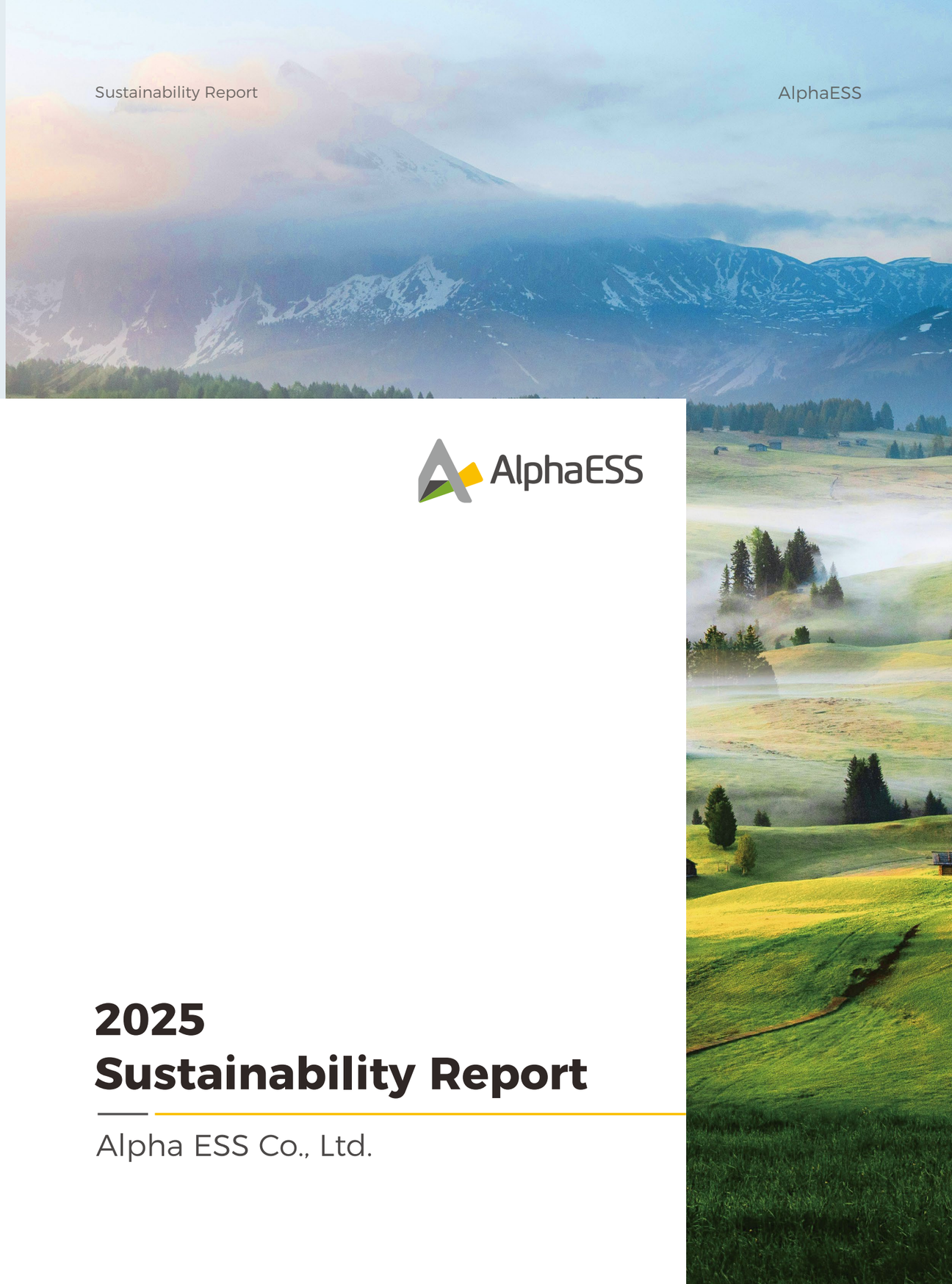


2025
Sustainability Report

Alpha ESS Co., Ltd.

Global Headquarters

Alpha ESS Co., Ltd.

Tel: +86 513 8060 6891

Email: info@alpha-ess.com

Website: www.alphaess.cn

Address: No.1086, Bihua Road, Tongzhou District, Nantong City, Jiangsu Province, China

Overseas Headquarters

Alpha ESS International Pte. Ltd.

Tel: +65 6513 1125 / +65 6513 1126

Email: singapore@alpha-ess.com

Address: 16 Science Park Drive, #05-01 DNV GL Technology Center, Singapore 118227

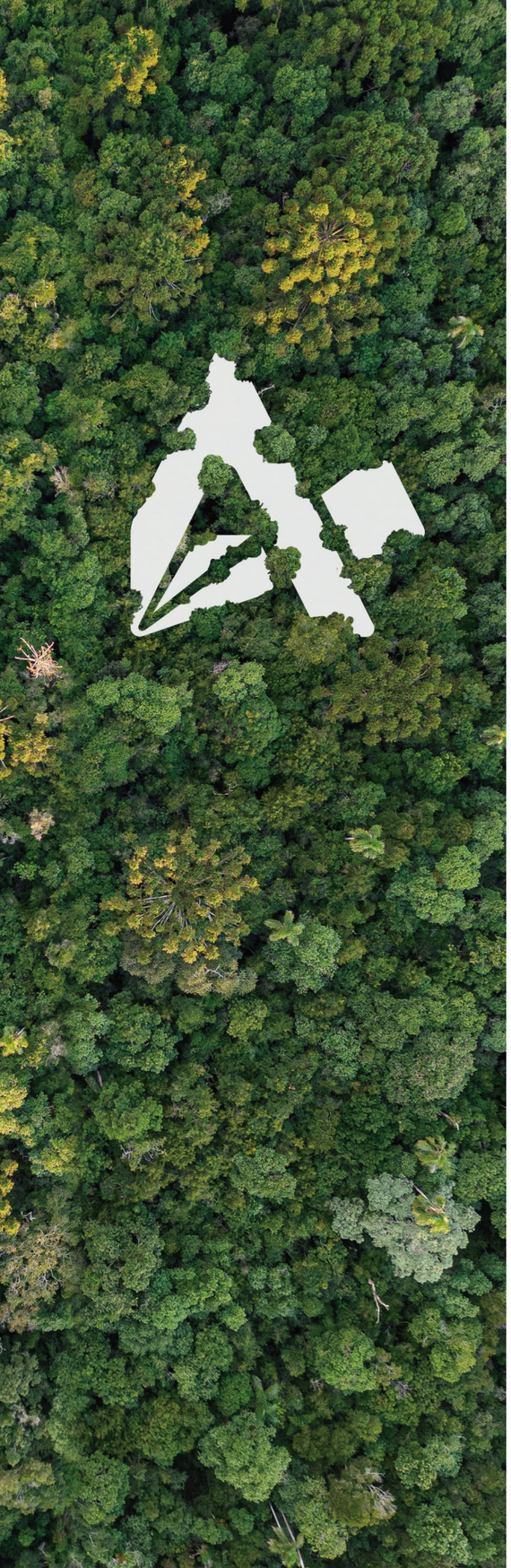
*Copyright © *2025* *AlphaESS*, All rights reserved.

Official Account

Website

2025
Sustainability Report

Alpha ESS Co., Ltd.



CONTENTS

Prologue

About the Report 01
Message from the Chairman 03
Company Introduction 05
Honors and Awards 09
Sustainability Governance 11

01 Strengthening Corporate Governance

Corporate Governance 17
Compliance and Risk Management 20
Business Ethics 23
Information Security and Privacy Protection 25

02 Focusing on Service Leadership

Technology R&D and Innovation 29
Product Responsibility 39
Responsible Marketing 44
Customer Rights and Service 45

03 Safeguarding a Green Future

Respond to Climate Change 49
Green Operations 56

04 Empowering People for Shared Progress

Human Capital Development 67
Employee Training and Development 72
Employee Rights and Benefits 76
Occupational Health and Safety 80

05 Building a Responsible Ecosystem

Supply Chain Management 85
Practicing Responsible Procurement 88
Industry Collaboration and Engagement 90
Delivering on Social Responsibility 91

Appendix

Appendix I
ESG Performance Indicators 95
Appendix II
ESG Content Indices 103
Reader Feedback Form 105

About the Report

Report Overview

This is the third Sustainability Report (the "Report") of Alpha ESS Co., Ltd. The Report provides a systematic overview of the Company's philosophy, initiatives and performance in the environmental, social and governance (ESG) areas in alignment with its sustainable development strategy and management practices. It aims to maintain ongoing, transparent communication with stakeholders and proactively respond to their expectations and concerns regarding our sustainability agenda.

Reporting Scope

The Report covers Alpha ESS Co., Ltd. and its subsidiaries ("AlphaESS", the "Company" or "we"). The reporting period spans from 1 January, 2025 to 31 December, 2025. To enhance the continuity and forward-looking perspective, certain content appropriately refers to previous years or extends to future years where necessary.

Basis of Preparation

The report is prepared in accordance with Appendix C2 Environmental, Social and Governance Reporting Code (the "ESG Reporting Code") of the Main Board Listing Rules of the Stock Exchange of Hong Kong Limited (the "Stock Exchange"). At the same time, this Report also references to the Corporate Sustainability Disclosure Standards – Basic Standard (Trial) issued by the Ministry of Finance of the People's Republic of China and eight other ministries and departments, the European Sustainability Reporting Standards (ESRS) issued by the European Financial Reporting Advisory Group (EFRAG), and the United Nations Sustainable Development Goals (SDGs), among other relevant reporting frameworks and standards.

Data Statement

The Company hereby warrants that this Report contains no false statements or misleading statements. As certain forward-looking statements are subject to multiple variables, actual future results or development trends may differ; the actual outcomes shall prevail. The data presented herein is primarily derived from the Company's original operational records as well as quarterly and annual reports and other formally disclosed documents. Unless otherwise specified, all monetary amounts disclosed in this report are denominated in Renminbi (RMB). In the process of data collection and disclosure, the Company adheres to the principles of consistency and comparability to ensure the accuracy, completeness, and traceability of the information presented.

Reporting Principles

This report is prepared in accordance with the reporting principles set out in the ESG Reporting Code of the Stock Exchange, including:

Materiality In preparation of this Report, the Company systematically identified its key stakeholders, and assessed sustainability topics of concern through surveys and analysis. Considering the Company's business development and operational characteristics, the Company prioritized relevant topics and disclosed them accordingly. Details of the process and results of the materiality assessment are presented in the "Stakeholder Engagement" and "Materiality Assessment" sections of this Report.

Quantitative This Report provides quantitative disclosures of key performance indicators (KPIs) and, where applicable, specifies the statistical methodologies, calculation methods, assumptions, and data sources adopted to enable stakeholders to evaluate and benchmark the effectiveness of the Company's ESG management.

Balance Based on objective facts, this Report presents a comprehensive overview of the Company's ESG performance during the reporting period, covering both positive and negative information to ensure fairness and completeness of the information disclosed.

Consistency This Report maintains consistent disclosure scope and methodologies with prior reports. Any changes in disclosure boundaries, statistical methods or data definitions are explained in the relevant sections to enhance comparability.

Access to the Report

Electronic versions of this Report in both Chinese and English are available on the "Sustainability" section of AlphaESS's official website (www.alphaess.cn/sustainable_development) for review and download. In the event of any discrepancy or inconsistency between different language versions of this report, the Simplified Chinese version shall prevail.

Message from the Chairman



Chairman, Alpha ESS Co., Ltd.

Yuan Hongliang

Since 2025, the global energy landscape has continued to evolve profoundly amid an increasingly complex and uncertain external environment. The intertwined challenges of climate change, geopolitical volatility and growing energy security concerns are reshaping economic and social development worldwide. As the energy transition moves into a critical phase, building a new power system centered on clean energy has become a defining direction of global energy transformation. As the "stabilizer" of new power systems and the "cornerstone" of energy security, energy storage's strategic role in the global low-carbon transition is becoming increasingly prominent.

Amid evolving industry cycles and market differentiation, AlphaESS remains committed to pursuing steady progress, continuously advancing our global footprint and sustainability practices. Guided by our mission to "make clean energy accessible to everyone in the world", we leverage technological self-reliance as our foundation and global operations as our pathway, translating R&D outcomes into diverse application scenarios. Building on 13 years of deep research and practical experience, our business now spans over 130 countries and regions, our platform manages more than 200 factories and industrial parks, and cumulative deliveries of energy storage system have surpassed 300,000. Moving forward, AlphaESS will continue to serve the global green and low-carbon transition with safe, efficient and reliable innovative solutions, working collaboratively with all stakeholders to chart a blueprint for sustainable value creation.

We continue to refine our sustainability governance framework

AlphaESS has further integrated sustainability principles into corporate strategy and operational management, while establishing a robust mechanism for identifying and managing climate-related risks and opportunities. Supported by targeted training programs and external think tanks, we continuously enhance the Board's and management's professional capacity to address climate change and ensure ESG compliance. We also maintain ongoing stakeholder engagement through surveys and assessments on key topics spanning governance, environment, employees and the value chain, ensuring our management practices remain closely aligned with regulatory expectations, industry trends and stakeholder concerns.

We remain committed to innovation-driven development to continuously strengthen our core competitiveness

Technological innovation is the fundamental force enabling the energy storage industry to navigate market cycles. As a pioneer in the sector, AlphaESS consistently regards independent R&D as the cornerstone of high-quality growth. In 2025, we invested approximately RMB 143 million in R&D, focusing on key technologies including Battery Management System (BMS), Energy Management System (EMS), Power Conversion System (PCS), system integration, and cloud platforms. Through sustained advancement in these critical areas, we continuously iterate and upgrade our products and solutions, responding to market dynamics with innovation and supporting the global energy transition through technological progress.

We remain committed to service excellence, consistently creating long-term value for our customers

In a rapidly evolving market, increasingly diverse and sophisticated customer needs place higher demands on enterprises. AlphaESS remains steadfastly customer-centric, continuously optimizing our product lifecycle management system, strengthening product quality, customer service and responsible marketing practices, and enhancing service responsiveness and delivery capabilities. Leveraging our global network and localized service expertise, we strive to provide higher-quality, more efficient and more reliable smart clean energy solutions. By continuously enhancing customer experience, we aim to achieve long-term mutual success and shared growth with our customers.

We proactively address climate change and fulfill our responsibilities for green and low-carbon development

Acknowledging our environmental stewardship, AlphaESS continues to refine its internal management framework, systematically advancing practices across climate action, green operations, resource efficiency, and pollution and waste management. At the same time, we fully leverage the positive role of energy storage in improving renewable energy integration, enhancing grid flexibility and facilitating the widespread adoption of clean energy, ensuring that every kilowatt-hour of green electricity serves the real economy and residential power needs more efficiently and reliably.

We remain committed to a people-oriented approach, fostering the internal drive that underpins sustainable organizational development

AlphaESS is dedicated to cultivating an open, inclusive, equitable and respectful workplace. We continuously strengthen talent pipeline, career progression pathways and long-term incentive mechanisms, while fully safeguarding employees' rights and occupational health and safety. We believe that by bringing together individuals who share our mission, embrace responsibility and pursue excellence, we can continuously strength organizational capability and talent density, thereby building the resilience needed to navigate industry cycles.

We continue to advance a sustainable supply chain and work with our partners to build a resilient ecosystem

Navigating global supply chain restructuring and rising uncertainties, AlphaESS continuously enhances its full-lifecycle supplier management system, scaling sustainable procurement practices and critical materials traceability, while enhancing transparency and resilience across our value chain. In parallel, we actively engage in industry dialogue and ecosystem collaboration to drive technology sharing, co-develop standards, and foster industrial coordination. Through open partnership, we collaborate with upstream and downstream stakeholders to support the healthy and sustainable development of the energy storage industry.

Looking ahead, AlphaESS will stay committed to its long-term development vision and continue to deepen our global footprint and sustainability practices. Driven by technological innovation, grounded in robust governance, and enabled by localized operations, we will advance our strategic priorities with clarity and discipline. Working alongside our customers, employees, partners and broader society, we will seek to capture opportunities amid uncertainty, sustain high-quality corporate development, and honor trust through long-term value creation. Together, we will actively contribute to a broader and more promising future for the global clean energy transition.

Company Introduction

Since its establishment in 2012, AlphaESS has focused on the research, development, manufacturing and commercialization of energy storage products. The Company has mastered core energy storage control technologies including BMS, EMS, PCS, system integration and cloud management platform. As an industry-leading provider of energy storage systems covering the full power range, AlphaESS is committed to delivering integrated smart clean energy solutions for residential, commercial and industrial (C&I), and utility-scale applications.

AlphaESS has received multiple national-level recognitions, including Certification as a National High-Tech Enterprise and a National Intellectual Property Demonstration Enterprise. Our products span four core energy storage segments — micro, residential, C&I, and utility-scale — and are widely deployed across power generation, transmission, distribution and consumption. By lowering electricity costs, enhancing renewable energy utilization, and reducing carbon emissions, our solutions deliver tangible economic and environmental benefits, making a substantive contribution to sustainable development.

Mission

Make clean energy accessible to everyone in the world

Vision

Become a world-leading green energy storage solution and service provider
Serve 100 million people over the next 10 years

Values

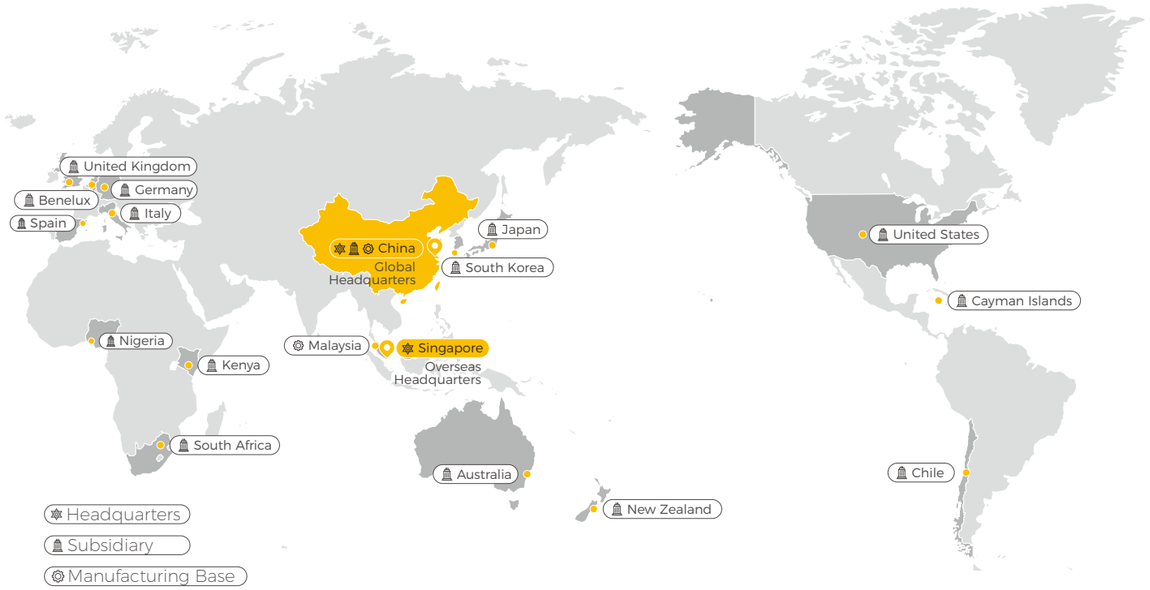
Open & Inclusive,
Agility & Grit,
Common Prosperity & Shared Growth



Global Presence

AlphaESS adheres to its globalization strategy and operates under a "dual-center" management model, with Nantong, China as the global headquarters and Singapore as the overseas headquarters, enabling optimized allocation of global resources and efficient cross-regional collaboration. Guided by this framework, AlphaESS has developed a diversified manufacturing footprint. Alongside domestic production bases in Nantong, Qidong, and Kunming, the Company has also established an overseas facility in Malaysia, effectively enhancing regional delivery stability, mitigating supply chain risks, and ensuring business continuity amid external volatility — while continuously deepening its long-term commitment to local communities.

Meanwhile, guided by its localization strategy, AlphaESS has established more than 60 subsidiaries worldwide and built a global service network of over 400 sites across Asia, Europe, Oceania, the Americas, and Africa. Supported by a mature localized sales and service system, we guarantee a "2-hour response, 24-hour spare parts delivery, and 72-hour issue resolution" standard, ensuring reliable and efficient support for customers worldwide.



Global Subsidiaries & Branches
60+

Total employees
1,100+

Factory Area (m^2)
150,000+

Countries and Regions
130+

Energy Storage System Installed
300,000+

Service Locations Worldwide
400+
Spanning Asia, Europe, Oceania, the Americas, and Africa

5 R&D Centers
Suzhou, Nanjing, Tianjin, Nantong, Xi'an

4 Manufacturing Bases
China: Nantong (Tongzhou and Qidong), Kunming
Malaysia: Kulim

Business Focus

Leveraging its proprietary core energy storage control technologies—including BMS, EMS, PCS, system integration, and cloud management platform—AlphaESS has emerged as an industry-leading provider of energy storage system covering the full power range. The Company delivers full-spectrum storage solutions ranging from the kilowatt to the hundred-megawatt scale to global markets, comprehensively addressing intelligent energy demands across residential, C&I, and utility-scale applications.



Market Share

Netherlands Top 1
Mordor Intelligence
Residential ESS Market Share in the Netherlands (H1 2025)

Australia Top 2
SunWiz
Energy Storage Market Share in Australia, 2024

China Top 3
EESA
Global Residential ESS Shipments, 2024

China Top 3
Polaris Energy Storage
Global C&I ESS Shipments, 2024

China Top 6
Gaogong Industrial Institute
String-Type All-in-One ESS Cabinet Shipments, 2024

Our History

Since its establishment in 2012, AlphaESS has been the pioneer in China to launch residential energy storage systems. With deep industry chain resources, years of R&D capability and rich project experience, the Company has consistently pursued excellence and advanced steadily.

2012
- Company Founded

2013
- Launched the first residential energy storage battery
- Launched the 1st generation BMS, EMS, and AlphaCloud platform

2014
- AlphaESS brand launched
- Launched "All-in-One" Residential ESS

2015
- Established subsidiary in Europe
- Established subsidiary in Australia

2016
- Launched C&I energy storage solutions
- Developed market in China

2017
- Launched the residential ESS series: SMILE
- Launched air-cooled utility-scale energy storage systems
- Established subsidiary in Italy

2018
- Launched residential ESS SMILE-B3 and SMILE-T10
- Completed multiple on-grid megawatt-scale projects

2019
- Transformed from an equipment manufacturer to a comprehensive energy storage solution and service provider
- Established subsidiary in South Korea

2020
- Added medium-voltage versions to SMILE series
- Established subsidiary in Singapore
- Established subsidiary in the UK

2021
- Recognized as a National-Level "Little Giant" Firm
- Invested by Temasek, Hillhouse, NIO Capital, etc.
- Established subsidiary in the United States

2022
- Expanded ESS product portfolio to cover the full power range
- Launched the high-voltage version SMILE series residential ESS
- Launched liquid-cooled utility-scale energy storage systems
- Established Overseas Headquarters in Singapore

2023
- Launched new liquid-cooled C&I and utility-scale energy storage system
- Began production at overseas manufacturing base in Malaysia
- Completed construction of the Low-Carbon Smart Park at Global Headquarters (Tongzhou, Nantong)
- Established subsidiaries in South Africa and Japan

2024
- Launched 20ft 5MWh Liquid-Cooled Container Energy Storage System
- Launched the Low-Carbon Smart Park Platform 2.0

2025
- New manufacturing base completed in Kunming, Southwest China
- Launched stackable residential and C&I ESS solutions
- Established subsidiaries in Nigeria and Kenya
- Recognized as a Tier 1 Energy Storage Manufacturer for Q4 2025

Honors and Awards

Major Honors and Awards

Global



ESG Transparency Award
EUPD Research



Excellent ESG Case Award
The First Sino-European Corporate ESG Best Practice Conference in Frankfurt 2024



AEO Certification
General Administration of Customs of China (GACC)



SAP Global Reference Customer
SAP



2025 BNEF Tier 1 Energy Storage Manufacturer
Bloomberg New Energy Finance



NextGen Tech 30 – Asia's High-Growth Technology Companies with the Greatest Global Expansion Potential
Granite Asia



2024 Top Brand PV Energy Storage (Germany)
EUPD Research



2024 Top Brand PV Inverters (Germany)
EUPD Research

China



The National-Level "Little Giant" Enterprise
Ministry of Industry and Information Technology of China



Best Emission Intensity Award for Carbon Neutrality (PV & Energy Storage Sector), the 7th Future Light Awards
TÜV SÜD Group



Outstanding Project Award in the User-side Track, Application Innovation Category, the 8th International Energy Storage Innovation Competition
International Energy Storage Alliance
China Energy Storage Alliance



Inaugural KPMG China Top 50 New Energy Technology Companies
KPMG China

Key Sustainability Highlights

Strengthening Corporate Governance

Revenue
RMB **2,856** million

Increased by
17.79% year-on-year

Female Board Representation
11.1%

Business Ethics & Anti-Corruption Training
286 hours

Board participation
100%

Incidents of Business Ethics Violations
0

Cybersecurity & Data Privacy Incidents
0

Focusing on Service Leadership

R&D investment
RMB **143** million

Number of Patents Held
307

Number of Trademarks Held
57

Number of Software Copyrights Held
203

Product Recall Incidents
0

Major Marketing Violations & Penalties
0

Customer Satisfaction Rate
89.4%

Safeguarding a Green Future

National-level Green Factories Certifications
1

Hazardous and Non-hazardous Waste Compliant Disposal Rate
100%

GHG Emissions Intensity
0.0161 tCO_2e per RMB 10,000 of revenue

Total Energy Consumption Intensity
0.0320 MWh per RMB 10,000 of revenue

Water Consumption Intensity
0.2005 m^3 per RMB 10,000 of revenue

Total Solar PV Generation
2,405,853.70 kWh

Empowering People for Shared Progress

Total Number of Employees
1,104

Female Employees Representation
33.9%

Total Employee Training Hours
10,156.8 hours

Average Training Hours per Employee
9.2 hours

Number of Employees Benefiting from the Employee Charity Fund
97

Safety Hazard Inspection Investment
RMB **2,863,000**

Number of Work-Related Fatalities
0

Safety Hazard Rectification Rate
100%

Building a Responsible Ecosystem

Total Number of Suppliers
351

Suppliers with Environmental & Labor Contractual Requirements
100%

Procurement Staff Trained in Sustainable Procurement
100%

Investment in Educational Philanthropy
RMB **700,000**

Sustainability Governance

Guided by the mission to "make clean energy accessible to everyone in the world" and the core values of "Open & Inclusive, Agility & Grit, and Common Prosperity & Shared Growth", AlphaESS integrates sustainability into corporate strategy and operational management. We continuously refine our sustainability governance framework and management systems advancing systematic measures with disciplined execution to deliver steady, balanced and high-quality growth in the long term.

Board Statement

The Board of Directors (the "Board") places great emphasis on the Company's long-term sustainability and regards a robust ESG management system as the cornerstone for fulfilling environmental and social responsibilities. As the highest decision-making body, the Board bears overall responsibility for the Company's sustainability governance. It regularly oversees and reviews the appropriateness of ESG targets and the feasibility of related strategies, while evaluating the progress and effectiveness of ESG initiatives. The Company embeds sustainability into its operational decision-making, continuously identifies relevant risks, and proactively seizes potential growth opportunities to address the impacts of climate change, technological shifts, and evolving market conditions. Furthermore, the Company is committed to fostering strong employee alignment with its ESG strategy, ensuring that sustainability principles drive tangible value throughout all business processes.

In the future, AlphaESS will adhere to sustainable development as a core strategic priority, continuously deepening ESG management practices based on its existing strategies and promoting the integration of sustainability and business operation. We encourage stakeholders to provide opinions and suggestions for the Company's ESG development and will continually refine its sustainability focus in response to global trends and its specific business context. By strengthening the environmental and social management capabilities, we aim to ensure long-term resilience and deliver enduring sustainable value.

Sustainable Development Structure

AlphaESS continues to refine its sustainability governance framework, strengthening the Board's oversight and strategic decision-making on ESG matters. By enhancing its governance policies and management systems, the Company has established a top-down, three-tier sustainability governance structure.

The Board has established a Strategy and ESG Committee comprising three directors, including at least one independent director, and chaired by the Company's Chairman. The Strategy and ESG Committee is responsible for researching material sustainability topics, formulating ESG strategies, overseeing implementation, and regularly reporting progress to the Board. The ESG Management Team consists of heads from all business centers and departments, leading the planning, daily management, and performance evaluation of sustainability initiatives, and reporting material ESG matters to the Strategy and ESG Committee. The Company has issued the *AlphaESS ESG Management Indicator System Manual*, providing a structured framework and clear operational guidelines to ensure the systematic and effective execution of ESG practices across the organization.

Board Level	**Strategy and ESG Committee**	• Formulate the Company's ESG policy and supervise the management of ESG issues. • Develop the communication paradigm ESG issue management (including its process, approach, and frequency). • Monitor and assess the effectiveness of management practices, including the review of indicators, targets, and action plans relating to sustainable development. • Conduct ongoing assessment and management of sustainability-related matters.
Management Level	**ESG Management Team**	• Assess, manage and oversee sustainability-related matters to facilitate effective Board oversight. • Coordinate the efforts of different departments and ensure effective collaboration.
Execution Level	**ESG Execution Team**	• Conduct routine work implementation and data collection according to the strategies and measures designated by the Strategy and ESG Committee and management.

Sustainability Governance Structure and Responsibilities

To ensure that the decision-making bodies possess adequate professional competence to deepen the Company's sustainable development, the Company plans to continuously strengthen the professional knowledge and capabilities of the Board and management in areas such as ESG policy trends, regulatory compliance, and risk control, through a combination of internal specialized training and support for directors to participate in external professional seminars.

Stakeholder Engagement

AlphaESS establishes diverse communication methods and channels to regularly listen to, understand and proactively address stakeholders' sustainability-related concerns and expectations, incorporating it as a key input for ESG management and strategic decision-making while integrating it into the Company's operations and development planning to continuously create long-term value for all stakeholders.

Communication with Key Stakeholders

Stakeholder	Topics of Concern	Communication Channels and Response Methods
Shareholder & Investor	• Business Performance • Compliance Governance • Risk Management and Prevention	• General Meeting of Shareholders • Regular Information Disclosures • Routine Communication (Conference Calls, Emails, and Surveys)
Customers	• Product Quality and Reliability • Service Experience • Rights Protection • Data Privacy and Security	• AlphaCloud After-sales Management • Customer Satisfaction Surveys • Routine Communication (Meetings, Calls, Emails and Visits)
Employees	• Occupational Health and Safety • Compliant Employment • Remuneration and Benefits • Training and Empowerment • Employee Rights Protection	• Staff Councils and Trade Unions • Training and Career Development System • "Alpha Planet" (Online Knowledge Platform) • Corporate Culture Journals • Employee Care Program • Routine Communication (Meetings, OA System, Opinion Mailbox, Employee Satisfaction Surveys)
Suppliers	• Transparent Procurement • Ethical Trading	• Supplier Conferences • On-site Visits and Research • Regular Assessment and Review • Routine Communication (Calls, Emails and Visits)
Government & Regulatory Authorities	• Job Creation • Contribution to Local Economy • Compliant Operation • Green Manufacturing Practices	• Regular Reporting and Communication • Special Research and Visits • Regulatory Dialogues and Working Sessions • Participation in Policy Standard Formulation and Consultations
Industry Association, Peers & Academic Institutions	• Sustainable Supply Chain Management • Compliant Operation Product and Service Quality • Quality Customer Service • Cooperation Projects	• Industry Standard Formulation • Global Industry Exhibitions • Conferences and Forums • Formulation and Consultation of Policies and Standards • Industry-Academia-Research Strategic partnerships
Communities, Public & Media	• Emissions Management • Community Development • Environmental Compliance	• Community Project Partnerships • Charitable & public welfare initiatives • Community Volunteer Activities

Materiality Assessment

AlphaESS continuously monitors sustainable development dynamics and trends within the energy storage sector, conducting regular materiality assessments to ensure each issue remains closely aligned with industry developments. Based on its strategic planning, and considering the latest sustainable development trends, the overall industry situation, and stakeholder expectations including capital market concerns, the Company, with reference to mainstream standards such as the ESG Reporting Code and the ESRS, identified and analyzed material sustainability topics, building upon the previous assessment. This resulted in the AlphaESS 2025 materiality matrix comprising 22 issues, including 6 core issues, 12 priority issues, and 4 concerned issues. The 2025 material issues have been reviewed and approved by the Strategy and ESG Committee and the Board.

Identification of Material Issues

Aligned with mainstream ESG standards, peer practices, industry trends, and regulatory & capital market expectations, the Company integrated external requirements with its strategy, business profile and operational context to identify material issues affecting business performance and stakeholder assessments.

Identification of Material Issues

Internal and external stakeholders completed annual ESG materiality questionnaires. We also interviewed key ESG departments to understand stakeholder expectations and demands.

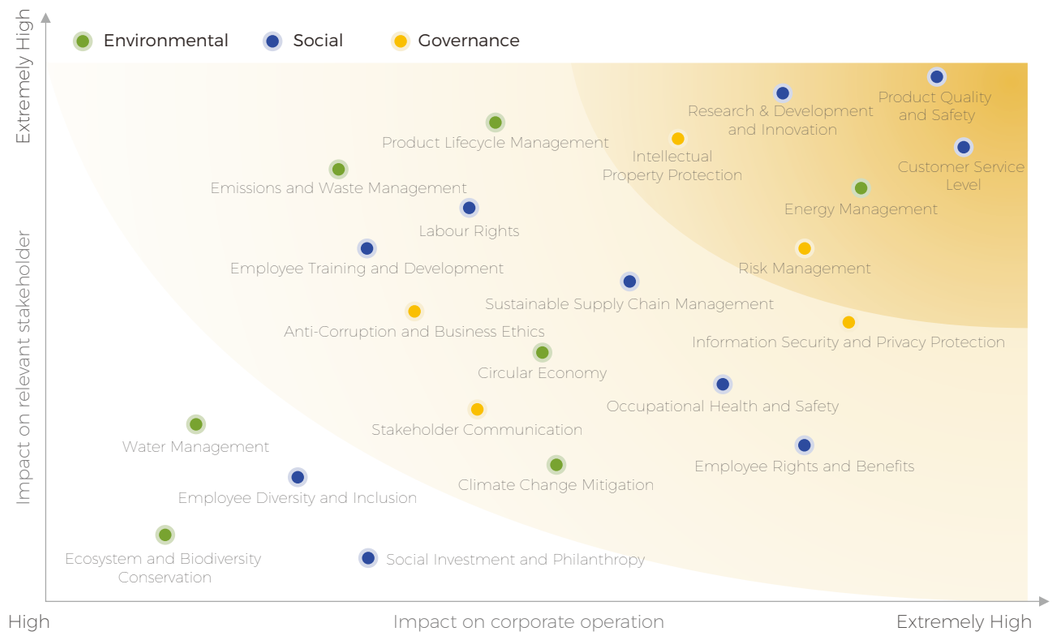
Materiality Assessment

Based on survey results, we conducted a materiality analysis. Issues were prioritised by importance to stakeholders and the Company's operations, categorised into core, priority and concerned issues, with a materiality matrix developed accordingly.

Approval

Taking into account the Company's development strategy, feedback from external experts, and industry trends, the Company's management confirmed the material issues and their prioritisation, which were subsequently submitted to the Strategy and ESG Committee and the Board for review and approval.

AlphaESS 2025 Materiality Assessment Process



AlphaESS 2025 Materiality Matrix

Strengthening Corporate Governance

Facing the complex and volatile global market environment and the increasingly refined regulatory system, AlphaESS firmly believes that excellent corporate governance is the fundamental cornerstone for the Company's stable and long-term development. Adhering to the core management philosophy of "governance first", we continuously improve the governance structure with the General Meeting of Shareholders, Board, Board of Supervisors, and Senior Management—serving as the backbone of our organizational structure, enhance the diversified decision-making capabilities of the Board, and ensure operational compliance and transparency. At the same time, we integrate business ethics, risk management and information security into the entire operation process, build a comprehensive risk defense system, and strive to enhance the Company's operational resilience in a complex environment. We uphold the bottom line of integrity and compliance, actively establish fair, mutually trusting communication with stakeholders, strengthen cyber security and privacy protection mechanisms, support the industry's high-quality development, and achieve the Company's long-term sustainable growth.

01

Corresponding SDGs:



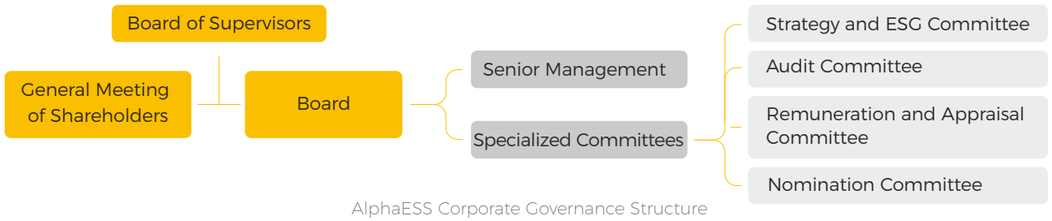


Corporate Governance

In strict accordance with the *Company Law of the People's Republic of China* and the *Securities Law of the People's Republic of China*, and with reference to the *Listing Rules* of the Stock Exchange and other applicable regulations promulgated by the Hong Kong Securities and Futures Commission and the China Securities Regulatory Commission (CSRC), AlphaESS has formulated a series of internal rules and regulations, including the *Articles of Association*, *Rules of Procedure for Shareholders' General Meeting*, *Rules of Procedure for the Board of Directors*, *Rules of Procedure for the Board of Supervisors*, and *Related Party Transactions Management Policy*. The Company has improved its internal corporate governance structure and management system to ensure compliant, efficient corporate governance, laying a solid foundation for the Company's long-term development and creating sustainable value for stakeholders.

Governance Structure

The Company has established a governance structure consisting of the Shareholders' General Meeting, Board, Board of Supervisors, and Senior Management, which aims to achieve harmonious interaction and effective checks and balances among the governance bodies, ensure fairness, transparency and effectiveness of the Company's decision-making process, and foster an open, transparent and accountable governance environment.



AlphaESS Corporate Governance Structure

General Meeting of Shareholders

In strict accordance with applicable laws, regulations, and internal rules of procedure, the Company regularly convenes and holds shareholders' general meetings and fully respects and safeguards the legitimate rights and interests of all shareholders. The Company's shareholders act responsibly, exercise their rights through the shareholders' meeting, and make decisions on the Company's major operating matters. In 2025, AlphaESS convened a total of 3 shareholders' general meetings.

Board

The Company elects its directors in strict accordance with laws and regulations. Each term of office of the Company's directors is 3 years. The same director may be reelected at the end of his/her term, but independent directors shall not serve the position for more than 6 years.

As of the end of the reporting period

The Board consists of **9** directors

5 Executive directors
1 Non-executive director
3 Independent non-executive directors

The Board has established four specialized committees: the Strategy and ESG Committee, Audit Committee, Remuneration and Appraisal Committee, and Nomination Committee. Each committee carries out its work in accordance with the respective rules of procedure, including the *Rules of Procedure for the Strategy and ESG Committee*, the *Rules of Procedure for the Audit Committee*, the *Rules of Procedure for the Remuneration and Appraisal Committee*, and the *Rules of Procedure for the Nomination Committee*, and follows the Company's management system and strategic plans to effectively perform its supervisory and management functions, ensuring the sound operation of the Company.

Committee	Responsibility
Strategy and ESG Committee	To advise on the medium and long-term strategies of the Company; to make recommendations on major investments, financing programs, major capital operations, asset management projects, sustainable development, ESG works, and other major matters affecting the development of the Company; and to supervise the implementation of the plans.
Audit Committee	To propose the hiring or replacement of the external auditor; to be responsible for the communication between the internal audit and the external audit; to supervise and review the Company's financial information and its disclosure, the internal audit system and its implementation; to review the Company's internal risk control system, and conduct audits of major related party transactions.
Remuneration and Appraisal Committee	To formulate remuneration policies or programs such as performance evaluation standards, procedures, incentive plans, and other remuneration policies or programs for the Company's directors and executives in accordance with internal job responsibilities and the remuneration levels of relevant external enterprises; to supervise and manage the implementation of the remuneration system, and to conduct annual performance appraisals of the directors and executives in accordance with the fulfillment of their responsibilities.
Nomination Committee	To advise the Board on the criteria and procedures for selecting directors and executives; to conduct extensive searches for qualified candidates for directors and executives; and to review and advise on the conduct of director candidates and executives.

During the reporting period

3	Meetings of the General Meeting of Shareholders
7	Meetings of the Board
1	Meetings of the Board of Supervisors
1	Meetings of the Strategy and ESG Committee
1	Meetings of the Audit Committee
0	Meeting of the Nomination Committee
1	Meeting of the Remuneration and Appraisal Committee

Board of Supervisors

The Company has established the Board of Supervisors in accordance with the law to exercise its supervisory power, safeguard the rights and interests of shareholders, the interests of the Company, and the legitimate rights and interests of employees from infringement, and to be accountable to the Shareholders' General Meeting and report on its work. As of the end of the reporting period, the Board of Supervisors consists of 3 supervisors, including 1 Chairman of the Board of Supervisors and one employee representative supervisor. Pursuant to the *Articles of Association of the Company*, employee representatives on the Board of Supervisors are elected through democratic means, such as the Employees' Congress, the General Assembly of Employees, or other forms of democratic elections involving company employees.

Remuneration and Appraisal

The Company has systematically integrated sustainability indicators into the executive performance appraisal system, covering core dimensions such as team safety management, key talent retention, employee satisfaction improvement, and energy consumption reduction across operational units. These indicators have been incorporated into the annual KPIs and key task assessment framework. By organically linking ESG performance with remuneration and incentive mechanisms, the Company aims to drive management to effectively practice the concept of sustainable development in daily operational decisions, ensuring the effective implementation of ESG targets, thereby achieving the synergistic development of long-term corporate value and social responsibility.

As of the end of the reporting period

Female director
1

Proportion of the Board
11.1%

Board Diversity

The Board members possess extensive industry experience and cross-disciplinary professionalism, enabling them to make effective decisions with comprehensive and diversified perspectives and insightful understandings. At the same time, we emphasize the diversity of our Board members by considering factors such as gender, age, cultural and educational background, professional skills, knowledge, and term of service in the selection of Board members, ensuring the effectiveness and legitimacy of the Board's operation.

In the future, AlphaESS will continue to promote the diversity of the Board, gradually optimizing the structure of gender and professional background, enhancing the Board's diverse perspectives and judgment capabilities in strategic decision-making and risk management, further improving the effectiveness of corporate governance, and providing strong support for the Company's long-term sustainable development.

Compliance and Risk Management

Internal Risk Control and Audit

AlphaESS has formulated the *Internal Audit Policy* in accordance with the *Company Law of the People's Republic of China*, *Securities Law of the People's Republic of China*, and *Audit Law of the People's Republic of China* and other applicable laws and regulations, as well as the *Articles of Association*, taking into account the Company's actual circumstances.

The Audit and Supervision Department, as an independent audit unit within the Company, assumes the important responsibility of ensuring business compliance and efficiency. Every year, we formulate and strictly execute internal audit plans based on the legal and regulatory requirements and risk assessment results of the regions where we operate to ensure that all operation sites are equipped with comprehensive auditing. In addition, we actively cooperate with third-party auditors to conduct external audits on a regular basis, which helps us identify potential management loopholes in a timely manner and further strengthen and standardize our internal management system. This mechanism not only enhances our management transparency but also provides a solid foundation for continuous improvement and risk prevention and control.

To ensure the comprehensiveness and effectiveness of the internal risk control system, the Domestic Internal Risk Control Department, and the Overseas Internal Risk Control Department, in close cooperation with each business unit, are responsible for formulating, implementing, and monitoring the Company's internal risk control policies and procedures. Particularly with respect to the complexity and specific risks of overseas operations, the Overseas Internal Risk Control Department places special emphasis on assessing and managing compliance with cross-border regulations, industry standards, and the implementation of global policies, ensuring that overseas branches and subsidiaries operate in compliance with applicable requirements. The Internal Risk Control Department provides reports on internal risk control and risk management to the executives and the Board, regularly fulfilling its role in proactive prevention and decision support.

Risk Management

AlphaESS has established a comprehensive internal risk control and management system, continuously improving the Company's management system, implementing risk management responsibilities, and optimizing risk prevention and response strategies to enhance the Company's resilience and adaptability to fluctuations and uncertainties in the external environment, and to achieve sustained and long-term development.

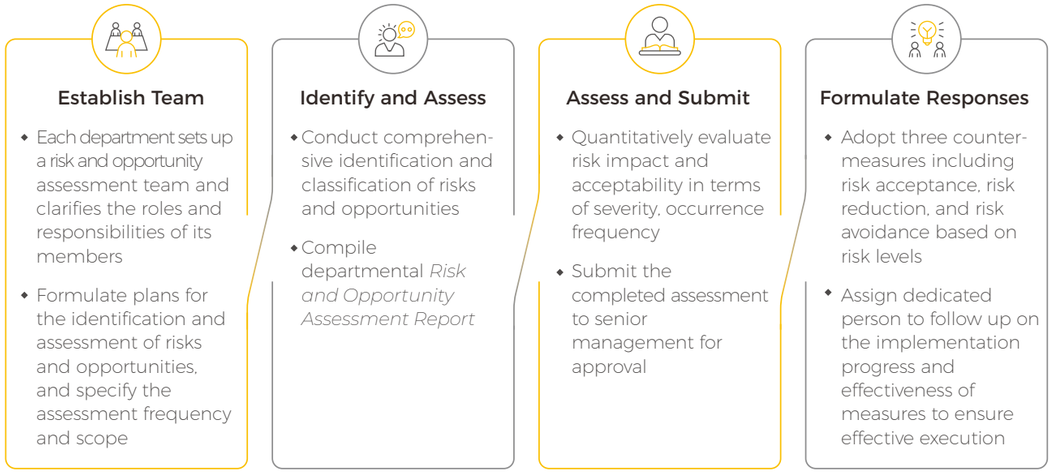
Risk Management System

The Company has formulated the *Risk and Opportunity Response Procedures* and *Procedures for Controlling the Analysis of the Company's Environment* in accordance with *Basic Norms for the Internal risk control of Enterprises* and other regulatory requirements to safeguard the effective identification and monitoring of risks.



Risk and Opportunity Management Process

The Company continuously optimizes its risk and opportunity management process. At least once each year, it conducts a risk and opportunity review, comprehensively assessing the severity and frequency of occurrence, quantitatively calculating the risk coefficient, and formulating targeted response measures accordingly. The review results are fully recorded in the *Risks and Opportunities Assessment Report*, with dynamic updates and management. At the same time, the Company regularly communicates and reports to management, continuously improving the risk and opportunity control mechanism.



AlphaESS Risk and Opportunities Assessment Process



ESG Risk Management

AlphaESS continuously improves its ESG risk management mechanism, integrating ESG risks (including climate-related risks) into the Company's overall risk management framework and gradually embedding them into daily operations, so as to better address the challenges arising from enhanced regulatory requirements and changes in the external environment. In accordance with the *Risk and Opportunity Response Procedures* and other relevant requirements, the Company has formulated an ESG risk management system covering risk identification, impact analysis, quantitative assessment, and risk control. Since the Company operates in the energy storage sector, the Company continuously identifies key ESG risk areas and corresponding response directions and reasonably allocates capital and human resources to carry out risk control, ensuring the Company's stable operation and the safety of stakeholders, and promoting sustainable and high-quality development.

To effectively prevent various risks, the Company has established an ESG risk management mechanism coordinated by the ESG Management Team. The Secretary to the Board serves as the director, and the heads of each center and department serve as committee members. This team regularly identifies, assesses, and evaluates ESG-related risks and opportunities, conducts analysis based on dimensions such as probability of occurrence and degree of impact, and reports relevant trends, key risks, and potential opportunities to the Board promptly, while proposing improvement recommendations and facilitating the implementation of corresponding response measures. This mechanism is consistent with AlphaESS's existing sustainability governance structure, reflecting the management approach of collaborative advancement among the Board, management, and execution levels.

On the basis of the existing risk assessment methods, and with reference to the relevant requirements of *International Financial Reporting Standard S2 - Climate-related Disclosures* (IFRS S2), the Company, taking into account its actual operations, is gradually attempting to integrate potential impact analysis and quantitative assessment into its ESG risk management, and has carried out identification and assessment practices for climate-related risks and opportunities on certain issues. Although the relevant methodology is still in a phase of continuous optimization and improvement, and quantitative analysis is still in the process of gradual deepening due to factors such as data availability and maturity of analytical models, the interim results have already provided useful references for the Company to identify key ESG risks and opportunities, optimize risk management strategies, and improve climate-related management measures.

AlphaESS fully recognizes that failure to identify and properly manage ESG risks promptly may adversely affect the Company's operations and development, business continuity, and stakeholders. The Company will continue to rely on the *Risk and Opportunity Response Procedures*, the *Procedures for Controlling the Analysis of the Company's Environment*, and other policies to drive the implementation of relevant management requirements across all subsidiaries, continuously enhancing the forward-looking, systematic, and effective nature of ESG risk management.

During the reporting period

The Company experienced no major ESG-related crises or incidents.

Business Ethics

Business Integrity

AlphaESS endeavors to create a fair, just, and clean working environment, and to build solid mechanisms of business ethics and anti-corruption to ensure that these principles are integral to every aspect of the Company's internal management and external cooperation, to maintain the Company's image of integrity and to create a business environment of mutual trust for all stakeholders.



Building a Culture of Integrity

AlphaESS has formulated an *Employee Handbook* to provide all employees with a clear code of conduct on business ethics, regulate employee behavior, and require all employees to sign an integrity agreement. To enhance all employees' awareness and understanding of business ethics, integrity, and compliance, the Company has organized several business ethics and anti-corruption training courses and campaigns for the Board, senior management, and other employees to reinforce the practice of integrity and honesty.

During the reporting period

Total business ethics and anti-corruption compliance training hours delivered
286

Covered employees and Board members
142

Board members participation
100%

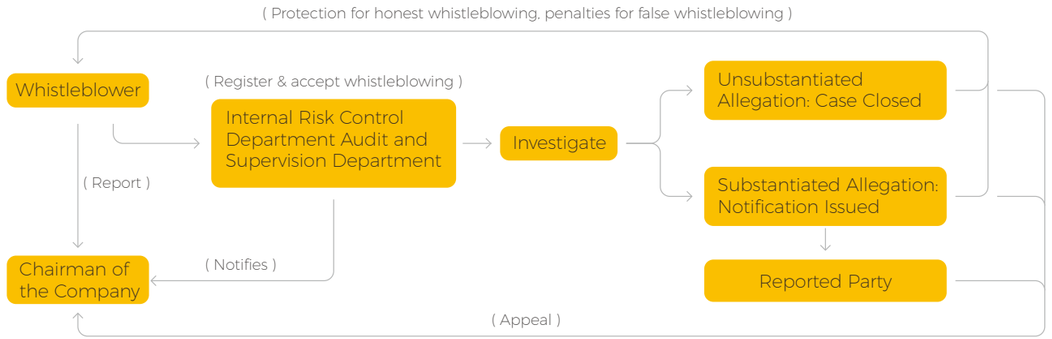
Business Ethics and Anti-Corruption Training

- Definition and Key Elements of Business Ethics
- Common Cases of Business Ethics Violations
- Definition and Legal Framework of Anti-Corruption
- Common Corrupt Practices
- Anti-Corruption Strategies and Measures
- Corporate Case Studies

Anti-Corruption Management

AlphaESS has established a Code of Conduct Committee, with the Chairman of the Company as the committee chair and the Chief Financial Officer (CFO) as the deputy committee chair. The committee is responsible for supervising and dealing with all kinds of internal corruption, violations of regulations, and other misconducts, continuously strengthening the Company's code of conduct for sound operation and healthy development. The Company regularly identifies risks related to business ethics and anti-corruption, and has formulated a series of internal policies such as the *Anti-Fraud and Whistleblowing Procedures*, *Gift Declaration and Handover Management Measures*, and *Procurement Management Regulations*, which aim to clarify the principles of business ethics management, reporting channels and procedures, and other relevant matters, ensuring that all employees uphold integrity and compliance in all business activities.

We maintain a zero-tolerance approach towards any violations of business ethics. Any substantiated breaches of business ethics will be dealt with strictly. To encourage employees and partners to report any inappropriate behavior, we have established diverse reporting channels, including external reporting email, phone, mailbox, and WeChat official account, and have developed a comprehensive and detailed reporting handling process, which is closely followed by the Internal Risk Control Department. All reports (including those invalidated after preliminary review) and investigation results must be reported to the Chairman, ensuring timely and impartial handling of each report. Additionally, we have explicitly stated provisions for whistleblower protection in the *Anti-Fraud and Whistleblowing Procedures* to effectively prevent any retaliatory actions, thereby creating a safe and fair reporting environment.



AlphaESS Anti-Fraud and Whistleblowing Procedures

- Whistleblowing Email: ac@alpha-ess.com
  If the whistleblowing involves a senior member of the Company, it will be sent directly to the Chairman of the Board: thomas.yuan@alpha-ess.com
- Whistleblowing Line : 0513-68070558
- WeChat Public Platform : AlphaESS Audit
- Whistleblowing Mailbox : Mailboxes across each site

During the reporting period

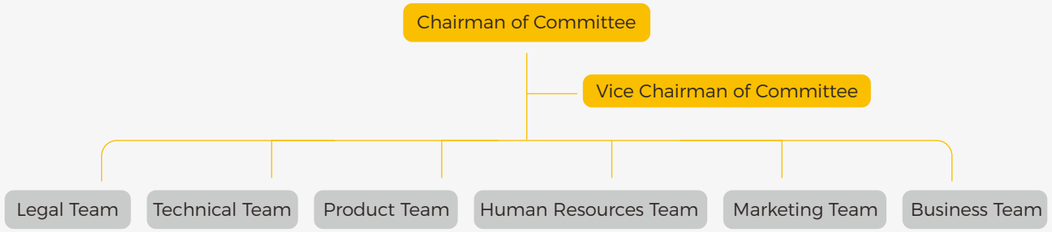
The Company did not receive any reports related to business ethics and anti-corruption.
The Company did not incur any administrative penalties or litigation arising from violations of laws and regulations related to business ethics.

Information Security and Privacy Protection

AlphaESS conducts its business in strict compliance with the *Cybersecurity Law of the People's Republic of China*, the *Data Security Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China*, the EU's *General Data Protection Regulation* (GDPR), *German's Federal Data Protection Act* (Bundesdatenschutzgesetz), Singapore's *Personal Data Protection Act* (PDPA), Malaysia's *Personal Data Protection Act 2010* (PDPA), and Australia's *Privacy Act 1988*, among other applicable national or regional laws and regulations. Upholding the overarching principle of "placing security first, with comprehensive risk prevention and equal emphasis on management and technology", we continuously strengthen our capabilities in data security and privacy protection to mitigate associated risks.

Enhancing Information Security

The Company has established a Data Compliance and Security Committee responsible for coordinating, supervising, and executing data security and privacy protection related work. The committee members consist of responsible personnel from the Company's Legal, Technical, Product, Human Resources, Marketing, and Business teams. They are responsible for regularly testing and evaluating internal systems, and reviewing and supervising external partners to ensure the effective implementation of data security and privacy protection policies.



Data Compliance and Security Committee Structure

Furthermore, the Company has established a suite of governance documents including the *Information Security Principles*, the *User Access Management Program*, the *Password and Key Management Program*, the *Information System User and Permission Management System*, the *Password Security Management System*. These policies are designed to standardize process management and direct the Company's efforts in data security and privacy protection. To promptly identify data security risks and assess the effectiveness of the data security management framework, the Company engages a third-party organization to conduct annual external data security audits, covering areas such as security governance and data protection.

During the reporting period

Number of information security audit conducted by the Company

1

The Company encountered no major cybersecurity or data privacy incidents

Protection Management Initiatives

The Company attaches great importance to data security and customer privacy protection. By leveraging various privacy protection technologies and management initiatives, the company has built comprehensive standards and mechanisms that govern the entire data lifecycle.

Data Communication	Secure communication is supported through the use of security algorithms and transport encryption protocols, and the Secure Sockets Layer (SSL) protocol is deployed to safeguard important personal privacy data during data transmission.
Data Processing	Stringent data filtering and verification are employed, alongside a comprehensive audit process for data integrity.
Data Storage	All user data is securely encrypted and stored on Microsoft Azure servers. The servers are currently located in Singapore. The operations team of the Azure data centre provides 7×24 continuous monitoring to prevent any unauthorised access to data and services.

Examples of AlphaESS's Data Security and Privacy Protection Initiatives

For the European region, the Company fully respects the legal rights of consumers over their personal data. In accordance with the relevant provisions of the EU GDPR, consumers may exercise their rights to access, rectify, erase, or restrict the processing of their personal data, and may request data portability where the legal conditions are met. The Company has established corresponding communication channels to respond promptly to consumer requests regarding personal information protection, and handles such requests in accordance with the procedures and time limits prescribed by law.

We have implemented multiple emergency response measures to address data security incidents, including those that are suspected. By conducting regular information security emergency drills, we have enhanced our team's ability to respond to data security emergencies effectively.

Developing Emergency Plans

We have defined the structure and responsibilities of our emergency response team, as well as data security incident reporting and handling procedures.

Conducting Information Security Emergency Drills

In December 2025, we conducted continuity drills for Office Automation, Manufacturing Execution System (MES), and third-party networks. Following the drills, we summarized the issues, produced an analysis report, and formulated solutions and implementation measures.

Data Security Emergency Management Initiatives

The Company attaches great importance to fostering a culture of data security and privacy protection, and continuously enhances the data security awareness and practical capabilities of all employees through a systematic training mechanism. During the reporting period, the Company conducted a special data security training for all employees in both online and offline forms. The training covered core topics such as basic knowledge of data security, privacy protection regulatory requirements, and daily operational norms, aiming to strengthen employees' data security awareness and comprehensively improve the Company's overall data protection capabilities.

Focusing on Service Leadership

Against the backdrop of the global energy transition and the deepening advancement of the "dual carbon" goals, AlphaESS firmly believes that energy storage — as a core enabling component of the energy transition — plays an irreplaceable role in optimizing the energy mix and safeguarding energy security. Adhering to the core development principle of service leadership, we orient ourselves to customer needs, continuously optimize the full life-cycle product management system, drive innovation breakthroughs from the source of technology R&D, and dedicate ourselves to providing safe, efficient and reliable integrated energy storage service solutions to global customers. We continue to enhance refined supply chain management capabilities, building a resilient, efficient and sustainable supply chain system, empowering customers through high-quality service and supporting high-quality industry development and achieving the Company's long-term sustainable growth.

02

Corresponding SDGs:







Technology R&D and Innovation

As a globally recognized high-tech enterprise certified as a National High-Tech Enterprise, AlphaESS regards R&D and innovation as the core engine driving sustainable development. The Company continues to consolidate core technological capabilities, providing a solid foundation for the high-quality development of the energy storage industry and the global low-carbon transition.

Innovation and R&D

AlphaESS attaches great importance to building an R&D and innovation system. We continuously optimize the R&D management framework, assemble a professional and highly competent R&D team, and persistently improve R&D efficiency to drive innovation vitality.

2025

The Company invested in R&D approximately

RMB **143** million

R&D Management System

AlphaESS prioritizes proprietary innovation and R&D capability development, continuously builds an integrated and platform-driven R&D system that consolidates R&D resources across product lines, strengthens the alignment of forward-looking technology development with business strategies and market demands, ensuring organizational agility in response to technological shifts and industry dynamics.

The Company adopts a "matrix" management model to optimize cross-functional resource allocation and streamlines decision-making pathways. Through the implementation of a RACI Matrix (Responsible, Accountable, Consulted, Informed), the Company clarifies the functional boundaries and collaboration processes among project teams, departments and positions, and correspondingly adjusts the product development and IT-enabled workflows to enhance team collaboration efficiency and project delivery quality. Leveraging the R&D Center's technology advanced research and technology platforms capabilities, the Company continuously integrates technological development with commercial applications. This alignment, reinforced by a robust technology pipeline and rapid iteration mechanisms, sustains the momentum for core technology breakthroughs and accelerates the continuous upgrading of AlphaESS's product portfolio across all power segments.

R&D Talent Incentives

AlphaESS regards R&D talent as the core asset driving sustainable innovation, and has assembled a high-caliber R&D team with solid expertise, forward-looking vision, and cross-disciplinary collaboration. The Company continuously refines the framework for attracting, cultivating, retaining, and deploying R&D talent. On one hand, it actively recruits advanced technical professionals and senior industry experts to fortify technical backbone; on the other hand, it enhances talent cultivation mechanisms by establishing an R&D trainee program, where senior engineers provide fresh graduates with structured technical training and career mentorship, helping them solidify their technical foundation and integrate quickly into the R&D team, thereby ensuring a resilient talent pipeline and seamless capability succession.

To further stimulate the creativity and vitality of the R&D team, the Company has formulated the *R&D Center Innovation Incentive Policy* and the *R&D Center Performance Management Process*, linking incentives to project progress and the commercialization value of R&D outcomes. This fosters a vibrant, inclusive and open research environment that empowers engineers to translate advanced innovative concepts into executable projects, continuously driving the transformation of technological breakthroughs into product competitiveness and commercial value.

Incentive Recipient	Assessment Requirements	Incentives	Review Cycle
Individual / Team with Key Breakthroughs	Effective Transformation of Project Implementation into Key Technology Achievements	President's Special Award	Annual
Individual / Team with Innovative Projects	Successful Transformation of an Innovative Idea into a Project	Innovative Project Award	Annual
Team with the Maximum Innovative Ideas	Department with the Highest Per Capita Contribution of Ideas Approved in Preliminary Review	Innovative Team Award	Semi-annual
Individual with the Maximum Innovative Ideas	Individual with the Highest Number of Innovative Ideas Approved in Preliminary Review	Innovative Individual Award	Annual

Incentives for R&D Innovation

R&D and Innovation Achievements

AlphaESS remains steadfastly committed to a proprietary R&D model. Through sustained R&D investment and continuous innovation, the Company consistently breaks through core technological bottlenecks in energy storage, iteratively upgraded comprehensive energy storage products and smart energy management systems, and achieves breakthroughs advancements across products and solutions, supporting the global energy storage industry development and widespread adoption of sustainable energy.

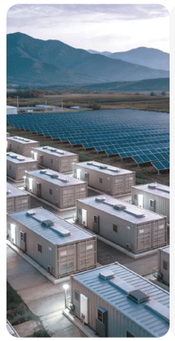
Core Innovation Strategy

Focusing on the construction of new-type power systems and the global energy transition, AlphaESS centers on the core elements of energy storage systems, with a strategy of "full-stack proprietary R&D + digital intelligence empowerment-driven". The Company deepens its work on BMS, EMS, PCS and full-system integration, building integrated proprietary R&D capabilities across hardware, software and algorithms. Building on this foundation, it simultaneously focuses on key areas including PV oversizing optimization, smart grid interaction, modular architecture design and multi-dimensional safety protection, creating a full-spectrum energy storage product matrix covering utility / grid-side, C&I, and residential applications, achieving breakthroughs in both technical performance and market adaptability and providing customized core equipment for different scenarios.



Battery Management System

- AI & intelligent applications
- Networking & communication technologies
- Safety & reliability
- Multi-modal sensor fusion
- Large-scale integration & modular design



Energy Storage System Integration

- Extended system lifespan & enhanced performance
- Reduced energy storage costs
- Intelligent energy storage systems
- Battery thermal management design
- Safety protection design
- Parallel operation technology for all-in-one solar and storage systems
- High-speed frequency regulation technology



Big Data Development

- Battery state-of-charge (SoC) estimation technology
- Edge computing module implementation
- Battery anomaly detection & early warning functions
- Electrochemical-based battery aging model
- Battery consistency diagnostics



Green & Low-Carbon Digital Intelligence Management System

- Enterprise grade standard IoT platform
- Integrated energy & carbon management platform
- AI driven intelligent strategies
- Digital twin
- Virtual power plant ("VPP")

AlphaESS Principal R&D Technology Directions

Products as the Foundation: Building Core Capability

The superior performance of the hardware engine is critical to ensuring the precise execution of AI algorithms and the stable release of asset value. AlphaESS has established a robust hardware foundation through a high-performance product matrix spanning all application scenarios and power ratings, providing solid support for the Company's full-lifecycle services and ensuring efficient and reliable operation of global energy assets across diverse operational environments.



STORION 313 Full Liquid-Cooled Outdoor Energy Storage Cabinet

Outdoor Energy Storage Cabinet
STORION Series

Targeting the dynamic energy demands of small- and medium-sized parks and high-load factory areas, the STORION series (e.g., the STORION 313 fully liquid-cooled outdoor energy storage cabinet) helps customers accelerate the green transition of their energy mix through extreme energy efficiency management and agile deployment capabilities:

Energy efficiency and emission reduction synergy

The system adopts a fully liquid-cooled architecture for both Pack and PCS, maintaining high efficiency under complex conditions. The annual integrated efficiency exceeds 88%, effectively reducing energy losses during conversion and storage.

Agile response supporting system resilience

With millisecond-level response, the series precisely supports VPP dispatch and peak-shaving and load-shifting needs, materially increasing local clean energy absorption and fundamentally optimizing the energy mix.

Resource-efficient and high-performance operation

The integrated modular design combining the high-voltage box and PCS optimizes footprint and construction cost, while supporting parallel operation of multiple units to deliver flexible, scalable low-carbon solutions.



Aster 6260 Liquid-Cooled Energy Storage System



All-In-One Residential SMILE-G3 Series

Energy Storage Container
Aster Series

For grid-side and ultra-large-scale energy storage applications, the Aster series (e.g., the Aster 6260 liquid-cooled energy storage system) sets a green benchmark for large-capacity energy storage by redefining space utilization and system safety.

Space efficiency and resource conservation

Through in-depth optimization of the physical architecture, the Aster series achieves a 25% increase in energy density at equivalent capacity and a more than 20% reduction in footprint, significantly reducing land use for large-scale deployment and improving energy output per unit area.

Full-lifecycle safety assurance

Integrating cell-level aerogel thermal insulation with intelligent liquid-cooling thermal management, the system maintains intra-pack temperature differentials within 2°C, effectively extending battery cycle life and safeguarding long-term asset reliability.

Smart & digital, low-carbon O&M

Combining cloud-based remote commissioning with AI-powered operational capabilities, the system significantly reduces the frequency and resource consumption of on-site maintenance, delivering robust technical assurance for the sustainable operation of utility-scale energy storage projects.

Residential Energy Storage
SMILE-G3 Series

Anchored in our technology-driven core, AlphaESS has launched the new-generation SMILE-G3 series, successfully addressing the challenges of overload adaptability, rapid response and flexible configuration under high-penetration renewable energy scenarios. The series significantly enhances system stability and regulation capability, providing solid technical support for the new-type power system.

Expanding the boundaries of PV oversizing

The new-generation inverter architecture supports up to 200% PV oversizing, enhancing system design flexibility and generation efficiency. It accommodates multiple independent maximum power point tracking (MPPT) channels and increases the input current capacity to 15–18A, aligning with the industry shift toward higher-power PV modules. This effectively addresses current mismatch issues and significantly boosts the power station's full-lifecycle energy revenue.

Reshaping grid interaction

Fully aligned with VPP dispatch needs, the series achieves 50-ms high-precision sampling and an average response latency of 50 ms, and sub-100-ms rapid response capability, advancing distributed energy storage from "passive integration" to "active support" and effectively enhancing regional grid flexibility and renewable energy integration.

Building an overload protection system

A multi-stage overload algorithm at industry-leading levels combines tiered overload strategies with phase-independent overload technology, effectively coping with complex grid conditions and three-phase imbalance. While ensuring equipment safety and continuous operation under extreme conditions, this significantly improves the reliability and inclusiveness of energy access in remote areas.

Reinventing energy storage architecture

A 96V architecture and "small-capacity modular" design fundamentally reduce high-voltage shock risks and increase configuration flexibility. Pre-charge-free design and flexible series / parallel combination enable lightweight single-person deployment and automatic isolation of faulty modules. Combined with active balancing technology, the design effectively extends battery cycle life and maximizes full-lifecycle energy output of the system.

Platform as the Hub: Enabling Smart Operations

As the global energy transition accelerates, C&I parks — concentrated areas of energy consumption and carbon emissions — face the dual challenges of optimizing their energy mix and controlling operating costs. AlphaESS leverages digital and intelligent technologies to break down the "information silos" of traditional energy management, building a coordinated system encompassing energy monitoring, load forecasting, intelligent dispatch, and comprehensive energy and carbon management. By transitioning from "visualized management" to "intelligent optimized operations", the Company enables parks to achieve an optimal balance among energy efficiency, cost reduction, and decarbonization targets, even within dynamic and complex energy environments.



Low-Carbon Smart Park Platform Interface

"AlphaCloud" Low-Carbon Smart Park Platform

AlphaESS has independently developed the AlphaCloud platform, building an integrated "one platform plus N applications" capability framework that deeply integrates AI algorithms, cloud platform, IoT and big data analytics to provide comprehensive smart energy management for parks.

Full-scenario modular configuration for enhanced management efficiency

The platform integrates multiple core modules including PV O&M, energy storage management, VPP operation, energy-and-carbon management and digital twin. Its flexible modular design enables precise configuration based on each park's energy structure and management needs, significantly enhancing cross-scenario, multi-dimensional energy management.

AI strategy-led optimization of energy costs

Targeting the minimization of electricity costs, the platform comprehensively considers maximum demand, real-time tariffs, PV-storage revenue and dispatch gains, automatically generating intelligent dynamic energy storage strategies. Backed by AI-driven precise prediction and feedback, the platform helps customers achieve revenue uplift of 5%–30%, transforming complex energy data into tangible economic and environmental benefits.

Generation-grid-load-storage coordination for grid resilience

Powered by a robust digital twin O&M system, the platform delivers real-time control and coordinated optimization across source, grid, load and storage. By supporting VPP aggregation and regional power dispatch, it ensures self-sufficiency and efficient management within the park while harnessing the flexibility of energy storage systems to provide flexibility support for the resilience and risk-resistance of the new-type power system.

Solutions as the Enabler: Driving Value Creation

Building on its core technologies and product matrix, AlphaESS develops innovative full-scenario integrated energy storage solutions covering utility / grid-side, C&I, and residential applications, meeting diversified market needs and unlocking the value of energy storage technology while enabling the deployment of green energy.

Case | Empowering Inclusive Green Energy with Safe, Efficient and Sustainable Solutions

Targeting the core pain points in residential energy storage — installation complexity, safety concerns and inadequate efficiency - AlphaESS developed the M Series PV-storage integrated solution with "absolute safety, ultra-fast deployment, and superior efficiency" as the core R&D objectives, redefining industry standards for residential energy storage and significantly lowering the threshold and full-lifecycle carbon footprint of clean-energy access.



SMILE-M5 Series

Optimized installation and maintenance experience

Innovation

Industry-first blind-mate stacking technology and integrated minimalist design eliminate installation and commissioning complexity, significantly reducing labor and time costs.

Technical Highlights

15-minute rapid installation and 5-minute one-click smart self-test reduce dependence on specialized tools and complex commissioning procedures. The lightweight, low-noise design (inverter weighing only 21kg, battery module ≤50kg supporting single-person handling, operating noise <35dB) enhances user experience while reducing resources required for installation and O&M.

Multi-dimensional intrinsic safety system

Innovation

Establishing "absolute safety" as the foremost R&D principle, the system has been comprehensively upgraded from cell chemistry to system architecture to eliminate user-side safety hazards.

Technical Highlights

(1) Comprehensive 48V low-voltage architecture reduces shock risk at the design level;
(2) the system deeply integrates aerosol fire-extinguishing technology and explosion-proof valve design, achieving early suppression of thermal runaway and safe physical pressure release, comprehensively safeguarding equipment integrity and user safety under extreme conditions.

Enhanced energy efficiency and adaptability

Innovation

A new-generation inverter platform with high compatibility and high overload capacity, fully aligned with the trend toward higher-power PV modules, enhancing solar harvesting efficiency and supply reliability.

Technical Highlights

(1) PV input current increased to 16A (with 25A short-circuit withstand), precisely matching mainstream full-size PV modules;
(2) the system supports up to 200% PV oversizing, materially boosting power generation under low-irradiance conditions;
(3) instantaneous overload capability of 150% load for 10 seconds and 200% load for 2 seconds effectively handles surge currents from high-power equipment startup, ensuring continuity of supply.

Deepened battery management technology

Innovation

Leveraging high-precision BMS algorithms to break through traditional discharge bottlenecks and maximize per-cycle energy output.

Technical Highlights

100% Depth of Discharge (DoD) full utilization eliminates capacity redundancy waste, significantly extending the equipment's economic service life and reducing resource consumption.

Industry-Academia-Research Cooperation

Adhering to a spirit of innovation, AlphaESS leverages its core technological strengths and rich practical experience in the energy storage industry, deeply integrating with the high-quality research resources of leading universities to drive the efficient transfer and application of research outcomes and inject sustained innovation momentum into the industry. We have established long-term, stable industry-academia-research partnerships with renowned universities including Xi'an Jiaotong University, Tianjin University, Nantong University, Nankai University and the University of New South Wales, conducting collaborative R&D and forward-looking research on key technologies such as energy storage system safety, full-lifecycle management of lithium-ion batteries and intelligent energy storage, while co-developing R&D platforms and jointly cultivating skilled professionals.

Case | AlphaESS and Xi'an Jiaotong University Cooperate on Cathode and Anode Recycling Technology for Retired Lithium-Ion Batteries

In May 2023, AlphaESS partnered with Xi'an Jiaotong University to advance technology in retired lithium-ion battery recycling and to systematically file patents on the related technologies. In 2025, the Company achieved breakthroughs in core equipment for cathode and anode recovery.

Efficient anode separation

The "Hot-Air-Assisted Powder Stripping and Separation Recycling Device for Lithium-Ion Battery Anodes" received a national patent grant, enabling efficient separation and high-purity recovery of graphite powder and copper material, significantly improving overall anode recovery efficiency, throughput and recycled material quality.

Flash-thermal cathode stripping

A jointly filed invention patent on a "Flash-Thermal Rapid Stripping and Recovery Device for Lithium-Ion Battery Cathode Current Collectors and Active Materials" was published by China's National Intellectual Property Administration on July 19, 2025. The device enables flash-thermal stripping of electrode sheets and efficient collection of electrode powder, fully preserving the integrity of aluminum foil and the active structure of the cathode powder, while significantly reducing energy consumption and process cost. This further refines the Company's technology system for efficient recovery of cathodes and anodes from retired lithium-ion batteries, providing key equipment support for high-value, low-carbon recycling of electrode waste and end-of-life batteries, and continuously advancing the closed-loop resource circulation and green low-carbon development of the new-energy industrial chain.



Case | AlphaESS and Tianjin University Cooperate on Energy Storage System Safety Technology

AlphaESS has deepened industry-academia-research collaborative innovation with Tianjin University by establishing the Tianjin University–AlphaESS Joint Research Center for Energy Storage System Safety. The two parties cooperate in technology research, product development, testing and validation, solution design and standard-setting across key areas such as energy storage equipment systems and energy storage safety O&M, advancing the R&D and application of energy storage safety-related technologies.

In November 2025, an invention patent application jointly filed by the university and the Company on a "Method for Automatic Generation of Causal Chains for Energy Storage Anomalies Based on Multi-Source Data Fusion" was officially accepted and published by China's National Intellectual Property Administration. By integrating multi-source heterogeneous data with large language model technology, the patent precisely localizes energy storage anomalies and automatically generates causal chains, materially improving fault diagnosis and O&M decision-making efficiency, and safeguarding the security of industrial data and the reliability of system operations.



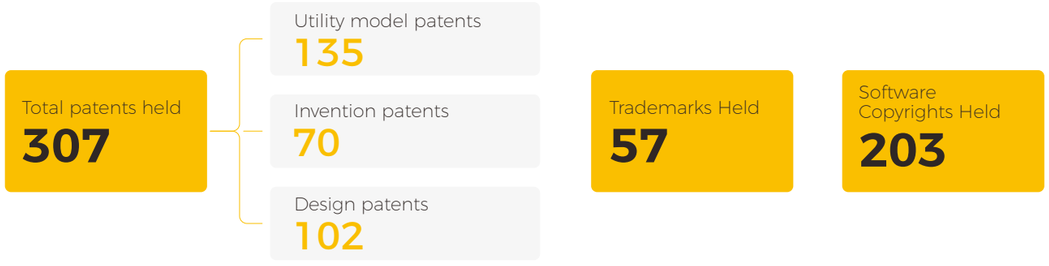
Intellectual Property Protection

Intellectual property is an essential component of AlphaESS's core competitiveness. We adhere to the management principle that "independent technological innovation leads the future of energy storage, and intellectual property protection enhances our competitiveness", and through systematic deployment and effective utilization, we lay a solid foundation for the Company's innovation-driven development strategy. The Company strictly complies with the *Patent Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China* and other applicable IP laws and regulations, fully respects the intellectual property of others while protecting our own, and conducts innovation activities on the basis of fairness and integrity.

To establish a comprehensive standardized intellectual property management system, the Company has formulated management policies including the *Intellectual Property Risk Control Procedures* and the *Intellectual Property Dispute Resolution and Emergency Plan*, and has signed *Confidentiality Agreements* and *Non-Compete Agreements* with key technical personnel, establishing a strong line of defense for technical confidentiality and forming a long-term protection mechanism. The Company has issued the *Intellectual Property Incentives and Penalties Policy*, which mobilizes employees' initiative and creativity through positive incentives and constraints, encouraging the generation, protection and efficient utilization of IP outcomes.

The Company has established AlphaESS Academy and leverages the AlphaESS Online knowledge platform to deliver systematic professional training to employees. To strengthen all-staff awareness of IP protection, the platform has a dedicated IP learning section and, in strict accordance with the Company's IP management requirements, regularly implements annual awareness campaigns and specialized training programs that embed compliance and innovation-protection principles into employees' daily practices.

AlphaESS Intellectual Property Status in 2025





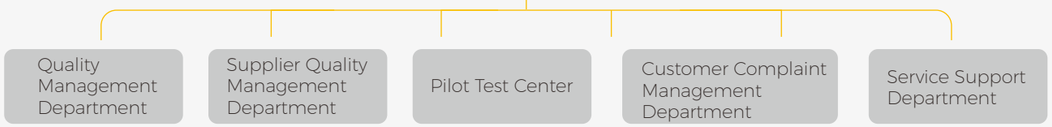
Product Responsibility

AlphaESS regards product quality as the lifeline of the enterprise. As an industry-leading provider of full-power-range energy storage system solutions, the Company adheres to the quality philosophy of "compliant operations, quality leadership, green development" and embeds quality requirements throughout the full-lifecycle of energy storage products-R&D, manufacture, sales and service — to deliver safe, reliable and efficient products and solutions to customers globally.

Strengthening Quality Management

Product Quality Management System

AlphaESS attaches great importance to quality management. We have built a comprehensive quality management system covering the full business process and a quality control chain spanning the entire product lifecycle, comprehensively safeguarding product quality and compliance.



AlphaESS Quality Management Structure

Guided by the quality policy and objectives of "Sincerity and traceability, improving every day; rigor and comprehensiveness, and ten years of zero defects in operation", the Company has formulated more than twenty quality-related management policies, including the *Quality Manual*, the *Safety Design Specifications*, the *Product Design and Development Control Procedure*, the *Production Process Control Procedure*, the *Outbound Inspection Process*, *the Non-conforming Product Control Procedure*, the *Product Scrap and Recall Procedure* and the *Quality Personnel Incentive Policy*. Through the application of leading quality management tools and methodologies — including Total Quality Management (TQM), the TS core tools[1], Quality Control Circle (QCC), the Seven QC Tools along with lean management principles and methodologies — the Company has established comprehensive quality controls covering product development, procurement, production, testing and market feedback.

The Company also establishes annual quality management targets and monitors progress toward their fulfillment.

AlphaESS Product Quality Management Targets

Quality Management Target	Unit	2025
Product recall rate	%	0
First pass yield ≥ 96.5%	Achieved / Not Achieved	Achieved
Incoming material qualification rate ≥ 98%	Achieved / Not Achieved	Achieved

[1] TS core tools: includes Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Statistical Process Control (SPC), Advanced Product Quality Planning (APQP), Production Part Approval Process (PPAP).

As of the end of the reporting period, AlphaESS's Nantong, Qidong and Malaysia production bases as well as Nantong Wohuiyun Energy Technology Co., Ltd. have all obtained ISO 9001 quality management system certification. AlphaESS products feature highly reliable structural design and are equipped with high-reliability, high-precision intelligent battery management systems. The Company's principal products have passed International Electrotechnical Commission (IEC) standards, the United Nations Manual of Tests and Criteria for Dangerous Goods Transport (UN 38.3), EU CE certification (including the Low Voltage Directive — LVD), VDE certification (Verband Deutscher Elektrotechniker), Underwriters Laboratories (UL) certification, the joint Australian/New Zealand Standard (AS/NZS), Japanese Industrial Standards (JIS) and other authoritative international safety and market-access certifications. These certification systems effectively meet compliance requirements in major regions globally, providing a reliable foundation for large-scale product export and overseas business expansion.



AlphaESS ISO 9001 Certification

We continuously improve our quality work, and carried out several quality improvement projects during the reporting period:

Introduction of Multi-Tiered Audits	Quality management personnel, ranging from front-line employees, team leaders/supervisors, and department heads, to plant managers and general managers, are organized into four tiers. Each tier conducts on-site process audits and product audits at designated intervals. The Quality Management Department creates a list of audit issues. After each audit, the auditors consolidate identified issues and follow up on each one by one until resolution.
Conducting Internal Product Audits	The "Check Sheet" — one of the Seven QC Tools — is used to cover all in-process products. This provides a platform for continuous optimization of product design and manufacturing, and each issue is followed up until resolution.
Application of Additional Quality Management Tools	Quality management methods are optimized in line with the Company's quality objectives to achieve lean quality management. Quality Gate, QCC (Quality Control Circle), and other tools are applied.

Examples of Quality Improvement Projects

Full-Chain Quality Assurance

Building on the Company's comprehensive quality management system, AlphaESS has established sound process systems and quality management methodologies at every stage — from supplier early-stage development, raw material inbound, production process to outbound shipment — establishing a quality control chain across the product full lifecycle. During the reporting period, the Company experienced no product recall events.

Raw Material Warehousing	◆ Quality inspectors conduct inspections based on part drawings and preset sampling levels and synchronize the results with relevant functional modules such as warehouse and supplier management.
Product Production	◆ The quality team, composed of process control and production personnel, performs self-inspection, cross-inspection, full inspection, and routine inspection on each process in accordance with the Operation Instruction and the Inspection Instruction. All materials used and operations performed at each stage are recorded in the MES.
Product Dispatch	◆ We ensure that only qualified products are stored in the finished goods warehouse. All qualified products will be subject to a cross-departmental sampling inspection prior to dispatch.
Product Identification and Traceability	◆ We have established the *Product Identification and Traceability Control Procedure* to regulate product identification management and define product traceability procedures. ◆ Using the MES, we record the quality inspection statuses of the entire production process (including materials, in-process products, and finished products). Each product's serial number is linked to its respective quality records, ensuring the traceability of our products.

AlphaESS Quality Control Initiatives



Product Safety Assurance

Product Safety Management

Energy storage battery systems (ESS) entail multiple safety risks, principally including battery overheating, short circuits, overcharging and over-discharging, all of which may lead to thermal runaway, fire or explosion. AlphaESS places a high priority on product safety management of energy storage battery systems, fully embedding the safety philosophy across the full lifecycle of product design, manufacturing and operation, and building a comprehensive, end-to-end safety management system. During the reporting period, the Company experienced no product safety incidents.

Design Process	◆ Adhering to the Safety *Design Standards*, we ensure adequate electrical clearance and creepage distances to avoid internal short circuits. ◆ Simulation tools guide our product design and manufacturing, allowing us to identify and optimize potential issues in advance. ◆ Preliminary safety tests are conducted based on safety regulations during the prototype phase to verify product safety performance. ◆ New technologies and processes are thoroughly validated for reliability before their implementation. ◆ Following the design standards, a dual explosion-proof valve design is applied to both the battery cell and the battery enclosure
Production Process	◆ The Company strictly implements a complete factory inspection process, conducting comprehensive testing of products to ensure that product quality meets safety standards before shipment. ◆ Safety testing covers six key areas: battery safety, electrical safety, fire safety, management safety, structural safety and environmental reliability. Key test items include crush/overcharge tests, insulation withstand voltage tests, thermal runaway propagation tests, structural strength tests, and salt spray tests.
Operation Process	◆ The BMS and the cloud platform are used to monitor and mitigate product safety risks. ◆ The BMS monitors key battery parameters in real time, executes thermal management, adjusts balancing functions, and detects abnormal battery states, ensuring safe battery usage and operation. ◆ The cloud platform collects and analyzes extensive data from the BMS to assess battery health status. It also enables remote monitoring and alarming, maintenance and optimization, as well as software updates and repairs. The synergy of the BMS's real-time monitoring and protection functions with the cloud platform's data analysis, remote monitoring and maintenance capabilities significantly enhances the safety of energy storage battery systems, preventing and mitigating safety incidents.

Product Safety Risk Management and Prevention Initiatives

The Company also complies with the EU *Restriction of Hazardous Substances Directive* (RoHS), the EU *Registration, Evaluation, Authorization and Restriction of Chemicals Regulation* (REACH) and other regulations on prohibited and restricted substances. By implementing systematic risk identification, assessment, and control across raw materials and finished products, the Company ensures effective management of hazardous substances and delivers safe, environmentally compliant products.

Quality Culture Development

AlphaESS places great emphasis on the management of product and service quality and is equally committed to advancing a robust corporate quality culture. The Company comprehensively deploys initiatives covering quality talent *pipeline development, talent incentives and skills training, continuously reinforcing the cultivation of a quality culture.*

To strengthen the engagement and performance of quality professionals, AlphaESS has formulated a *Quality Personnel Incentive Policy*. Contributors who demonstrate exceptional efficiency, identify product or process risks in a timely manner, or propose effective improvement suggestions are recognized with commendation, point-based rewards, performance accolades and special incentives. The Company also delivers multi-dimensional, multi-format quality training tailored to different roles, ensuring training content is practical, methods are flexible and outcomes are tangible.

New Employee Quality Training

- We implement new employee quality training through online platform courses and pre-employment training.

Routine Meetings

- Quality, warehouse, and production staff are trained in daily team meetings and weekly factory meetings.

Flexible Quality Training

- Quality, warehouse, and production staff must attend flexible internal and external training according to the Company's annual training plan. We also engage third-party consulting firms for intensive on-site training.

Quality Month and Technical Competition

- Held bi-monthly, these events reinforce our commitment to a culture of quality. They include all-hands morning meetings at the factory, commendations for outstanding individuals and teams, and collective signing of a commitment declaration followed by motivational pledge ceremonies.

Quality Training System



Responsible Marketing

Adhering to the core value of being "customer-centric", AlphaESS positions responsible marketing as a core focus of corporate sustainability, embedding it across brand communication, channel management and customer engagement. The Company is committed to truthful information, compliant content and transparent communications, earning the trust of global customers and stakeholders through honest and professional marketing practices.

Responsible Marketing Management System

The Company continuously refines its marketing compliance management system. We have formulated policies including the *Management Mechanism for the External Release of Product Marketing Materials*, defining the basic compliance principles, content review responsibilities and applicable scope of marketing activities. To safeguard the truthfulness and transparency of marketing information, the Company standardizes statements regarding the environmental benefits of products, ensuring that all promotional language is supported by data from technical projects. In terms of process control, the Company has established a standardized content review workflow covering main marketing channels, clarified the review responsibilities of each functional department, required that important marketing materials be reviewed by multiple parties before external release, and implemented a marketing-content version management mechanism to ensure consistency, accuracy and timeliness of information across channels.

In partner management, the Company has incorporated responsible marketing requirements into distributor and partner agreements, requiring partners to commit to compliance with the Company's brand-use guidelines and marketing-content compliance requirements, providing periodically updated official marketing material packs, and establishing a random spot-check mechanism for third-party channel marketing content.

During the reporting period

Material marketing violations / regulatory penalties
0

Product parameters released after content review
100%

Responsible Marketing Training

The Company has incorporated responsible marketing capability building into its overall training framework, organizing dedicated training for marketing departments, covering fundamentals of advertising laws and regulations, industry-specific green marketing guidelines, complaint handling requirements, and case studies of common compliance risks, and regularly issuing the *Marketing Risk and Compliance* newsletter, with the aim of enhancing compliance awareness and professional capability among marketing, sales and partner-channel personnel, preventing false-advertising risks at the source and embedding the responsible marketing philosophy into business practice. The Company requires all relevant personnel to abide by laws, regulations and industry codes, conducting marketing activities with integrity, transparency and accountability, and jointly safeguarding corporate reputation and consumer rights.

Topics Covered by the *Marketing Risk and Compliance* Newsletter

- False advertising and compliance management
- Compliance boundaries under advertising law
- Fair competition and market order maintenance
- Compliance requirements for the use of maps
- Compliant use of intellectual property

During the reporting period

Special training sessions on responsible marketing
13

Customer Rights and Service

Customer Relationship Management

Based on user scale, energy-use characteristics and scenario needs, the Company classifies its consumers and end-users into the following principal categories:



Large-scale / C&I Users

Service targets include industrial enterprises, industrial real estate operation and investment parties, district/county governments, and energy project investment and operation parties. These solutions apply to scenarios above 30kW, with core functions covering peak-valley arbitrage, dynamic capacity expansion, backup power, peak shaving and frequency regulation, demand response, smoothing output, and delaying transmission and distribution equipment investment, supporting the coordinated optimization of "source-grid-load-storage" applications.



Residential / Micro Users

Provide residential users with a comprehensive solar-plus-storage portfolio ranging from 1 to 20 kW, helping increase the proportion of self-consumed PV power, enabling peak-valley arbitrage, reducing electricity bills, and supplying emergency backup power. Product offerings include all-in-one solar and storage systems, portable outdoor energy storage, balcony solar-plus-storage system, and EV chargers, all supported by the feature-rich AlphaCloud platform for remote monitoring and energy management services.

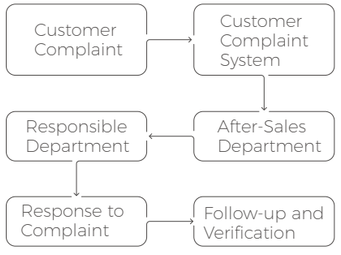
We recognize that, as critical energy infrastructure, any failure in the safety or reliability of energy storage systems could directly cause service interruptions or property loss to end-users. To this end, the Company has built a four-tier protection system covering material safety, system safety, production safety and testing safety, and partners with leading insurers both domestically and internationally to provide product insurance coverage, ensuring that end-users receive sustained safety assurance throughout the product full lifecycle.

In addition, through the AlphaCare service system and the AlphaPartner partner platform, the Company provides full-process service support to distributors, installers and end-users — including pre-sales consultation, installation training, repair and replacement, and recycling — combining online and offline channels to continuously enhance customer satisfaction and service responsiveness.

Customer Protection and Service Process

The Company has established a comprehensive customer service process and developed a series of management policies including the *Customer Complaint Management Procedure* and the *After-Sales Issue Handling Procedure*, covering customer enquiries, complaints and after-sales service. Through the AlphaCloud management platform, the Company provides quantifiable tracking management of every customer's service journey, ensuring effective response and timely resolution at each step.

To rapidly respond to customer needs, the Company has built diversified customer feedback channels. Customers can directly create complaint tickets via the AlphaCloud management platform or call the after-sales service hotlines published in the warranty manual, official website and other channels. Customer feedback is processed through a closed-loop mechanism of "weekly aggregation and analysis, dedicated solution development, cross-departmental collaborative remediation", ensuring that every request is responded to in a timely and substantive manner.



Customer Complaint Handling Process

In accordance with the Customer Satisfaction Management Procedure, the Company conducts customer satisfaction surveys regularly. During the reporting period, the survey covered key distributors and end-customers across major global regions including Europe, Oceania and Asia-Pacific, encompassing four dimensions: product, service, delivery and value-for-money. The overall customer satisfaction rate reached 89.4%, reflecting strong recognition of the Company's product quality and service standards.



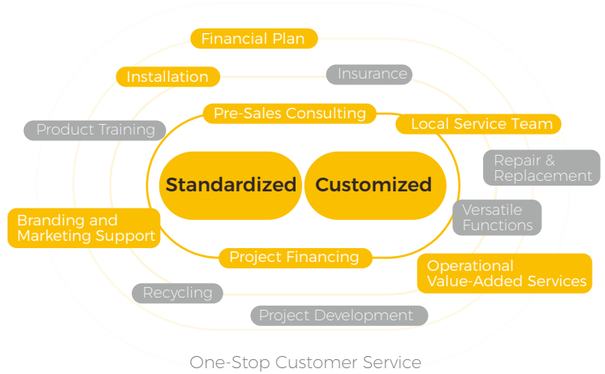
Customer Satisfaction Survey Process

Customer Experience Enhancement

AlphaESS continually refines its customer service system, dedicated to providing professional, high-standard service experience. The Company has built a one-stop customer service platform that delivers full-process service assurance to users, and has launched the AlphaCare package tailored for distributors and installer partners, providing comprehensive technical support, energy management and marketing services to enhance the experience and satisfaction of all customer groups.

One-Stop Service

The Company focuses on multiple dimensions including products, technology, customer service and maintenance, sustainability and internationalization, providing personalized and comprehensive one-stop customer service to ensure customers enjoy an outstanding experience across the purchase, use and maintenance of energy storage systems.



One-Stop Customer Service

AlphaCare Customized Package

The Company has customized the AlphaCare package specifically for commercial energy partners. Integrating four core modules—technical support, marketing support, the AlphaCloud energy management platform, and the AlphaPartner service platform—the program delivers end-to-end support spanning online services, co-marketing initiatives, ticket management, and an e-commerce portal. This comprehensive suite empowers distributors and installers to enhance brand competitiveness and streamline operational efficiency.



Individual Account | Instant Messaging | Work Order Management | Online Store | Active User Community

AlphaCare Package

Safeguarding a Green Future

Under the global consensus of addressing climate change and fulfilling "Net-Zero" commitments, AlphaESS consistently upholds a green development strategy, deeply embedding climate governance and resource efficiency into the entire life cycle of corporate operations. Leveraging leading energy storage technologies, we are committed to empowering global customers to achieve low-carbon transformation through green energy solutions, while strictly benchmarking against international disclosure standards to systematically enhance corporate climate resilience. From optimizing environmental management systems and refining pollution control to actively exploring the circular economy and biodiversity conservation, we leverage the power of technology to drive green industrial transformation, dedicated to achieving our own emission reductions and footprint mitigation while providing the "AlphaESS Solution" to build a zero-carbon future and contribute long-term value.

03

Corresponding SDGs:



Respond to Climate Change

Global climate challenges not only profoundly impact natural ecosystems but also concern the long-term strategic resilience of enterprises. To effectively respond to climate risks and capture low-carbon opportunities, AlphaESS deeply integrates climate change issues into its core governance system and long-term development strategy. In accordance with the recommendation of the IFRS S2 and the *Guidance on Climate Disclosures* issued by the Stock Exchange, and in combination with the characteristics of the global energy storage industry, we have established a comprehensive climate risk management and disclosure framework across four dimensions: governance, strategy, risk management, and metrics and targets.

Governance

To effectively address climate challenges, AlphaESS has established a three-tier climate governance system with well-defined roles, responsibilities, and efficient synergy, forming an organizational structure that ensures seamless connectivity between the Board, management, and execution levels, ensuring that climate-related decisions are effectively integrated into the Company's strategy and daily operations to provide a solid institutional guarantee for enhancing corporate climate resilience.

Strategy and ESG Committee	• Oversee corporate sustainable development and climate change strategies while providing core decision-making support and recommendations to the Board • Exercise comprehensive oversight of material ESG issues, including climate change, to ensure alignment with the Company's long-term development objectives • Periodically assess climate management performance and review the fulfillment and execution efficacy of emission reduction metrics, interim targets, and action plans
ESG Management	• Responsible for the overall planning and execution of climate governance, strengthening cross-departmental resource integration, and identifying and assessing climate risks and opportunities • Refine and implement the Company's climate change-related targets, establish a regular reporting mechanism, and assist the Strategy and ESG Committee in optimizing climate response strategies
ESG Execution	• Composed of departments within the climate change remit, ensuring the deep integration of all emissions reduction measures into operational activities • Strictly execute all emission reduction management measures to ensure the effective implementation and high-quality delivery of climate action plans at the operational level • Continuously monitoring the achievement of key climate action indicators and regularly reporting emissions reduction outcomes to ESG Management

Climate Governance Structure and Responsibilities

AlphaESS is committed to continuously strengthening the professional competencies of the decision-making level in climate-related fields. Leveraging deep accumulation in the energy storage and green energy industries, the Board and management maintain high strategic sensitivity toward global climate trends and low-carbon policies. The Company is steadily establishing a regularized climate capacity-building mechanism, aiming to systematically enhance the governance level's risk assessment and informed decision-making in complex climate environments via specialized training and external consultations.

AlphaESS is actively exploring the integration of climate metrics into management performance evaluations. While climate factors are not yet directly linked to remuneration, the Company prioritizes the strategic guidance provided by incentive mechanisms. Looking ahead, we will closely monitor regulatory trends and industry benchmarks to establish a science-based climate performance indicator system aligned with operational realities. Institutionalized mechanisms will be employed to strengthen accountability for green and low-carbon objectives across all organizational levels.

Strategy

AlphaESS regards addressing climate change as a core driver of long-term corporate development. In close alignment with the unique characteristics of the global energy storage industry, the Company deeply integrates climate risk management and opportunity capture into its strategic design and business models. By formulating and implementing targeted strategic response measures, the Company aims to continuously optimize resource allocation, bolstering corporate long-term competitive advantage and sustainable development resilience while supporting the global energy transition.

Climate Risk and Opportunity Identification

AlphaESS has established a regularized climate risk and opportunity management mechanism designed to systematically identify potential impacts across short-term (0-2 years), medium-term (2-5 years), and long-term (5-10 years) horizons. Through qualitative assessments of various climate factors, the Company has developed targeted response measures and deeply integrated them into daily business planning to continuously strengthen corporate climate adaptability.

AlphaESS Climate-related Risk and Opportunity Identification

Climate-related Risks and Opportunities	Potential Impacts on the Business Model and Value Chain	Potential Financial Impacts	Time Horizon	Response Measures
Physical Risks				
Acute risks • Extreme weather events (e.g. hurricanes, heavy rainfall, flooding, heatwaves, and severe cold)	• Extreme weather may directly damage the Company's infrastructure or force the suspension of certain production and operational activities • Affected by extreme weather, some project construction and operation and maintenance activities may experience phased interruptions due to personnel safety risks and construction site constraints • The operational performance and safety stability of energy storage systems face higher requirements in extreme temperature environments, which increases complexity of operation and maintenance	• Decrease in asset value • Increase in operating costs • Decrease in revenue	Short-term Medium-term Long-term	• Formulate emergency response procedures and conduct regular training and drills to enhance the capacity for contingency response and handling • Strengthen disaster prevention capacity building at production bases and project sites (such as flood control, wind proofing, and temperature control measures) • Optimize the thermal management and safety design of energy storage systems to enhance product stability and safety under extreme climate conditions Establish digital monitoring and • early warning mechanisms to improve responsiveness to extreme weather events
Chronic risks • Extreme changes in climate and precipitation patterns • Continuous rise in sea levels • Continuous rise in average temperatures	• Extreme changes in climate patterns may affect the extraction and processing of raw materials, leading to supply chain volatility • The continuous rise in average temperatures may intensify pressure on product thermal management, potentially compromising cycle life and warranty obligations • Rising sea levels jeopardize the long-term security of production bases, logistics centers, and customer assets located in low-lying coastal regions	• Increase in operating costs • Decrease in revenue • Decrease in asset value	Medium-term Long-term	• Establish supplier diversification procurement strategies to mitigate raw material dependence on climate-vulnerable regions • Accelerate R&D investment in AI-driven thermal control technologies to ensure product stability in high-humidity and high-temperature environments • Conduct periodic disaster-resilience assessments of production sites and surrounding areas, implementing physical reinforcements or drainage upgrades where necessary

Climate-related Risks and Opportunities	Potential Impacts on the Business Model and Value Chain	Potential Financial Impacts	Time Horizon	Response Measures
Transition Risks				
Policy and regulation risks • Rising carbon prices • Implementation of carbon tariffs • Tightening of regulatory requirements for climate-related disclosures • Product carbon footprint reporting requirements	• Rising carbon prices may cause upstream supply chain suppliers to incur higher carbon costs, which may subsequently be passed on to the Company • The implementation of the EU Carbon Border Adjustment Mechanism (CBAM) increases the complexity of overseas market access and associated compliance risks • Heightened disclosure requirements from Chinese and international regulators regarding climate and environmental information increase overall compliance pressure • Policies such as the EU Battery Regulation mandate life-cycle carbon footprint declarations, compelling the supply chain to undergo low-carbon technical upgrades	• Increase in operating costs • Increase in export costs • Increase in capital expenditure • Increase in R&D investment	Medium-term Long-term	• Optimize the supplier management system by incorporating low-carbon performance and energy efficiency indicators into supplier selection and qualification criteria • Establish a robust climate compliance mechanism to dynamically track the evolution of domestic and international climate policies and disclosure standards • Promote low-carbon product design and system integration to reduce life-cycle carbon intensity through technical innovation • Strengthen carbon data management capabilities and progressively improve the product carbon footprint accounting system
Technology risks • R&D and investment in low-carbon transition technologies • Rising requirements for energy storage safety and performance	• The escalation of low-carbon technical standards requires the Company to allocate significant capital to research and development • Accelerated technological iteration may challenge the competitiveness of existing products and current technical roadmaps • The application of new technologies must be tailored to diverse scenarios, increasing the complexity of system integration	• Increase in R&D investment	Medium-term Long-term	• Optimize the allocation of R&D resources to focus on breakthroughs in core low-carbon technologies • Continuously drive core technical breakthroughs and product iterations to enhance performance and adaptability • Strengthen industry-academia-research collaboration to enhance technological innovation and the efficiency of achievement commercialization
Market risks • Customer demand for low-carbon products and services • Fluctuations in energy pricing • Supply chain instability	• Customers make procurement decisions by benchmarking the product carbon footprint data of various suppliers • Energy price volatility and shifts in renewable energy supply and demand impact on the revenue models of energy storage projects • Fluctuations in energy prices and imbalances between renewable energy supply and demand affect product costs and pricing	• Increase in operating costs • Increase in capital expenditure • Increase in procurement costs	Short-term Medium-term Long-term	• Continuously develop the product carbon footprint accounting system while optimizing production processes and material selection to reduce carbon intensity • Expand diversified energy storage application scenarios and business models to enhance the stability of project returns • Optimize supply chain layout and inventory management strategies to bolster supply chain resilience • Strengthen market trend analysis and responsiveness to customer needs
Reputation risks • Increasing prioritization of climate action by investors and stakeholders	• Capital markets are imposing increasingly stringent requirements on corporate low-carbon performance and the quality of climate disclosures • ESG performance and the quality of climate disclosure may impact brand equity and investor confidence	• Decrease in financing channels • Depreciation of corporate valuation	Medium-term Long-term	• Strictly comply with all regulatory requirements for climate disclosure and continuously enhance the quality of ESG reporting • Proactively strengthen communication and engagement with various stakeholders to ensure the timely and accurate dissemination of information • Continuously refine the ESG and climate governance framework, strengthening the Board's oversight and management of climate-related issues
Opportunity Types				
Products and services • Energy transition and rising demand for low-carbon solutions	• As the transformation of the energy mix accelerates, demand for energy storage applications continues to grow across the generation side, grid side, and user side • Rising demand among C&I users for cost reduction, efficiency, and low-carbon transition is expanding the market for energy storage solutions • The development of new power systems is deepening the application of energy storage in peak shaving, frequency regulation, and renewable energy integration	• Increase in revenue	Medium-term Long-term	• Continuously explore innovative photovoltaic and energy storage solutions to meet the diversified market demand for sustainable products • Explore diversified business models (such as ancillary grid services) to enhance the comprehensive revenue potential of projects • Actively participate in industry collaboration and the formulation of technical standards to enhance market influence

Climate Scenario Analysis

To systematically assess the potential impact of climate-related risks and opportunities on medium- and long-term strategies, AlphaESS has constructed two climate scenarios—low-emission and high-emission—by referencing the representative pathways proposed by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA). Through qualitative scenario analysis, we evaluated the potential effects of different evolutionary trends on global business layout, supply chain stability, and end-market demand, whereby findings provide a basis for dynamically adjusting climate strategies and resource allocation to continuously enhance business climate resilience.

AlphaESS Climate Scenario Descriptions

Type of Climate Scenario		Climate Scenarios Descriptions
Physical Risks	Low-emissions Scenario	SSP[2]1-2.6 (IPCC) The global economy accelerates its transition from a high-carbon model toward renewable energy dominance, actively implementing climate mitigation and adaptation measures while ensuring a continuous decline in GHG emissions. Global warming is projected to be limited to approximately 1.5°C–2°C above pre-industrial levels by the end of the century. Under this scenario, physical risks are generally manageable, though extreme weather events may still cause phased impacts on energy system stability and infrastructure operations.
	High-emissions Scenario	SSP5-8.5 (IPCC) The global economy remains persistently dependent on fossil fuels for growth, characterized by a lack of climate policies or insufficient enforcement, leading to a continuous rise in GHG emissions. Global average temperatures are projected to rise by 4°C or more above pre-industrial levels by 2100. Under this scenario, the frequency and intensity of extreme weather events increase significantly, posing severe physical risks to energy infrastructure, supply chains, and system operational safety.
Transition Risks	Low-emissions Scenario	Net Zero Emissions by 2050 Scenario (IEA NZE 2050) Global energy transition is accelerated through the large-scale deployment of renewable energy, energy storage, and efficiency improvements, aiming for net zero emissions by approximately 2050 to limit global warming to within 1.5°C. Under this scenario, the rapid development of low-carbon technologies significantly boosts demand for critical solutions such as energy storage, while imposing higher requirements on corporate carbon management, technical innovation, and business model transformation.
	High-emissions Scenario	Stated Policies Scenario (IEA STEPS) Based on projections of policies currently implemented or explicitly committed to by various nations, climate policy advancement remains relatively limited, and the pace of global energy transition is moderate. Global warming levels this century are expected to exceed the targets of the Paris Agreement. Under this scenario, the policy and market environments are characterized by uncertainty, and enterprises face phased transition pressures regarding compliance costs, technical roadmap selection, and market demand.

[2] SSP: Shared Socioeconomic Pathways, refers to scenarios sourced from the IPCC Sixth Assessment Report (AR6).

As assessed, the Company's existing global business layout, supply chain system, and operational management mechanisms possess foundational resilience against climate-related risks. During the reporting period, no major operational disruptions or asset losses resulting from climate-related risks occurred, and business operations maintained stable performance.

Building upon the scenario analysis results, the Company has identified global supply chain resilience, the security of critical raw material supply, and climate policy and compliance requirements in overseas markets as key areas for continuous focus. Given that climate-related risks are characterized by long-term, complex, and non-linear traits, and their transmission pathways to financial performance involve multiple variables and assumptions, a degree of uncertainty remains in independently quantifying the assessment of single climate factors at this stage. Consequently, the Company currently prioritizes qualitative analysis, utilizing scenario assumptions for a comprehensive assessment of risks and opportunities, and is yet to disclose separate quantitative financial metrics. Looking ahead, as the data foundation continues to improve and analytical methodologies mature, the Company will prudently advance quantitative assessment work to continuously enhance disclosure transparency and decision-making relevance.

By comprehensively evaluating current carbon cost transmission pathways and management priorities, the Company has determined that internal carbon pricing will not be included in the implementation toolkit at this stage. Management focuses are centered on operational energy efficiency refinement, supply chain decarbonization collaboration, and life-cycle carbon footprint tracking. AlphaESS will closely monitor global carbon market mechanisms and regulatory dynamics, and in conjunction with the evolution of corporate strategy and changes in carbon risk exposure, periodically re-evaluate the feasibility of internal carbon pricing. Under the prerequisites of ensuring financial consistency and operational stability, we will continuously optimize resource allocation decisions to drive the long-term sustainable growth of the enterprise.

Risk Management

AlphaESS continuously improves its identification and management system for climate-related risks and opportunities, and has fully integrated into the Company's overall risk management framework. By institutionalizing annual risk assessment processes, the Company ensures that climate-related issues are identified, evaluated, and managed in synchronization with other business risks. The assessment results are incorporated into business decision-making and resource allocation processes to enhance the Company's overall risk response capabilities and operational resilience.

Throughout the risk assessment process, the Company systematically identifies and categorizes various climate and ESG risks based on business characteristics and operational realities, thereby clarifying key risk areas and priorities to drive the rational allocation and efficient utilization of management resources. Building upon existing risk management practice, the Company has established a structured climate risk assessment mechanism, conducting comprehensive evaluations across the following key dimensions:

Probability	Evaluates the frequency and likelihood of specific climate risk occurring within the Company's manufacturing, project construction, and energy storage system operations. Risks with a higher probability or those more easily triggered within critical business segments are assigned higher priority.
Impact	Comprehensively assesses the potential effects of risk events on the Company's operational activities, including impacts on production and delivery schedules, energy storage system safety and performance, supply chain stability, and project fulfillment capabilities. A comprehensive judgment is made by incorporating potential financial losses, operational disruptions, and reputational and compliance risks.
Adaptability	Assesses the Company's capability to address risks before and during their occurrence through technical solutions (such as system design optimization, thermal management, and safety controls), operational management, and supply chain adjustments. Risks with low coverage by existing measures or those requiring additional resource investment are assigned higher priority.
Recovery	Evaluates the time and resource investment required for the Company to restore production operations, project execution, and stable energy storage system performance subsequent to the occurrence of a risk event. Risks characterized by longer recovery cycles and significant impacts on client projects and business continuity are assigned higher priority.

AlphaESS Climate Risk Assessment Mechanism

Metrics and Targets

Adhering to the governance principles of prudence and transparency, AlphaESS regards high-quality data as the core foundation for reviewing the effectiveness of climate actions and driving the continuous optimization of its management systems. During the reporting period, the Company continuously refined its greenhouse gas (GHG) accounting system. While consolidating the data quality of Scope 1 and Scope 2 emissions, the Company actively responded to global value chain decarbonization trends by steadily advancing Scope 3 carbon footprint accounting practices, which aims to empower upstream and downstream collaboration toward a low-carbon transition through transparency across the entire value chain.

GHG Emissions of AlphaESS in 2025

Indicator	Unit	2025
Scope 1 GHG emissions[3]	**tCO_2e**	**659.79**
Stationary emission sources	tCO_2e	82.25
Mobile emission sources	tCO_2e	331.98
Fugitive emission sources	tCO_2e	245.56
Scope 2 GHG emissions[4]	**tCO_2e**	**3,936.86**
Purchased electricity	tCO_2e	3,936.86
Total GHG emissions (Scope 1 + Scope 2)	**tCO_2e**	**4,596.65**
GHG emissions intensity (Scope 1 + Scope 2)	**tCO_2e/RMB 10,000 revenue**	**0.0161**
Scope 3 GHG emissions[5]	**tCO_2e**	**1,286.42**
Category 3: Fuel- and energy-related activities[6]	tCO_2e	723.04
Category 6: Business travel[7]	tCO_2e	563.38

During the reporting period, the Company's total GHG emissions increased, which was primarily driven by the continuous refinement of the environmental data collection system, where improvements in data quality and coverage resulted in more complete and accurate emission statistics. Additionally, the expansion of overseas business operations and the concentrated release of production capacity from newly operational manufacturing sites led to a synchronized growth in energy demand. Aligned with current growth stage, AlphaESS is committed to deeply integrating low-carbon development concepts into global operations and life-cycle product management, continuously exploring emission reduction potential through lean operations and energy efficiency optimization while ensuring R&D efficiency.

Regarding resource allocation, although the Company has not established an independent capital expenditure plan specifically for climate risks at this stage, it has begun incorporating climate resilience factors into the comprehensive considerations of production base construction, green product R&D, and renewable energy infrastructure to enhance long-term asset resilience. To address the emission pressures resulting from output growth, the Company will dynamically monitor emission intensity indicators and effectively manage the marginal impact of scale expansion on carbon emissions through process energy efficiency upgrades, clean energy substitutions, and the deployment of digital energy management systems.

[3] During the reporting period, stationary and mobile emission sources primarily encompassed the consumption of natural gas, gasoline, diesel, and liquefied petroleum gas within operational processes. The calculation formula is GHG emission from fossil fuel combustion = fuel consumption × average low level heating value × carbon content per unit calorific value × fuel carbon oxidation rate × 44/12. Relevant fuel parameters are based on the General *Rules for Calculation of the Comprehensive Energy Consumption* (GB/T 2589-2020) issued by the State Administration for Market Regulation and the Standardization Administration of the People's Republic of China, as well as the *Guidelines for Accounting and Reporting of Greenhouse Gas Emissions from Enterprises - Power Generation Facilities* published by the Ministry of Ecology and Environment. Fugitive emission sources primarily cover uncontrolled leakages from fire extinguishers, septic tanks, and air-conditioning refrigerants within office and production areas. All Global Warming Potential values adopt the 100-year time horizon parameters provided by the IPCC AR6.

[4] During the reporting period, Scope 2 emissions primarily covered purchased electricity from various global operating entities. Relevant emissions were calculated using the location-based method, categorized according to the electricity carbon dioxide emission factors of the respective countries or regions.

[5] During the reporting period, the Company identified and analyzed Scope 3 categories in accordance with the *Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard*. Within the scope of current data collection capabilities, we have quantified and disclosed GHG emission data for Category 3 and Category 6.

[6] Category 3 primarily involves GHG emissions from the upstream extraction, production, and transportation of fuels and purchased electricity consumed during operations, as well as grid transmission and distribution losses. The calculation formula is emissions from energy-related activities = energy consumption × corresponding upstream lifecycle/transmission loss emission factor.

[7] Category 6 primarily involves aviation, high-speed rail, and road transportation resulting from employee business travel. The calculation formula is business travel emissions = business travel distance (or expenditure) × emission factor for the corresponding mode of transport.

Case | AlphaESS Nantong "Near-Zero Carbon Industrial Park"

AlphaESS utilizes the Nantong Headquarters as a "proving ground" for the Company's low-carbon transition and technological applications. By integrating self-developed full-range energy storage products with a digitalized energy management platform, the Company has established a near-zero carbon demonstration model that features a synergetic "solar, storage, charging, cloud" integration.

Deep Synergy in Integrated Solar-Storage-Charging	The industrial park aggregates 1.4 MW of distributed PV, 7.5 MWh of energy storage containers, and 55 kWh all-in-one solar-storage cabinets. The configuration achieves an annual PV generation of approximately 1.4 million kWh and energy storage discharge of approximately 4 million kWh, which fully covers the electricity demand for office operations, production, and nearly 40 EV charging piles, constructing an internal energy micro-circulation of "clean generation, intelligent storage, and low-carbon mobility".
AI Algorithm-Driven Energy Forecasting and Optimization	Leveraging the Company's proprietary "Low-Carbon Smart Park Platform," the industrial park integrates AI algorithms, cloud platforms, IoT, energy big data analysis, and forecasting technologies. These capabilities enable not only precise coordination of "generation-grid-load-storage" at the industrial park level, but also friendly interaction with the power grid through VPP functionality, thereby driving a systemic optimization of the park energy structure. Measured data indicates that since the system began operation in July 2024, the intelligent scheduling of AI algorithms has increased energy storage system operating returns by over 20% while reducing demand-based electricity charges by approximately 5% compared to the traditional 'two-charge, two-discharge' strategy in Jiangsu Province, which has been an achievement that maximizes both energy efficiency and environmental benefits.
Project Results	Calculations indicate that the near-zero carbon industrial park is expected to save 420.98 tons of coal equivalent and reduce carbon dioxide emissions by approximately 1,153.6 tons. The innovative practice not only showcases the latest achievements in high-efficiency energy utilization and flexible management, but also actively explores a benchmark model for deep decarbonization in the manufacturing sector by utilizing its own operational base as a proving ground for the full-scenario application of self-developed storage technologies and the green transformation of energy structures. Building on the outstanding performance in low-carbon transition, the project was awarded the "2025 Energy Storage Application Innovation Model TOP10" at the 9th International Energy Storage Innovation Competition in 2025.



AlphaESS Nantong Near-Zero Carbon Industrial Park

Green Operations

AlphaESS firmly believes that green and low-carbon practices constitute the core foundation of high-quality development in the manufacturing industry. As a global leader in the energy storage sector, we deeply integrate sustainability concepts into every stage of operations and commit to the construction of a life-cycle environmental management system. We have continuously refined resource utilization efficiency, strengthened the closed-loop management of various pollutants and waste, and steadily advanced the implementation of circular economy models, aiming to support efficient business expansion with a lower environmental footprint. Meanwhile, AlphaESS pays close attention to ecological compatibility within operational boundaries, committing to gradually deepening the exploration and practice of topics such as biodiversity in the future, and continuously driving the enterprise toward an operational vision of resource conservation and environmental friendliness.

Environmental Compliance and Governance

AlphaESS strictly complies with the *Environmental Protection Law of the People's Republic of China*, the Law of the *People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, and the environmental protection laws and regulations of all global operational regions. We have established several internal management policies, including the *Environmental Protection Responsibility Policy*, the *"Three Simultaneities" Policy for Construction Project Environmental Protection*, the *Operation and Management Guidelines of Environmental Protection Facilities*, the *Environmental Accident Management Guidelines*, and the *Management Guidelines for Waste Gas, Water, and Residues*. These policies ensure that environmental compliance requirements are precisely implemented across all production bases, which solidify the institutional foundation for high-quality green development.



Environmental Compliance Governance Framework

To ensure the systematic and efficient nature of environmental governance, the Company continuously refines its hierarchical environmental management matrix. We adhere to the core principles of "Accountability for those in leadership positions" and "Prioritizing the environment in production", clarify management rights and responsibilities at all levels, and commit to building an environmental governance culture characterized by full employee participation and full-chain coverage.

AlphaESS Environmental Management Hierarchy and Responsibilities

Principal Officer	• The General Manager serves as the primary person responsible for the Company's environmental protection, providing comprehensive coordination of environmental governance to ensure the strict enforcement of national and local environmental laws and regulations. • Decides on key incentive and disciplinary matters within the field of environmental protection, regularly receives specialized reports, and authorizes major decisions and resource investments in the • Company's environmental management. • Spearheads the formulation of environmental protection rules, regulations, and technical procedures to ensure that management work is evidence-based and follows established protocols. • Directs the implementation of critical project stages, including environmental impact assessments, the design and construction of waste treatment facilities, and the "Three Simultaneities" compliance inspections. • Serves as the lead coordinator during sudden emergencies, establishing the emergency coordination center and emergency planning, resource allocation, and response implementation. • Oversee in-depth investigations into major environmental pollution accidents and coordinate follow-up disposal and rectification efforts.
Vice President for Environmental Management	• Assists the General Manager in overseeing daily environmental management. • Supervises the implementation of environmental policies across departments, promptly halting and correcting any dereliction of duty or environmental pollution risks. • Spearheads the formulation and revision of environmental protection rules and technical procedures, while coordinating the execution of technical measures and maintenance plans. • Coordinates the relationship between production, development, and environmental protection, while directing functional departments to refine the institutional system.
Department Heads	• Serves as the primary person responsible for environmental protection within the department, overseeing regional environmental management, site hygiene, and the implementation and assessment of the Company's environmental systems. • Conducts environmental inspections within the scope of authority and ensures the execution of environmental rectification projects. • Ensures that waste from production meets discharge standards, while managing the timely removal and disposal of various solid wastes, including general industrial and domestic waste—across production, office, and living areas. • Manages the operation and upkeep of subordinate environmental protection equipment, while supporting the "Three Simultaneities" construction and daily maintenance of facilities for new, renovated, or expanded projects. • Facilitates environmental education and training for department employees, providing actionable suggestions based on actual operations to drive the continuous improvement of the Company's environmental management system.
Environment, Health and Safety (the EHS)	• Enforce national environmental policies and regulations while formulating company-wide environmental systems, taking responsibility for supervision, inspection, and implementation across all processes. • Organizes the study and exchange of new environmental technologies, driving the application of advanced emission reduction technologies and the continuous advancement of environmental initiatives. • Organizes various environmental monitoring activities, proactively investigating and addressing pollution incidents while providing factual reports to the Company. • Administers the environmental incentive and disciplinary system, providing regular environmental assessment and evaluation feedback to relevant departments.
All Employees	• Assumes primary responsibility for environmental protection at the specific post, taking direct accountability for the environmental performance of all assigned tasks. • Studies and strictly adheres to national environmental policies and the Company's environmental management systems. • Strictly implements wastes management, ensuring no unauthorized disposal, mixed storage, or self-handling of waste. • Identifies and promptly escalates any environmental issues or concerns to the relevant authorities.

Environmental Risk Prevention

AlphaESS attaches great importance to the potential impact of environmental risks on corporate sustainability and has established a comprehensive management system covering "identification, assessment, response, and alerting". The Company conducts thorough identification of risk factors, including pollutant emissions during production, natural disasters, supply chain compliance, and changes in policies and regulations. By combining historical data with industry trends, the Company performs both qualitative and quantitative assessments and defines response priorities and critical nodes through the establishment of a risk level matrix. Throughout the analysis process, the Company simultaneously monitors the correlations between different risks to ensure that response strategies remain systematic and scientifically sound.

Risk Prevention

Reduces the probability of risks at the source by optimizing process flows, strengthening equipment operations and maintenance, and enhancing environmental awareness training

Risk Response

Develops specialized emergency contingency plans for potential incidents and conducts regular drills to ensure efficient allocation of emergency resources and rapid response

Risk Transfer

For risks that cannot be fully eliminated, the Company actively seeks third-party collaboration, such as securing environmental liability insurance, to enhance financial robustness and hedge against economic losses in extreme scenarios

Environmental Risk Governance Procedure

To ensure efficient response to environmental risks, AlphaESS has established a real-time alerting mechanism covering both internal and external environments, relying on advanced equipment to maintain continuous tracking of the entire production process and external environmental dynamics. Once potential risks or abnormal indicators are identified, the alerting mechanism is triggered immediately, ensuring that risk signals accurately reach the designated responsibility parties.

In terms of information flow, the Company has constructed standardized communication and feedback channels:

Regular Communication Mechanism

The Company ensures the efficient flow of environmental risk information across functional departments by regularly convening specialized environmental meetings and issuing internal briefings and management notices, providing a decision-making reference for coordinated response

Multi-party Information Integration

We attach great importance to the demands and feedback of stakeholders, transforming external insights into a driving force for optimizing risk management by systematically collecting and analyzing operational data, employee suggestions, and customer opinions

Continuous Optimization

Based on information feedback from various channels, the Company performs dynamic evaluations and iterations of the accuracy and effectiveness of the alerting mechanism, ensuring the risk management system remains responsive to increasingly complex and volatile external challenges

Environmental Governance Information Collection Channels

Environmental Compliance Audit

AlphaESS has established a regular environmental audit mechanism, conducting annual internal audits of the ISO 14001 Environmental Management System across company factories and, by systematically reviewing potential improvement items based on audit results, drives the implementation and continuous tracking of rectification measures to form a closed-loop management mechanism. As of the end of the reporting period, AlphaESS production bases in Nantong, Qidong, and Malaysia have all obtained ISO 14001 Environmental Management System certification, building a systematic control matrix that covers core business operations. Meanwhile, the production base in Kunming is advancing the implementation and operation of the environmental management system according to plan. During the reporting period, the Company maintained a good environmental compliance record, with no administrative penalties or litigation resulting from violations of environmental management laws and regulations.



AlphaESS ISO 14001 Certifications

Environmental Compliance Culture and Training

AlphaESS is committed to building a green culture characterized by full employee participation. The Company has established a systematic environmental training system, deeply integrating ecological and environmental concepts into new employee orientation to ensure full coverage of general environmental education. Simultaneously, the Company conducts in-depth environmental and occupational health training for key positions, achieving a comprehensive upgrade from the strengthening of environmental awareness to professional management capabilities.

During the reporting period, the Company organized a cumulative total of 18 specialized training sessions centered on core topics such as environmental compliance, occupational health, safety risk prevention, and special equipment management.



AlphaESS
Environmental and Occupational Health Training

Case | Grounded in Green-- AlphaESS Honored as 2025 National Green Factory

In February 2026, the Ministry of Industry and Information Technology announced the 2025 National Green Manufacturing List. Leveraging its deep-rooted excellence and systemic achievements in the field of green manufacturing, AlphaESS was consecutively recognized as a "Jiangsu Provincial Green Factory" and a "National Green Factory," successfully completing a strategic progression from a provincial benchmark to a national model.

This honor is not only an authoritative recognition of the Company's green development strategy but also a result of AlphaESS's long-term dedication and accumulation. With its production bases as the foundation and a focus on core green manufacturing goals, the Company integrates sustainability concepts throughout the entire lifecycle—from product R&D and material selection to process control and after-sales service—building a full-chain green manufacturing system:

Energy Decarbonization	Continuously optimizing the energy structure and increasing the proportion of clean energy usage.
Resource Efficiency	Refining energy and water resource monitoring to enhance overall utilization efficiency.
Cleaner Production	Strictly controlling the waste discharge and ensuring the robust operation and maintenance of environmental protection facilities.
Greener Products	Adhering to eco-design principles to minimize the environmental impact across the product lifecycle.
Land-use Intensification	Scientifically planning factory layouts to improve the output efficiency per unit of land.

Lean Energy Management

Regarding energy management as the core driving force of the Company's low-carbon transformation, AlphaESS has compiled the Energy Management Handbook and established its energy policy: "Comply with energy laws, regulations, and other requirements; support high-efficiency design, procurement, and operational control; continuously improve energy performance and costs; and seek benign corporate development alongside energy conservation and emission reduction". Leveraging its professional expertise in the new energy sector, the Company continuously refines its energy statistics and accounting system covering global operating entities, accurately identifying energy consumption trends through the regular collection and analysis of energy data. The Company continues to optimize the energy structure of its operational processes, increasing the replacement rate of clean energy and gradually reducing reliance on traditional fossil fuels.

In management practice, the Company is dedicated to the scientific and proactive nature of energy management planning. Through systematic risk and opportunity response plans, the Company deeply integrates the concepts of energy saving and carbon reduction into its business logic, embedding the setting of energy goals and indicators into daily business plans to ensure that management actions have clear direction. The Company conducts full-coverage energy reviews on an annual cycle, utilizing energy flow diagrams and statistical models to perform rigorous audits of energy usage across all production bases and office areas, accurately identifying significant energy use areas. Building upon this, the Company has established a logical evaluation system starting from energy baselines and set multi-dimensional energy performance indicators scientifically, which achieves dynamic monitoring and feedback for critical segments such as core production lines and power systems, ensuring that every energy-saving improvement project has a solid management and control path.

At the operational execution level, AlphaESS is committed to embedding the philosophy of energy conservation deeply into every aspect of production and operations. With the goal of "elevating energy-saving awareness across the workforce and optimizing the energy-use mix", we have implemented a closed-loop journey from "energy-efficiency footprint tracking" to "energy-saving project delivery", using digital monitoring, energy-mix optimization and technological retrofits at key consumption points. Relying on continuous energy efficiency assessments, the Company constantly identifies potential for consumption reduction across various operational scenarios, striving to optimize energy intensity while supporting steady business growth, and driving the evolution of the corporate energy model pragmatically toward high efficiency and cleanliness.

Energy Consumption of AlphaESS in 2025

Indicator	Unit	2025
Direct energy consumption		
Natural gas	10,000 m^3	3.80
Gasoline	liter	142,752.47
Diesel	liter	10,195.31
Liquefied Petroleum Gas (LPG)	liter	60.00
Indirect energy consumption		
Purchased electricity	kWh	7,390,405.62
Renewable energy consumption		
Rooftop PV output	kWh	2,405,853.70
Total energy consumption [8]	MWh	**9,152.85**
Total energy consumption intensity	MWh/ RMB 10,000 revenue	**0.0320**





Energy Conservation Slogans at AlphaESS Factories

[8] The total energy consumption is calculated in accordance with the *General Rules for Calculation of the Comprehensive Energy Consumption* (GB/T 2589-2020) issued by the State Administration for Market Regulation and the Standardization Administration of the People's Republic of China.

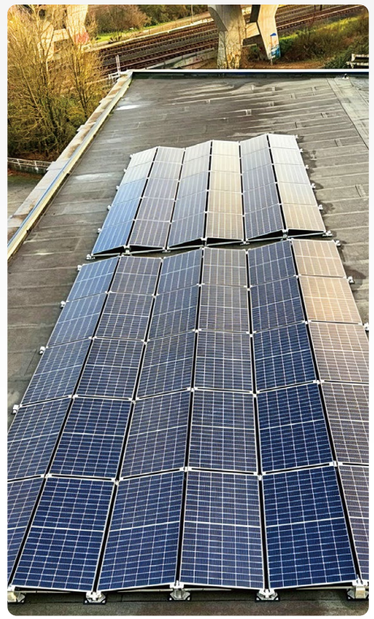
Digital & Intelligent Management Energy Management Center	• The Company has established an Energy Management Center, which achieve systematic monitoring of operational processes. Through the real-time collection and precise measurement of energy consumption data during the production phase, the center provides accurate and reliable data support for identifying potential points for energy conservation and consumption reduction.
Structure Optimization Renewable Energy Application	• To reduce reliance on traditional fossil fuels, the Company actively promotes the construction of rooftop distributed PV projects and continuously optimizes the energy structure of its industrial parks, effectively reducing GHG emission intensity while ensuring energy supply for production.
Technical Reduction Production and Lighting Energy Saving	• **Electrical System Optimization:** The Company has established a comprehensive reactive power compensation system to ensure that the power factor of the distribution system and major energy-consuming equipment remains above 0.95 during operation, minimizing electrical energy loss during transmission. • **Mechanical Power System Energy Saving:** Production equipment fully adopts variable frequency motors, which can perform real-time frequency conversion and speed adjustment according to different product specifications, with an estimated saving of 15%–25% in electricity consumption. • **High-Efficiency Lighting Management:** Widely utilizes energy-saving lamps and dedicated LED energy-saving drivers. Through implementing centralized regional controls (combining manual, light, and time-based controls) and making full use of natural light, maximizes the reduction of lighting energy consumption while ensuring the quality of the working environment.

Energy Consumption Management Practices

Case | Green Retrofit of the Langen Office Building, Germany

To actively embody new energy technology concepts and enhance the energy efficiency of overseas operational sites, AlphaESS launched the green-energy retrofit project for the Langen office building in Germany in 2022, with formal commissioning at the end of October that year. The project established a "generation–storage–consumption–testing" integrated microgrid demonstration scenario. A 20 kWp distributed PV system was installed on the office building roof, providing dual-purpose architecture for office consumption and product validation: 10 kWp supports day-to-day office use, while another 10 kWp is dedicated to product testing and maintenance scenarios. The supporting self-developed SMILE-T10-HV high-voltage energy storage system operates in synergy with the Energy Management System. Through real-time monitoring and bidirectional regulation of PV power, it achieves effective energy storage along with peak shaving, providing stable green power support for the office building while offering reliable data feedback for product performance optimization in real-world C&I environments.

Over the full operating period from 2023 to 2024, the project demonstrated significant energy-efficiency improvements. Average annual PV generation was approximately 9,100kWh, with green-electricity coverage of the office stably between 60% and 63%, achieving a structural transition from grid-imported electricity to localized green supply. Through precise dispatch by the energy storage system, the project effectively reduced PV curtailment and feed-in to the grid, significantly enhancing the self-consumption ratio of PV power and substantially reducing the office building's reliance on external electricity.



Rooftop PV at Langen Office

Pollution Prevention and Control

AlphaESS strictly complies with the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Law of the People's Republic of China on the Prevention and Control of Water Pollution*, the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, and other relevant laws and regulations. The Company has constructed a systematic management framework covering pollution prevention, facility operation, and project lifecycles, dedicated to minimizing waste generation throughout the entire operational process.

Waste Management

Adhering to the principles of "reduction, harmless treatment, and resource recovery", AlphaESS classifies and compliantly disposes of solid waste generated in production and operations. The Company is committed to minimizing waste-related risks and maintains a 100% safe disposal rate for both hazardous and non-hazardous waste. During the reporting period, all waste generated by the Company was properly treated.

Waste Disposal of AlphaESS in 2025

Indicator	Unit	2025
Hazardous waste	kg	6,227.00
Hazardous waste intensity	kg/RMB 10,000 revenue	0.0218
Non-hazardous waste	ton	833.17
Non-hazardous waste intensity	ton/RMB 10,000 revenue	0.0029

For non-hazardous waste, the Company centrally stores general industrial solid waste, such as waste packaging materials, and periodically sells them to professional agencies for comprehensive utilization, while domestic waste is regularly collected and harmlessly disposed of by local sanitation departments. For hazardous waste arising in production — such as waste glue, waste packaging, waste circuit boards and oily waste liquids — the Company has built a tightly controlled closed-loop process. Following compliant collection and interim storage in the hazardous-waste cloud warehouse, hazardous waste is regularly transferred to a duly qualified third-party agency for safe transfer and harmless disposal, with no external discharge throughout the process and minimizes environmental risks.



AlphaESS
Hazardous-waste Cloud Warehouse

Wastewater and Exhaust Gas Management

Given the nature of energy storage system R&D and manufacturing, AlphaESS's production processes do not entail the discharge of industrial wastewater or process waste gases. For domestic sewage generated during operations, the Company strictly implements a drainage system characterized by the "separation of clean water and sewage, and separation of rainwater and sewage", ensuring the scientific layout and efficient operation of the drainage infrastructure. Meanwhile, the Company periodically commissions qualified third-party institutions to conduct sampling and testing of domestic sewage. During the reporting period, the Company's pollutant discharge indicators complied with relevant standards and remained well below the prescribed emission limits.

Pollution Prevention Facilities

AlphaESS has formulated and strictly implemented the *Operation and Management Guidelines of Environmental Protection Facilities*, which comprehensively covers treatment and disposal, purification control, recycling facilities and their associated monitoring systems as the core vehicles for strengthening pollution prevention and improving environmental quality. The Company is dedicated to ensuring the efficient and stable operation of various environmental protection facilities to strengthen pollution prevention capabilities from the source.

To guarantee the substantive effectiveness of environmental protection facilities, the Company strictly adheres to the following standards during the construction and operation phases:

Qualification and Technical Access

All environmental protection facilities are constructed by units with corresponding qualifications. In technology selection, priority is given to advanced technologies recommended by the "Guidelines on Best Available Technologies for Pollution Prevention and Control" to ensure the scientific and proactive nature of treatment methods.

Compliance Assurance for Emission

Facility scale and treatment capacity must precisely match the production load to ensure continuous and stable operation, with all pollutant emission indicators consistently outperforming national or local discharge standards.

Integrated Emergency Warning

Facilities are equipped with fault-warning systems and pollution-prevention emergency response facilities, ensuring timely response and effective handling in the event of sudden failures or environmental incidents.

Enhancing Resource Efficiency

Water Resource Management

AlphaESS deeply understands the importance of conserving water resources and actively practices sustainable water management. Water for both factories and offices are sourced from the municipal water supply, posing no direct withdrawal pressure on local water ecosystems or community water use. Given that the Company's business nature does not involve industrial production water, the focus of AlphaESS's water resource management is primarily on improving water efficiency in office and living areas. By refining the water monitoring system and promoting water-saving initiatives, the Company continuously standardizes daily water management to reduce unnecessary resource loss.

Water Consumption of AlphaESS in 2025

Indicator	Unit	2025
Total water consumption	m^3	57,264.36
Water consumption intensity	m^3/RMB 10,000 revenue	0.2005

Strengthening Management Responsibilities
By establishing a water-saving working group, the Company clarifies management responsibilities, strengthens the management of key water-using areas and the daily maintenance of water systems, and eliminates water resource waste

Optimizing Facility Efficiency
Actively conducts water supply system diagnostics and continuously increases the utilization rate of water-saving products by adopting energy-saving and water-saving technologies and equipment

Guiding Water-Saving Awareness
Promotes water conservation concepts in daily operations, guiding employees to develop good water-use habits and creating an office atmosphere centered on resource conservation

AlphaESS Water-Saving Measures

Packaging Material Optimization

The conservation and recycling of packaging materials serve as a vital entry point for the Company's circular economy practice. AlphaESS continuously promotes the scientific design of packaging structures, aiming to balance logistics safety, cost optimization, and environmental friendliness. By reducing the proportion of non-biodegradable foam filling materials, expanding the use of recyclable cardboard packaging, and implementing simplified and reduced-material designs, we have effectively reduced resource consumption in packaging, accurately responding to the green-access requirements of overseas markets while unlocking further cost-optimization opportunities and building environmentally friendly value chain advantages.

Packaging Materials Consumption of AlphaESS in 2025

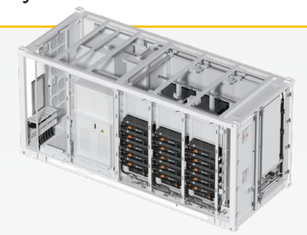
Indicator	Unit	2025
Total packaging materials	ton	945.62
Packaging material intensity	ton/RMB 10,000 revenue	0.0033

Circular Economy Practices

Faced with the challenges of global resource constraints and environmental pressures, AlphaESS actively responds to circular economic concepts. We are committed to optimizing resource efficiency across the product lifecycle, reducing the input of raw resources, extending product service life and building a robust end-of-life recycling system.

Case | Deepening European Market Presence to Build a Circular Battery Resource Chain

Europe is a core business region for AlphaESS and one of the most stringently regulated regions globally for circular economy. Based on local regulatory requirements and customer demand, the Company has, around full product lifecycle management, systematically built a closed-loop management system covering "design, use, recycling, reuse", continuously enhancing compliance capability and sustainability competitiveness in high-standard markets.



Example of AlphaESS Modular Product

Proactive Strategic Positioning

In response to the compliance requirements of the EU *Ecodesign for Sustainable Products Regulation* (ESPR) and the Battery Digital Product Passport (DPP), AlphaESS has launched an internal implementation roadmap. Based on the Life Cycle Assessment (LCA) methodology, the Company is systematically conducting carbon footprint accounting for residential, C&I, and large-scale energy storage products, laying a solid data foundation for the mandatory disclosure requirements effective in 2027.

Battery Recycling Mechanism

In 2016, AlphaESS established a deep partnership with the authoritative German recycling organization, Gemeinsames Rücknahmesystem Servicegesellschaft mbH (the "GRS"). Strictly following the requirements of regulations such as the *German Battery Act* (BattG), the Company commissions GRS to implement compliant end-of-life recycling and reuse for industrial energy storage batteries sold in the local market. The cooperation has not only built a Germany-wide network for collecting end-of-life batteries but also achieved end-to-end management from logistics, safe disposal to compliance reporting.

Modular Design

AlphaESS systematically implements the concept of modular design at the product level, comprehensively covering its three major product lines: residential, C&I, and large-scale energy storage, laying the foundation for lifecycle management from the source. The design allows for the independent replacement or upgrade of battery units, inverters, and protection devices, eliminating the need to retire entire energy storage system due to local component failure. While significantly reducing the total cost of ownership for customers, it effectively extends the overall service life of product assets. During the reporting period, the Company shipped 3,069 independent module replacements in Europe through after-sales service, materially reducing the generation of electronic waste.

Localized Repair and Reuse

The Company has established a comprehensive warehousing and repair support center in Germany. In accordance with warranty policies and while ensuring service quality, the Company provides equivalent products that have been rigorously tested and reliably repaired as warranty replacements, achieving the in-use circular reuse of products and further enhancing resource efficiency while reducing electronic waste.

Empowering People for Shared Progress

AlphaESS regards talent as the core driving force of sustainable enterprise development and innovation. Adhering to the talent philosophy of "respect, equality, growth and incentive", the Company is committed to building an open and inclusive international workplace, standardizing recruitment, promotion, training and remuneration-and-performance systems, and safeguarding employees' statutory rights and career development. Through a comprehensive training and development system, cross-regional communication mechanisms and diverse incentive arrangements, we continuously elevate organizational capability and talent density, unleashing employees' potential and strengthening team collaboration and innovation. The Company also pays close attention to employees' mental health and occupational safety and has established regular support mechanisms, fostering a transparent, trust-based and win-win talent ecosystem and providing sustained momentum for stable corporate development.

04

Corresponding SDGs:



Human Capital Development

Recruitment Management

AlphaESS strictly complies with the Labor *Law of the People's Republic of China* and the labor laws and regulations in the countries where it operates. The Company has established policies, including the *Regulations for the Administration of Labor Contracts*, the Recruitment Management System and the *International Talent System*, which clearly define recruitment principles, standards and implementation processes. We standardize the management of each stage of recruitment, ensuring that the recruitment process is fair, equitable and transparent, upholds the principle of equal employment, and reinforces compliant employment management, thereby establishing a high-quality talent pipeline that supports the Company's sustainable development.

Talent Attraction

AlphaESS attaches great importance to talent attraction, using talent to drive the Company's development. We have established a sound recruitment management system and developed diversified recruitment channels. To meet the Company's growing demand for talent, in addition to the *Recruitment Management System*, we have also formulated complementary *Internal Recommendation Management Measures* and *On-board Staff Application Management Measures*, and introduced corresponding incentives to enhance person-position fit and strengthen the talent pipeline.

AlphaESS adopts a global perspective while respecting regional characteristics, and has built a talent allocation mechanism that integrates localized recruitment with international talent introduction, and continuously optimizes the workforce structure. By expanding regional recruitment channels, conducting overseas campus recruitment, and strengthening global employer branding, the Company refines its cross-cultural management system to align with local labor regulations and cultural characteristics, effectively enhancing the resilience of talent supply for critical positions. For example, at the Malaysian plant, the Company prioritizes the selection of locally qualified professionals to form the EHS management team, enhancing the team's professionalism and local execution capability.

2025

Externally recruited experienced professionals over
320

Newly enrolled fresh graduates
45



External Recruitment Channels

- Government talent introduction programs, such as talent exchange events
- Human resource service providers, such as headhunting firms and labor agencies
- Online recruitment platforms, including LinkedIn, Liepin, 51Job, and BOSS zhipin



Campus Recruitment Channels

- Campus Recruitment Programs: Offer diverse positions for fresh graduates, accompanied by dedicated development plans
- University-Industry Collaboration: Partner with universities to establish internship bases and R&D platforms



Internal Recruitment Channels

- Internal Recommendation: The Company encourages employees to recommend talent and provides referral bonuses
- On-board Staff Application: Open positions are available to internal employees, who may apply if they meet the eligibility criteria

Principal Talent Recruitment Channels of AlphaESS

AlphaESS continuously builds an integrated industry-academia-research talent ecosystem, conducting joint talent cultivation with Xi'an Jiaotong University, Tianjin University, Nantong University and other universities. In 2025, the Company invited Professors Li Chao and Wen Weijie to participate in the Company's research and innovation work via flexible engagement arrangements, further strengthening enterprise R&D capabilities. Through enterprise-university collaborative innovation, the Company continues to drive the conversion of research outcomes into industrial applications, accelerating breakthroughs in key technologies and cultivating high-quality professional talent.



AlphaESS Designated Postdoctoral Research Workstation



Compliant Employment

AlphaESS strictly enforces the *Provisions in the Prohibition of Using Child Labor* and other related laws and regulations, and has formulated the *Guidelines* on *the Management of Underage and Child Labor*, which clearly set out internal policies, procedures and remedial measures, requiring all employees and stakeholders to strictly comply with them. During recruitment, the Company strengthens background checks of applicants and takes resolute measures to prevent the use of child labor and any other forms of forced labor.

Control Procedure for Prohibiting Forced Labor

- Forced labor is strictly prohibited, and the right of all employees to rest and vacation should be guaranteed.
- The principle of "equal pay for equal work" should be strictly observed to prohibit any form of discrimination based on an employee's race, color, social status, nationality, religion, disability, gender, age, sexual orientation, political affiliation, or marital status.
- It is strictly prohibited to require pregnancy tests or enforce mandatory medical examinations as part of the recruitment process, and the results of such tests should not be used to discriminate against applicants.
- For employees with disabilities, the Company provides disability benefits in accordance with regulations and assists with reemployment.
- ……

As of the end of the reporting period, AlphaESS had a total of 1,104 employees, with a labor contract signing rate of 100%. Overseas employee numbers continue to grow, providing strong support for the Company's globalized footprint.

Total full-time employees: **1,104**

Employment contract signing rate: **100%**

Total Number of Employees of AlphaESS in 2025

Indicator		Unit	2025
Total employees		person	1,104
Total new hires		person	348
By gender	Male employees	person	730
	Female employees	person	374
By age	30 and below	person	560
	31-40	person	454
	41-55	person	87
	Above 55	person	3
By position level	Senior managers	person	17
	Middle managers	person	59
	Employees	person	1,028
By job function	Management employees (M sequence)	person	76
	Professional employees (P sequence)	person	510
	Technical employees (T sequence)	person	266
	Operational employees (O sequence)	person	252
By region	China	person	929
	Europe	person	65
	Other Asian regions (South Korea, Japan, Malaysia, Singapore)	person	70
	Americas	person	0
	Africa	person	5
	Oceania	person	35

Employee Turnover Rate of AlphaESS in 2025

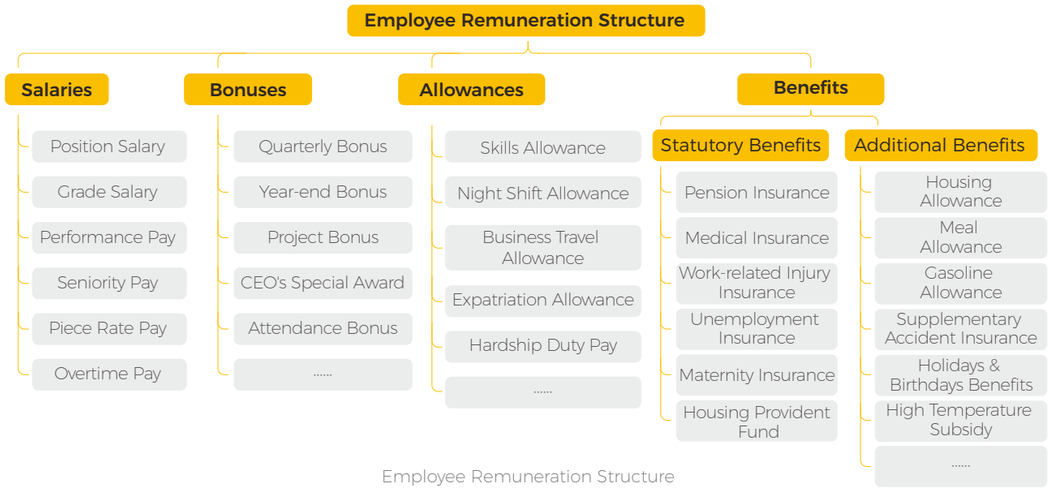
Indicator		Unit	2025
Total employee turnover rate[9]		%	23.73
By gender[10]	Male employees	%	25.48
	Female employees	%	20.32
By age	30 and below	%	27.32
	31-40	%	18.64
	41-55	%	27.47
	Above 55	%	66.67
By position level	Senior managers	%	30.43
	Middle managers	%	9.43
	Employees	%	24.32
By job function	Management employees (M sequence)	%	15.79
	Professional employees (P sequence)	%	25.24
	Technical employees (T sequence)	%	16.23
	Operational employees (O sequence)	%	30.95
By region	China	%	22.07
	Europe	%	32.31
	Other Asian regions (South Korea, Japan, Malaysia, Singapore)	%	28.57
	Americas	%	0.00
	Africa	%	120.00
	Oceania	%	28.57

[9] During the reporting period, total employee turnover rate = total number of employees who left during the year/total number of employees at the end of the year

[10] During the reporting period, employee turnover rate by category = number of employee who left in the category/total number of employees in the category

Remuneration, Performance and Incentives

AlphaESS continues to refine its remuneration and performance system, persistently enhancing the science and applicability of performance objective setting, tracking, evaluation and outcome management. We have formulated policies including *Salary Management System*, *Performance Management System*, *International Headquarters (SG) Performance Management System*, and *Employee Rewards and Discipline Management Regulations*, balancing external competitiveness with internal fairness to provide employees with a balanced and motivating remuneration structure. Fixed and variable remuneration ratios are regularly optimized to unleash employees' potential and promote shared growth with the Company.



Employee Remuneration Structure

Performance Management

To align employee objectives with the Company's strategic goals, AlphaESS has established the *Performance Management System*, clarifying assessment principles and weighting, supporting employee capability development and career growth, and promoting shared value creation between the Company and individuals. In consideration of overseas employment policies, the Company has also formulated the *International Headquarters (SG) Performance Management System* and other related policies, ensuring that both domestic and overseas employees receive effective performance evaluation and development opportunities under a standardized and fair performance framework.



Performance Appraisal Approach of AlphaESS

Equity Incentives

To attract and retain core talent, ensuring that their personal interests are closely aligned with those of shareholders and the Company's overall objectives, and thereby driving sustained growth in operating performance, AlphaESS has implemented equity incentives for selected senior management and core employees through diversified platforms, in accordance with the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, and other applicable laws and regulations, as well as the *Articles of Association*.

Employee Training and Development

Employee Training

Employees are the cornerstone of AlphaESS's development. We deeply understand that the Company's progress is closely tied to employees' growth. To this end, we have established a comprehensive talent management system and clearly mapped career development pathways, continuously enhancing employees' professional competence and capabilities. We are dedicated to fostering a growth environment full of development opportunities, providing employees with a platform to realize their career aspirations and create value.

AlphaESS has formulated a comprehensive training framework, including the *Training Management Policy*, the *New Employee Training Policy*, the *Mentor Management Policy*, and the *Guidelines for the Fresh Graduate Mentorship Program*, ensuring sustained career development support for every employee in conjunction with the Individual Development Plan ("IDP") program. Meanwhile, by establishing "AlphaESS Online" as an online knowledge platform for all employees while linking it with professional offline training empowerment, the Company has constructed a comprehensive employee training system.

2025

Total employee training hours
10,156.8 hours

Various business training sessions
200+

Cumulative participation exceeding
5,000 attendances

Employees certified for special operations
76

Online courses launched on AlphaESS Academy
200+

Total online training hours
3,000+ hours

Employee Training Performance of AlphaESS in 2025

Indicator		Unit	2025
Average training hours per employee		hour	9.2
By job function	Management employees (M sequence)	hour/person	41
	Professional employees (P sequence)	hour/person	13.72
	Technical employees (T sequence)	hour/person	11.07
	Operational employees (O sequence)	hour/person	5.88
By gender	Male employees	hour/person	9.28
	Female employees	hour/person	9.05

Employee Training System

AlphaESS's training and cultivation system consists of three major components — organizational capability enhancement, the assurance system and the support system — each with detailed and specialized plans and goals dedicated to continuously stimulating talent potential, empowering core competitiveness and ensuring that every employee can deliver maximum value in their respective roles.

AlphaESS's Training and Cultivation System

Organizational Capability Enhancement

New Recruitment	Internal Job Training	External Specialized Enhancement	Talent Inventory
New Employee Onboarding and Training Growth Map (ATP)	"Alpha" Courses	Management Development	Potential Assessment
Spark Program (Training for Fresh Graduates)	Daily Learning (AlphaESS Academy)	Professional Skills	IDP
	External Training Transformation	Practical Skills	
	AMP/AGM	Professional Certifications	

Guarantee System			Support System		
Training Management System	AlphaESS Online	Assessment Transformation	Lecturer Certification	Professional Title Declaration	Mentor Management

AlphaESS's Training and Cultivation System

Fresh Graduate Mentor Cultivation Mechanism

To help fresh graduates rapidly transition from campus to workplace, AlphaESS has established a systematic mentor cultivation mechanism, enhancing new employees' adaptation efficiency and growth quality and providing sustained support for the Company's talent pipeline. Principal measures include:

Mentor selection

The Company selects mentors across dimensions including professional competence, cultural identification and performance. Employees with extensive experience and strong performance are appointed as mentors, ensuring the quality of talent development.

One-on-one coaching

Mentors are paired one-on-one with newly hired graduates and, in line with role responsibilities, assist them in formulating individual development plans, offering guidance and support on practical work issues through regular communication and feedback.

Professional capability enhancement

Through the transmission of experience and practical guidance, mentors help new employees adapt quickly to the work environment and enhance their professional skills and overall competence.

Cultural and team integration

During cultivation, mentors convey the Company's culture and assist new employees in integrating into the team, strengthening their sense of belonging and identification.

Case | Spark Program

AlphaESS attaches great importance to new employees' career development and team integration, designing and implementing a systematic new-employee training program — the Spark Program — to help new hires adapt to corporate culture, understand business strategies and enhance team collaboration. Principal measures include:

Immersive onboarding experience

Through comprehensive company tours and team-introduction activities, new employees rapidly understand the corporate structure and core values and integrate into the AlphaESS "family".

Outdoor team-building expeditions

Combining outdoor expeditions with collaborative challenges, the program strengthens individual perseverance, mutual support and collaboration, and enhances team cohesion and execution.

Multi-dimensional curriculum

New employees engage in in-depth dialogue with senior management on corporate strategy, energy development trends, frontier business and management philosophy, accelerating the campus-to-workplace transition.

Systematic growth support

Through realistic scenarios integrating strategy, collaboration and physical training, the program develops team spirit and core workplace skills, laying a solid foundation for career development.

Through this combination of "immersive experience + outdoor expeditions + executive dialogue + systematic training", the Spark Program elevates new employees' business capability and professionalism while promoting team collaboration and organizational identification, forming a sustainable talent cultivation cycle and providing strong support for AlphaESS to build a stable and high-performing talent pipeline.

Case | Specialized Marketing and Product Training

To enhance employees' professional capabilities, business understanding and corporate culture identification, AlphaESS organized a series of specialized marketing and product training sessions, inviting executive and core employees to share their entrepreneurial experiences and practical insights. The training content covered business processes, product technology, market strategies, brand building, overseas market expansion and the application of digital tools. By combining thematic lectures, case sharing, and practical exercises, the training broke departmental boundaries and promoted professional skill exchanges across fields and positions.

During the reporting period, the Company organized more than 30 training sessions, engaging employees from marketing, technology, product and overseas-market departments, with the aim of enhancing employees' understanding of corporate products and market strategies and their technical application capabilities.



Specialized Marketing and Product Training

Case | Competition-Driven Learning, Learning-Fueled Productivity

In August 2024, AlphaESS organized a Production Line Skills Competition at the Nantong Global Headquarters, with participation from manufacturing teams across multiple regional facilities. Anchored on the goal of "promoting learning through competition and production through learning", the event used hands-on skills competitions to spark employees' learning enthusiasm and elevate front-line technical proficiency and quality control capabilities, providing a practical platform for cultivating a versatile, skill-rich and knowledge-driven workforce.

The competition focused on key production stages, with multiple practical events including product assembly, quality inspection and forklift operation, comprehensively assessing participants' execution of process specifications, defect identification capability and safety awareness. Throughout the competition, participants demonstrated solid professional skills and strong professionalism, effectively fostering a vibrant learning atmosphere. The Company also recognized outstanding performers through certificates and incentives, further inspiring participation in skills enhancement.



Forklift Skills Competition



Product Assembly Competition



Award Ceremony

Promotion and Development

AlphaESS values employees' career development and continually refines the employee promotion system. The Company has formulated the *Employee Career Paths Management Policy* and the *Regulations on Employee Transfers and Promotions Management*, establishing diverse and clear career development pathways for employees across different functional roles.

The Company has set up two major categories — managerial and non-managerial — and four sequences (management, professional, technical and operation), each with 14 levels, defining job responsibilities at different levels and enabling promotions and transfers across levels. By breaking through the limitations of single-track promotion, the Company offers employees multiple development pathways, including vertical promotion within a sequence, horizontal development across sequences and cross-sequence transfers, forming a multi-dimensional career growth system.

Employee Career Paths Management Policy	Establishes three principles — value-orientation, classified management and diversified development; opens career development channels enabling vertical promotion, horizontal development and cross-channel transfers; and details the requirements for level evaluations, ensuring that talent is well-utilized.
Regulations on Employee Transfers and Promotions Management	Clarifies the Company's "talent selection and deployment" strategy and aligns the Company's talent needs with employees' individual development plans.

To further recognize outstanding performance and support the career development of high-potential talent, AlphaESS has formulated the *Management Measures for Alpha Star*, recognizing employees with outstanding performance in sales, product development, technological innovation, and management. The company-level Alpha Star adopts an all-employee voting mechanism to ensure that the selection process is fair, equitable, and transparent. Award-winning employees receive additional points in promotion and grade evaluation processes, closely linking incentives with career development and effectively promoting the growth of outstanding talent and the enhancement of overall organizational effectiveness.

Employee Rights and Benefits

Equality and Inclusion

AlphaESS advocates a corporate culture of equality, respect and inclusion, upholding fair recruitment and employment principles, safeguarding employees' statutory rights and interests, and creating a civilized and healthy workplace. To better understand and meet employees' needs, we have built diversified communication and feedback mechanisms, encouraging employees to actively contribute suggestions and views, continuously optimizing human resources management strategies, and promoting employees' well-being and career development, with the aim that every AlphaESS team member feels the Company's genuine care.

AlphaESS is committed to upholding and safeguarding employees' statutory rights across its global operations, strictly complying with the *Labor Law of the People's Republic of China* and other applicable laws and regulations in the jurisdictions where it operates, and treating every employee equally. The Company has formulated policies including the *Anti-Discrimination, Anti-Harassment, and Anti-Abuse Guidelines*, and is committed to opposing all forms of discrimination, harassment, and abusive behavior. The Company encourages employees encountering issues to raise complaints with employee representatives, the head of the Organizational Development Center, or labor protection authorities. To protect the privacy and safety of whistleblowers, AlphaESS has also established clear confidentiality measures within relevant policies to prevent any form of retaliation, providing employees with support and a sense of security.

Anti-Discrimination, Anti-Harassment and Anti-Abuse Guidelines

- No differential treatment in recruitment, remuneration, benefits, promotion, rewards and penalties, training, dismissal, etc., based on race, color, social status, nationality, religion, disability, gender, age, sexual orientation, trade-union membership, political affiliation, marital status or other factors.
- Prohibition of unwanted gazes and any verbal or physical conduct of a sexually demeaning nature toward members of the opposite sex.
- ……

Case | Cross-Cultural Exchange Strengthens Diverse Team Building

The Company regularly organizes cross-cultural exchange events to promote interaction and integration among employees from different backgrounds, strengthen communication between management and employees at all levels, and showcase the Company's diverse cultural atmosphere.

In Europe, principal events include the Summer Festival and the Christmas Party. Employees from various European countries gather at the German headquarters, participating in shared meals, awards, team games and cultural showcases. Through face-to-face engagement, cultural sharing and team interaction, the events not only enhance cross-functional, cross-regional collaboration and cross-cultural understanding but also strengthen employees' sense of participation and organizational belonging, while reinforcing democratic communication mechanisms and advancing corporate culture identification and team cohesion.



European Team Annual Gathering

Care and Wellbeing

AlphaESS pays close attention to employees' wellbeing and life-related care, enhancing employees' satisfaction and sense of belonging through diversified mechanisms. The Company has built a comprehensive employee benefits system that balances baseline guarantees with personalized needs. All benefits are administered through standardized procedures, ensuring transparency and openness and effectively safeguarding employees' statutory rights.

Protection of Female Employees' Rights

We are committed to safeguarding the rights of female employees, ensuring they are not subject to gender discrimination in recruitment and promotion and receive equal pay for equal work as their male counterparts. The Company also provides a range of work safeguards and benefits for "working mothers".

- **Pregnancy protection**
  Providing applicable prenatal-check leave for pregnant employees.
- **Maternity protection**
  Providing comprehensive maternity leave system safeguards female employees' time off and benefits in connection with childbirth.
- **Lactation protection**
  Implementing the breastfeeding leave system for female staff (with infants under 1 year of age) and equipping dedicated lactation rooms, fully caring for the workplace needs of breastfeeding mothers.
- **Childcare leave**
  Childcare leave is provided to help female employees balance their professional and family roles, continuously enhancing their workplace well-being and quality of life.
- **Women's Day events**
  All subsidiaries organize special events and distribute customized gifts on Women's Day, continuously deepening workplace care for female employees.
- **Dedicated health checks for female employees**
  Regularly provide female employees with specialized health checkups such as gynecological and breast examinations, effectively safeguarding their health.
- **Family care and work support**
  Leveraging internal systems, the Company periodically reminds department heads of key family milestones (e.g., a child entering a new school stage), enabling management to plan early and offer flexible work arrangements and support, thereby fully empowering female employees to balance workplace and family needs.




Figure: International Women's Day Event

Case | Employee Charity Fund — Building an Employee Mutual-Care Mechanism

To strengthen employees' sense of belonging and organizational care, AlphaESS established the Employee Charity Fund to build an employee mutual-aid support mechanism. Management and employees at the level of center head and above contribute a higher amount monthly, while other employees contribute a lower amount monthly, with contributions deducted from after-tax salaries. The Company makes matching contributions on a one-to-one basis and encourages employees to make additional voluntary contributions.

The Fund operates on a dedicated-purpose basis, managed by the Financial Control Center under a separate account, with fund-raising and disbursement information periodically disclosed and any misappropriation strictly prohibited. The Fund is principally used to provide support and care to employees and their families during key life stages or in unforeseen circumstances, including marriage and childbirth condolences, hospital visits and assistance in difficulties, providing timely and effective support.

Through this mechanism, the Company has established a mutual-aid support system within the organization, further strengthening connections and trust among employees, enhancing their sense of belonging and organizational identification, and providing strong support for fostering a warm corporate culture and a stable talent development environment.

2025

Employee Charity Fund inflow	Expenditure	Assistance cases supported
RMB 146,600	RMB 134,000	97

Democratic Communication

AlphaESS continues to foster a respectful, open and equal work environment, safeguarding by law employees' freedom of association, collective bargaining and the right to express reasonable opinions. The Company has built diversified communication and feedback channels, ensuring smooth grievance and complaint mechanisms so that employees' statutory rights are not interfered with, restricted or coerced, thereby achieving democratic communication, decision-making and management. On this basis, the Company has established the Employees' Congress as an important platform for employees to participate in corporate management. The Council periodically collects and conveys employees' opinions and suggestions, supervises the protection of employees' rights and interests, and communicates and coordinates on matters of employee concern, promoting effective interaction and information flow between employees and management.

During the reporting period

Collected reasonable suggestions
338

Adopted suggestions
254

GM's mailbox	A bottom-up channel through which employees can raise issues directly to senior management and receive responses.
Employee satisfaction / engagement survey	Regularly collects employees' opinions and suggestions on work, life and development.
Chairman / GM luncheon	The Chairman or general manager invites employees of all levels to share lunches from time to time, providing one-on-one opportunities to speak openly.
Regular meeting	Regular meetings are held at the company and department levels to efficiently communicate and implement major reforms, business updates and work arrangements.
Internal publications	The Company founded internal journal "Alpha Time" to chronicle the stories of AlphaESS people. The journal is aimed at all employees, from management to grassroots, truthfully recording their struggles and diverse voices.
360 rationalization proposal submission	The Company has established an information-based feedback channel to regularly collect employee suggestions and respond to their concerns in a timely manner.
Intranet platform	the "AlphaESS Online" platform offers a dedicated complaint-and-reporting section to address employee requests and feedback. The "Alpha Planet" platform has been launched to build a global online communication community, breaking down geographical barriers, facilitating employee interaction, and promoting information sharing.

AlphaESS Employee Communication Channels

Case | Employee Engagement Survey

In April 2025, to listen to employees' voices, enhance organizational effectiveness and employee wellbeing, the Company conducted a survey based on the internationally recognized Q12 Engagement Model, comprehensively examining employee experience and organizational management across 12 key dimensions covering basic needs, managerial enablement, teamwork and learning-and-growth. The results showed that the Company performs steadily on strategic alignment, resource collaboration and culture cultivation. To translate employees' voices into management actions, the Company has implemented targeted improvement plans and, through a routine "survey – feedback – improvement – review" mechanism, continuously broadens channels for feedback and consensus-building, further energizing organizational vitality.

Case | Employee Representatives Engagement Sessions

The Company actively promotes leadership teams to engage directly with the front line, ensuring that management decisions resonate with operational realities and reinforcing democratic governance and employee wellbeing. In 2025, the Company held executive-frontline employee exchange meetings in Suzhou, Qidong, Chengdu, Xi'an and other cities, with more than 50 employee representatives participating.

Prior to the events, questionnaires were used to accurately collect employees' core concerns, covering business collaboration, career development, local benefits, process pain points and resource support. During the exchange meetings, management and employee representatives engaged in face-to-face communication, gathering a number of constructive suggestions on production-research collaboration, remuneration and benefits, logistics support and employee care. Based on the feedback, the Company has established a dedicated improvement ledger, clarifying responsible departments, remediation actions and completion timelines for each item. Most items have already taken effect, with the remainder steadily progressing as planned.

Case | Alpha Planet — Building an Open and Transparent Employee Communication Platform

AlphaESS launched the "Alpha Planet" internal communication platform in March 2025. After approximately six months of trial operation, it was officially launched on September 25, 2025, during the Company's anniversary live-streamed gala. The platform aims to unite all employees through diversified communication and interaction mechanisms, build the "AlphaESS Ecosystem", and thereby enhance organizational transparency and cross-regional collaboration efficiency.

2025

Average monthly active users approximately **800**

Monthly engagement rate over **70%**

AlphaESS Headlines

Announces major company events, including new product launches, strategic collaborations and key milestones, ensuring employees stay informed about core information.



Around the World

Covers project sites in approximately 130 countries, enabling employees to quickly understand global business progress and changes and achieve information sharing across regions.



Growing Together

Focuses on employee learning and internal knowledge sharing, organizing training and experience exchange to convert knowledge into organizational assets and supporting the building of a learning organization.



Sports & Hobbies Clubs

Through interest-based activities such as badminton, running and skiing, the platform fosters informal exchange beyond work, narrowing distances among employees globally and strengthening team cohesion.



Alpha Planet Modules

Occupational Health and Safety

AlphaESS strictly complies with the *Work Safety Law of the People's Republic of China*, the *Fire Control Law of the People's Republic of China*, the *Law on the Prevention and Control of Occupational Diseases of China*, and other applicable occupational health and safety laws and regulations in the jurisdictions where it operates. The Company firmly implements the work safety management principle of "safety first, prevention foremost, and integrated management", and has established corresponding work safety management principles and policies.

Workplace Safety Management Structure

The Company has established a top-down safety management structure with clearly defined safety management responsibilities. By implementing the "one position, dual responsibilities" system, we ensure that work safety responsibilities are assigned to specific individuals, supporting the coordinated resolution of key issues in work safety and safeguarding employees' occupational health and safety.

To further strengthen the work safety management system and prevent safety accidents, the Company has formulated management policies including the *Workplace Production Safety Responsibility Guidelines* and the *Production Safety Inspection Policy*. In addition, the Company has established more detailed safety management regulations for special operations and specific hazardous sources, continuously improving workplace safety conditions. The Company regularly reviews its safety-related systems and policies and continuously revises and updates them in accordance with operational needs to ensure the effectiveness of safety management measures. Furthermore, AlphaESS continues to advance the certification of its occupational health and safety management system. As of the end of the reporting period, the AlphaESS production bases in Tongzhou and Qidong of Nantong, as well as its Malaysia production base, had all obtained ISO 45001 Occupational Health and Safety Management System certification.[11]



AlphaESS Safety Management Structure



ISO 45001 Certifications for AlphaESS Manufacturing Bases in Tongzhou, Qidong (Nantong, China) and Malaysia

We integrate safety risk management into all aspects of production and operations. By establishing a dual prevention mechanism that combines safety risk identification and control with hazard investigation and rectification, we effectively prevent and reduce the occurrence of safety accidents. We also strengthen on-site safety management, refine emergency preparedness and reinforce employee education and training to enhance compliance, lift safety awareness and emergency-response capability and support the achievement of safety goals.

[11] The Kunming manufacturing base in Yunnan remains in the early operation phase and has not yet initiated the relevant system certification. Certification work for this base has been included in the Company's follow-up implementation plan.

Safety Hazard Identification and Control

In accordance with the *Production Safety Inspection Guidelines* and the *Safety Hazard Identification and Control Guidelines*, the Company conducts regular inspections, promptly rectifies identified issues, eliminates potential safety hazards in a timely manner, and ensures closed-loop management of identified issues, while continuously improving and strengthening its safety management practices. The Company continuously strengthens on-site safety management and encourages all employees to participate in safety hazard identification. To this end, AlphaESS has formulated the *Safety Hazard Reporting and Reward Policy*, which clearly defines reporting channels and methods, encourages all employees to report potential safety hazards and incidents, and provides cash rewards for valid reports.

2025

Total safety investment
RMB **2,863,011.65**

Identified safety hazards
1,645

Safety Training and Emergency Drills

The Company places great emphasis on cultivating employees' safety awareness and capabilities. We standardize safety training content to effectively enhance employees' safety awareness and skills, and continually refine our emergency response plans and strengthen safety emergency drills.

During the reporting period, we conducted 32 safety training sessions covering pre-employment training, equipment safety, fire safety, emergency rescue and other topics, enriched in light of actual production conditions. We also organized emergency drills covering electric shock incidents, mechanical injury incidents, special-equipment incidents, fire incidents, poisoning and asphyxiation incidents, integrated emergency response and joint drills with the fire department, strengthening employees' ability to anticipate risks and handle incidents.

2025

Safety training sessions
32

At the Qidong production base
9

At the Tongzhou production base
23

Safety training hours
2,440 hours

At the Qidong production base
652 hours

At the Tongzhou production base
1,788 hours

Over the past three years

Employee work-related fatalities
0

Employee work-related fatality rate
0%

Lost workdays due to work-related injuries
0



Case | Work Safety Month and Fire Prevention Publicity Month

AlphaESS actively responds to national work safety and fire safety management requirements, designating June each year as Work Safety Month (in accordance with the *Notice on Conducting the National "Work Safety Month" Activities of 2025* jointly issued by the Office of the Safety Committee of the State Council and the Ministry of Emergency Management) and November as Fire Prevention Publicity Month (corresponding to the National Fire Prevention Day on November 9), and carries out a series of safety-related activities.

Activities include safety training and warning education, dedicated inspections and hazard identification, encouragement and incentives for employees to report fire safety hazards via internal platforms, integrated emergency drills and fire knowledge competitions, comprehensively enhancing employees' safety awareness, risk-prevention capabilities and emergency-response capabilities.

Through ongoing Work Safety Month and Fire Prevention Publicity Month activities, AlphaESS has gradually formed a closed-loop management framework of "publicity, training, inspection, drills, competitions", inspiring full participation in safety management, continuously strengthening safety culture and providing solid support for safe corporate operations.





Fire Prevention Publicity Month Activities

Case | Refining Global Travel Risk Identification and Protection Mechanisms

As the Company's global business footprint continues to expand, AlphaESS continuously refines its employee safety protection system, having established risk identification and early-warning mechanisms covering manufacturing, project sites and global business travel. In response to potential risks such as bushfires in Australia, floods in Southeast Asia and geopolitical events in the Middle East, the Company conducts dynamic risk assessments and timely safety alerts, applying pre-emptive management for affected employees and intended travelers and ensuring they obtain safety information and protective guidance before risk events.

On this basis, the Company has introduced specialist safety service resources and partnered with third-party security service providers to deliver real-time safety alerts, emergency support for incidents and medical assistance to overseas business travelers, further enhancing the level of safety assurance and emergency response capability for international travel. By building a risk-management mechanism combining pre-emptive identification, timely early-warning and specialist support, AlphaESS continually strengthens global employee health and safety protection, providing strong support for employees to work and travel with peace of mind.

Case | Building an Employee Mental Health Care Mechanism

AlphaESS pays close attention to employees' mental health and has established a regular psychological communication and support mechanism, providing employees with a safe and open environment for expression. Through periodic exchanges between employee representatives from different regions and the management team — covering work pressure, career development and employee concerns — the Company encourages employees to fully express their views and demands and drives the formation of a smooth and effective feedback mechanism.

Building on the communication mechanism, the Company systematically reviews employee feedback and forms a follow-up checklist, with publication and ongoing tracking via the "Alpha Planet" platform to drive closed-loop resolution and elevate employees' engagement and trust. The Company also continues to advance the Employee Assistance Program (EAP), regularly conducting mental-health counselling and related training and providing professional support and intervention when employees face stress or work-related challenges, further strengthening employees' psychological safety and organizational belonging.

Through a care mechanism combining "communication and feedback, issue follow-up, professional support", the Company continually refines its mental-health management system, promoting employees' holistic wellbeing and providing strong support for a stable and sustainable talent development environment.

Building a Responsible Ecosystem

The sustainable value of an enterprise originates not only from the green excellence of its own operations, but is more deeply rooted in a responsible ecosystem of co-construction with partners, jointly thrived with the industry and shared with society. Leveraging “responsibility” as a bond, AlphaESS deeply integrates sustainability into the full-chain management of the supply chain — from standardizing access criteria and strengthening ESG risk audits to empowering the green transformation of suppliers — partnering with upstream and downstream stakeholders to build a transparent, resilient and low-carbon sustainable supply system. With “openness” as our posture, we actively participate in international and domestic industry forums, summits and standard discussions, sharing practical insights in energy storage, advancing technological coordination and the joint construction of rules, and fostering the high-quality and inclusive development of the industry. With “accountability” as our original aspiration, we continue to invest in community development, education support and emergency assistance and other public-welfare initiatives, ensuring the warmth of green technology to benefit broader population.

05

Corresponding SDGs:



Supply Chain Management

Supplier Full-Lifecycle Management

Adhering to the philosophy of "compliance first, dynamic assessment, controllable risk and collaborative win-win", AlphaESS has built a full-lifecycle management system covering supplier access, evaluation and exit. We have formulated internal policies including the *Supplier Management Procedure*, the *Procurement Management Regulations*, and the *Supplier Performance Management Process*, deeply embedding requirements for business ethics, trade security, information security and environmental compliance into the construction of a sustainable supply chain. Powered by the Supplier Relationship Management (SRM) platform as a digital management tool, we have achieved fully online and traceable management of supplier qualifications, agreement signing, performance appraisal and remediation records, ensuring efficient operation of the supply chain system, and partnering with upstream and downstream stakeholders to build a resilient, transparent and responsible industrial ecosystem.

Stringent Access

The Company implements a "technology + compliance" dual-track screening mechanism, building quality, environmental and safety defenses at the source. The procurement team upholds the principle of multi-source price comparison and conducts qualification screening and credit checks via official authoritative channels, applying a "one-vote veto" for suppliers listed in the joint disciplinary system for breach of trust, the abnormal-operations directory or with material compliance defects. Meanwhile, the Company conducts verifications based on the *Supplier Audit Form and the Supplier Compliance and Trade Security Management Assessment Form;* only after passing the audit can a supplier be included in the qualified supplier list, and is required to sign compliance documents such as the *Integrity Agreement*, the *Supplier Code of Conduct and Statement*, the *RoHS/REACH Environmental Protection Agreement*, the *Trade Security Management Agreement, and the Confidentiality Agreement*.

Dynamic Assessment

The Company has established a "quarterly performance + annual special" assessment system, rolling and updating the *Qualified Supplier List* each quarter to achieve continuous optimization and dynamic management of the supply chain structure. Each quarter, the Supplier Quality Engineer (SQE) leads the quantitative scoring of partner suppliers across four dimensions — quality, cost, delivery and service. Annual process audits are conducted on suppliers of core materials. In urgent quality situations, flying inspections are carried out to strengthen risk identification and rapid response capabilities in critical links. The Company also conducts an annual trade security review on no fewer than 20% of total suppliers, focusing on suppliers with high annual transaction values, high delivery frequency, key core categories, or historical risks or safety management hazards, elevating the overall security and compliance level of the supply chain. In addition, the Company annually re-verifies the customs AEO credit ratings of suppliers, further safeguarding the compliance and stability of cross-border trade.

Tiered Management

The Company has established a multi-dimensional supplier-tiered management system to achieve precise resource allocation and pre-emptive risk interception:

Status Tiering

Six dynamic statuses — potential, qualified, temporary, customer-designated, frozen and eliminated — are established, with corresponding differentiated procurement authorities and conversion mechanisms. Temporary suppliers are managed under a 7-month validity period system; suppliers may only be promoted after achieving a grade B or above for two consecutive quarters.

Performance Tiering

Dynamic ratings are applied based on audit and appraisal results. Outstanding suppliers are admitted to a deepened collaboration pool, while underperformers receive dedicated coaching and remediation. For non-conformities identified during the audits process, a remediation period of 1–3 months is set with tracking for closed-loop verification; for enterprises with downgraded qualifications or with broken-trust records, strict controls are implemented or alternative sourcing is initiated to ensure continuous supply chain compliance and operational stability.

Orderly Exit

The Company has established standardized supplier status flow and exit mechanisms. For suppliers failing comprehensive appraisal, scoring below 70% in trade security audits and failing to remediate within the stipulated 1–3-month period, or experiencing material quality or compliance risks, the Company strictly enforces downgrading, reduced procurement shares or removal from the Qualified Supplier List in accordance with the Supplier *Exit Management Policy*. During the exit transition period, the Company simultaneously initiates alternative supplier import and capacity switching contingency plans to guarantee the continuity of production and operations.

Total number of suppliers **351**

Suppliers in China **327**

Overseas Suppliers **24**

AlphaESS Number of Suppliers in 2025

Supply Chain Resilience Management

Faced with external challenges including geopolitical volatility and extreme climate, AlphaESS has systematically built a high-resilience and risk-resistant supply chain management system, effectively safeguarding business continuity and long-term value delivery. During the reporting period, on-time delivery of materials remained stable at over 98%.

Risk Early-Warning and Response

The Company has established a global supply chain risk early-warning and tiered management system, conducting dynamic monitoring and classified controls over critical materials, complemented by a cross-departmental rapid-response mechanism. Early-warning information is reported directly to senior management for scientific decision-making and capacity scheduling, ensuring stable order delivery and the continuation of customer trust.

Coordinated Multi-Site Layout in China and Overseas

The Company actively advances a coordinated multi-site operating strategy across China and overseas (such as the overseas base in Malaysia), reducing supply chain risk through regional capacity diversification and resource coordination. In line with the global trend of supply chain localization, the Company actively cultivates and reserves high-quality local suppliers to further enhance the agility and delivery stability of regional supply chains.

Supplier Multi-Sourcing

The Company strictly executes multi-sourcing and safety stock mechanisms, applying dynamic stock-level controls to core materials and tightly controlling reliance on single sources. For customized materials such as molds, formed parts and connectors, suppliers are required to provide back-up molds or, where capacity permits, set up a second production line (a second process), effectively mitigating supply disruption risk and safeguarding production continuity.

Supplier Empowerment

AlphaESS has consistently embraced the philosophy of supply chain win-win development. Through engagement with suppliers, we understand their specific needs and operational difficulties, and provide targeted training and support from multiple perspectives such as product knowledge, service quality and social responsibility fulfillment. Meanwhile, through activities such as supplier conferences, cooperation promotion meetings, supplier exhibitions, and salons, the Company shares its development strategy and goals with suppliers, exchanges industry trends and best practices, achieves mutual progress and fosters a positive collaborative atmosphere.

The Company also regards supplier ESG capability building as a core engine for the sustainable development of the supply chain. In 2024, the Company successfully held the Core Supplier Partner Conference with the theme of "Brave the Currents, Co-Create and Win Together", aligning ESG requirements with supply assurance agreements and commercial negotiations, promoting the penetration of responsibility concepts to the upstream and downstream of the industrial chain.

Practicing Responsible Procurement

Building a Sustainable Supply Chain

AlphaESS continuously elevates its sustainable supply chain management level, incorporating sustainability-related requirements into supplier bidding, appraisal, and evaluation to reduce environmental and social risks in the supply chain. We have formulated the *Supplier Code of Conduct and Statement*, which clarifies the Company's requirements for suppliers in human rights, occupational health and safety and environmental protection, and require all suppliers to sign the statement. Meanwhile, we have also signed a series of agreements with suppliers, including the *Declaration of Conformity*, the *Integrity Agreement*, and the *Confidentiality Agreement*, further promoting the in-depth development of sustainable supply chain construction.

Transparent Procurement	The Company has formulated the *Procurement Management Regulations* and signed *Integrity Agreements* with suppliers, requiring them to follow the Company's integrity-related management systems and commit to establishing and improving their own integrity systems; meanwhile, the Company conducts integrity and honesty education for suppliers, and supervises as well as investigates any violations of laws and discipline.
Labor Management	The Company has released the *Supplier Code of Conduct and Statement*, requiring suppliers to comply with the *Human Rights Statement*, respect and guarantee human rights, prioritize health and safety, protect the environment, and establish and improve management systems.
Privacy Security	The Company signs *Confidentiality Agreements* with suppliers and has formulated the *Supplier Data Security Policy*, requiring suppliers to comply with relevant provisions in applicable data protection laws and regulations, including but not limited to: the *Data Security Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China*, the EU GDPR, and other relevant laws and regulations, and to carry out data processing activities in a lawful and compliant manner.
Environmental Compliance	The Company signs *Declarations of Conformity* with suppliers, requiring them to be familiar with and provide green and compliant products that meet the requirements of the EU REACH Regulation, RoHS Directive, and others.

Sustainable Supply Chain Management Initiatives

Green Procurement

AlphaESS practices green development principles in supply chain management and actively advocates for the low-carbon transformation of the supply chain. We encourage raw material suppliers to conduct carbon footprint accounting and certification, and prioritize the selection of local suppliers by building regional procurement networks, with a preference for environmentally friendly materials, achieving both efficiency and energy conservation in procurement and minimizing the environmental impact of the procurement process to the greatest extent.

During the reporting period, we continued to strengthen training for procurement personnel, with 100% of in-house procurement staff completing sustainable procurement training, comprehensively reinforcing supply chain management capabilities.

Raw Material Traceability and Management

AlphaESS is committed to building a transparent and traceable supply chain management system, incorporating critical mineral management into the core agenda of the supply chain to ensure that the procurement and use of critical minerals comply with sustainable development principles. The Company extends traceability management to the upstream end, establishing a full-chain traceability mechanism for the core materials of energy storage cells, and requires suppliers of key materials to uniformly apply traceability labels, ensuring the origins and movement of lithium and other key materials are fully traceable and controllable.

The Company always adheres to responsible procurement and effectively fulfills its responsibilities and obligations to respect human rights and not contribute to conflict. We pledge that our products do not use 3TG conflict minerals (tantalum, tin, tungsten and gold), eliminating the procurement of any controversial minerals that may exacerbate conflicts or harm human rights and the environment, and refrain from any activities that may finance conflict. To this end, the Company requires suppliers to sign the *Conflict-Free Mineral Commitment Letter*, treating compliance of mineral origins as a precondition for cooperation, ensuring full-chain traceability and control of critical materials. The Company continues to expand the scope of responsible procurement, extending conflict mineral controls to a broader scope of conflict material control, further reinforcing the defense line of supply chain ethics and compliance.



Industry Collaboration and Engagement

Anchored on the core strategy of "linking the industrial chain through technological innovation and empowering sustainability through ecosystem synergy", the Company focuses on premier industry events worldwide to strengthen brand influence and promote the digital, intelligent, and green transformation of the energy storage industry through technology displays, joint construction of standards, and dissemination of concepts. During the reporting period, the Company actively participated in industry exchanges and market expansion, attending dozens of forums, exhibitions and summits in China and overseas, covering key markets across North America, Europe-Asia, Australia and Southeast Asia.

Case | Jointly Released the *China C&I Energy Storage Development Report 2024*

In November 2024, the Company participated in the Second C&I Energy Storage Summit held in Hangzhou. As a core participating enterprise, AlphaESS jointly released the *China C&I Energy Storage Development Report 2024*, systematically reviewing industry development trends and market opportunities and providing an authoritative reference for industry participants. The Company was also invited to participate in the round-table forum on "Application and Development of C&I Energy Storage", conduct in-depth exchanges with industry experts and representatives of leading enterprises. The event strengthened the Company's influence in the C&I energy storage segment and advanced collaborative innovation across the upstream and downstream value chain, supporting the building of a healthy and orderly energy storage industry ecosystem.



Roundtable Forum at the Second C&I Energy Storage Summit

Case | Appearance at ESIE — Strategic Partnerships with Haitong Unitrust and EVE Energy

As the most influential premier event in the global energy storage industry, the Company has participated in the Energy Storage International Conference & Expo (ESIE) for two consecutive years, leveraging the platform to demonstrate its technology leadership and sustainability commitment. During the events, the Company signed strategic cooperation agreements with two core enterprises, achieving important cooperation results and helping to build the energy storage industry ecosystem and promote green transformation.

In April 2024, during the 12th ESIE 2024, AlphaESS signed a *Strategic Cooperation Agreement* with Haitong Unitrust International Leasing Co., Ltd. Both parties agreed to cooperate on the promotion of green energy technologies and the implementation of new energy projects, focusing on accelerating the commercial application process of energy storage industry, and working together to promote the green transformation of the energy structure, fully leveraging their respective resource advantages to achieve mutual benefit.

In April 2025, during the 13th ESIE, AlphaESS signed a *Strategic Cooperation Agreement* with EVE Energy Co., Ltd. According to the agreement, both parties will reach strategic cell procurement cooperation from 2025 to 2028, with an expected total procurement scale of 10GWh. The collaboration aims to deepen synergies with key supply chain partners, strengthen the technical and scale advantages of both parties in the new energy industrial chain through deep synergy with core supply chain partners, ensuring the stable supply and sustainable production of energy storage products, jointly promoting the global clean energy transition, and building a mutually beneficial energy storage industry ecosystem.



Signing Ceremony for the Strategic Cooperation between AlphaESS and Haitong Unitrust



Signing Ceremony for the Strategic Cooperation between AlphaESS and EVE Energy

Delivering on Social Responsibility

AlphaESS always upholds its original intention of corporate social responsibility, deeply integrating the practice of social responsibility into its sustainable development strategy. Centered on rural revitalization, employment promotion, community philanthropy and public welfare, the Company empowers rural development through industry, contributes to society through diversified public-welfare actions, and supports regional economic upgrading, livelihood improvements and shared prosperity through pragmatic measures, faithfully fulfilling its corporate responsibilities.

Community Impact

AlphaESS actively advances community-relations management, achieving the simultaneous enhancement of corporate value and community wellbeing through systematic mechanisms, supporting the construction of a green, low-carbon and mutually beneficial ecosystem. The Company has also established multi-dimensional reporting channels and a regular communication mechanism with communities to accurately address community needs. We not only drive local employment and assist in rural revitalization, but also use green energy storage technology to empower overseas communities, advancing community energy transition and coordinated development.

Community Communication and Management

AlphaESS regards harmonious community development as a core pillar of its sustainability strategy and is committed to identifying, assessing and managing community-related impacts, risks and opportunities through systematic mechanisms, achieving the simultaneous enhancement of corporate value and community wellbeing and supporting a green, low-carbon and mutually beneficial ecosystem. We attach great importance to the potential impact of business activities on communities and consistently uphold the principle of minimizing environmental impacts on communities, applying internal control standards in emission control, environmental management and other key areas that are stricter than industry standards and regulatory requirements.

Siting Stage	In the decision-making process for new project siting, the Company strictly follows national and local industrial planning and environmental protection access requirements, prioritizes siting in compliant industrial parks, and fully assesses the supporting capacity of the parks' environmental infrastructure and regional environmental carrying capacity. During the project planning stage, environmental impact assessments are systematically conducted, and functional zones of the plant and environmental protection distances are scientifically set. Meanwhile, the distribution of surrounding communities is comprehensively considered to reasonably plan transportation routes and operational hours, minimizing the impact of operational activities on surrounding residents to the greatest extent.
Operational Stage	The Company continuously iterates and upgrades production processes and environmental protection technologies, establishes a whole-process emission monitoring system, and strictly controls waste gas, solid waste, and noise emissions to ensure full compliance with and excellence beyond environmental regulation requirements. The Company promotes waste sorting, recycling, and resource utilization to build a circular economy model, reducing the impact of production activities on the environment of surrounding communities.
Supervision and Communication Mechanisms	In response to the potential impacts that operations may have on surrounding communities, the Company has established multi-dimensional feedback channels, including a hotline, corporate email, official WeChat account, and official website, to ensure that affected community members can conveniently report improper or illegal acts. Meanwhile, we maintain normalized work coordination with local community management agencies and government departments to respond timely to regulatory requirements and local planning guidelines.

Community Relations Management Process

Community Co-Building

Rural Revitalization

AlphaESS has consistently treated employment generation as an important measure for fulfilling social responsibility and supporting regional development, while actively practicing the rural revitalization strategy. Anchored on industry empowerment, employment assistance and green development, the Company deeply integrates its industrial layout with county-level economic and rural revitalization initiatives, supplying high-quality talent and increasing local employment and income growth, while injecting lasting momentum into the high-quality development and realization of shared prosperity in less-developed regions.

Case | Empowering Southwest China Rural Revitalization through Industry, Employment and Green Synergy

AlphaESS has precisely deployed in the less-developed central Yunnan region, investing RMB 5.139 billion to build the Southwest production base in the Yanglin Economic and Technological Development Zone in Songming County, Kunming. Focused on core energy storage system production lines and frontier technologies, the base, once operational, is expected to deliver an annual production capacity of 5 GWh of energy storage systems, complementing the regional green-energy industrial chain, attracting clusters of supporting enterprises and supporting local industrial upgrading.



Groundbreaking Ceremony of AlphaESS Southwest Production Base

The Company adheres to a localized operating philosophy, actively partnering with the local "industrial park + vocational education" integration model. Through targeted skills cultivation and joint training bases, the Company effectively elevates local residents' vocational skills and employment competitiveness, providing high-quality employment platforms. Through the construction and operation of this base, Songming County has cumulatively added 883 new jobs, with local residents accounting for over 70%, achieving a positive cycle between industrial development and employment growth. Through industry empowerment, the Company has supported local employment and people's livelihoods, advancing steady socio-economic development in less-developed regions.



Overseas Community Building

Based on a global sustainability perspective, AlphaESS actively practices the responsibility of cross-border social co-construction, leveraging green energy storage technology as a core lever to deeply empower the diversified development of overseas communities. By driving the green transition of energy structures, we help overseas communities reduce energy costs, lower carbon emissions level, enhance energy self-sufficiency and supply reliability. Through industry empowerment to practice social responsibility, the Company promotes the synergistic enhancement of corporate development with the ecology and economy of overseas communities, continuously conveying the philosophy of green development.

Case | Supporting the Zero-Carbon Transformation of the Basque Hotel in the UK

Located in Skegness, UK, the Basque Hotel is committed to building a new energy power structure, achieving the leap from conventional energy to green electricity and embodying sustainability. To support the goal, AlphaESS partnered with local stakeholders to provide customized solar-plus-storage solutions for the Basque Hotel's net-zero transformation project. Based on the hotel's actual electricity load and rooftop PV configuration, the Company deployed a 250kW/583kWh C&I energy storage system.

Operating in "self-generation, self-consumption with surplus to grid" mode, the system effectively raises on-site renewable consumption rates and reduces dependence on the conventional grid and operational carbon footprint. The project provides a replicable demonstration of net-zero energy use for local tourism industry, supporting the resilience of the regional distributed energy network and the popularization of clean energy, while continuously empowering the green and low-carbon development of local communities.



The Basque Hotel in the UK

Case | Promoting Energy Inclusion and Sustainable Community Development in Nigeria

Adhering to the philosophy of "rooting in local communities and developing together", AlphaESS takes localized operations as its cornerstone and continues to carry out pragmatic cooperation with the Nigeria Rural Electrification Agency (REA) in fields such as improving electricity access and the application of clean energy technologies. AlphaESS is committed to deepening community co-building and clean energy inclusion practices, supporting local sustainable development with stable and green energy solutions, and jointly advancing Nigeria's energy inclusion goals.

On December 9, 2025, AlphaESS and REA officially unveiled the "Nigeria Academy" and the "Shine 30·30·30 " public welfare project. Among them, the 'Nigeria Academy' focuses on the cultivation of local technical talents, reserving professional strength for the development of the local clean energy industry through systematic energy storage and power skills training. The "Shine 30·30·30" initiative plans, in partnership with local stakeholders, to donate teaching, medical equipment and high-reliability energy storage systems to 100 schools and medical institutions in the future, effectively improving the electricity environment in key livelihood locations and helping to upgrade community public service capabilities.



Unveiling of AlphaESS
"Shine 30·30·30" Public Welfare Project

Community Philanthropy

AlphaESS adheres to the public welfare original intention of "taking from society and giving back to society", actively practicing corporate citizenship. We conduct regular public welfare investment around key areas such as education assistance and community care, conveying corporate responsibility and social warmth through sustainable public welfare actions. The Company has long regarded education assistance as an important focus of social responsibility practice, building a systematic and regular public welfare education assistance mechanism. We actively recruit graduates from special education schools, building an equal employment platform to help special groups integrate into society and realize professional value and self-development. In 2023, the Company partnered with the Tongzhou District Red Cross Society to establish the "AlphaESS Charity Fund", leveraging it to mobilize multi-party public welfare resources to provide humanitarian rescue and support the development of Red Cross causes.

In supporting students from underprivileged families, the Company donated RMB 20,000 in 2024 through the Tongzhou District Red Cross Society to support disadvantaged college students. In 2024, the Company's total community public welfare investment was RMB 456,000. In July 2025, the Company donated RMB 400,000 to the Nankai University Education Foundation to support higher education development, and established the Tianjin University Energy Storage Talent Development Fund, contributing RMB 300,000 annually between 2024 and 2025 to specifically support the cultivation of professional talents and discipline construction in the energy storage field.

Case | Launching the Green Recycling Program and Carrying Out Public Welfare Visits to Welfare Homes in Malaysia

During the reporting period, the Company's overseas headquarters and overseas business division, in collaboration with the Malaysia production base, jointly initiated a Green Recycling Program to carry out public welfare collection activities for idle items among employees globally. A total of 171 items of various idle materials, including children's books, office equipment, household appliances, and daily necessities, were collected. After formal sorting and categorized registration, all items were donated to local children's homes, elderly care institutions, and rural schools, empowering community public welfare through a resource recycling model and effectively improving the material conditions of grassroots livelihoods and educational settings.

In addition, employee representatives visited welfare homes in Malaysia to conduct public welfare engagement, donating bookcases, children's books, study stationery and daily necessities to the institutions to create a high-quality and rich learning and growth environment for children, supporting the healthy growth and comprehensive development of teenagers, and conveying equal and inclusive humanistic care and corporate warmth through practical actions.



AlphaESS Employees with
Children at the Malaysian Welfare Home

Case | Caring for the Growth of Disaster-affected Students in the Dongting Lake Area

In 2024, the Dongting Lake basin experienced sustained heavy rainfall and severe flooding, with significant impacts on residents' production and livelihoods, and certain affected college students faced major academic and life challenges. Upon learning of the disaster, the Company responded swiftly by partnering with public welfare organizations to carry out disaster relief and education assistance actions.

Through the "Back to Dongting Lake" public welfare project, the Company donated RMB 36,000 in targeted living subsidies to 10 affected college students, easing their financial pressure and supporting the steady continuation of their studies.

Appendix I ESG Performance Indicators

Governance

Indicator	Unit	2023	2024	2025
Economic Value [12]				
Operating revenue	RMB million	2,450	2,424	2,856
Net profit	RMB million	185	179	193
The Board				
Number of directors	person	9	11	9
Number of executive directors	person	4	5	5
Number of non-executive directors	person	2	2	1
Number of independent non-executive director	person	3	4	3
Percentage of female directors	%	22	18	11
Number of shareholders' general meetings	meeting	6	4	3
Number of board meetings	meeting	5	8	7
Number of supervisory board meetings	meeting	2	2	1
Number of Strategy and ESG Committee meetings	meeting	2	1	1
Number of Audit Committee meetings	meeting	4	1	1
Number of Remuneration and Appraisal Committee meetings	meeting	1	1	1
Number of Nomination Committee meetings	meeting	0	4	0
Business Ethics				
Anti-corruption Training				
Total hours of anti-corruption training	hour	35	75	286
Total number of participants in anti-corruption training	person	70	140	142
• Number of directors who received anti-corruption training	person	6	9	9
• Number of employees who received anti-corruption training	person	64	131	133
Business Ethics Violations				
Business ethics and anti-corruption whistleblowing	case	0	0	0
Number of Penalties & Litigations for Ethical Violations	case	0	0	0

[12] The 2023 financial data has been adjusted accordingly based on the audited financial statements.

Environment

Indicator	Unit	2023	2024	2025
GHG Emission [13]				
Total GHG emissions (Scope 1 + Scope 2)	tCO_2e	2,637.31	3,504.60	4,596.65
Scope 1 GHG emissions	tCO_2e	203.61	571.61	659.79
• Stationary emission sources	tCO_2e	40.23	97.30	82.25
• Mobile emission sources	tCO_2e	131.70	227.91	331.98
• Fugitive emission sources	tCO_2e	31.68	246.40	245.56
Scope 2 GHG emissions	tCO_2e	2,433.70	2,932.99	3,936.86
• Purchased electricity in China	tCO_2e	2,326.77	2,741.19	3,490.94
• Overseas purchased electricity	tCO_2e	106.93	191.80	445.92
GHG emissions intensity (Scope 1 + Scope 2)	tCO_2e/ RMB 10,000 revenue	0.0108	0.0145	0.0161
Scope 3 GHG emissions	tCO_2e	617.31	860.67	1,286.42
• Category 3: Fuel- and energy-related activities	tCO_2e	440.27	558.02	723.04
• Category 6: Business travel	tCO_2e	177.04	302.65	563.38
Energy [13]				
Total energy consumption	MWh	5,309.00	6,920.80	9,152.85
Total energy consumption intensity	MWh/ RMB 10,000 revenue	0.0217	0.0285	0.0320
Direct Energy Consumption [14]				
• Natural gas	10,000 m^3	1.19	4.50	3.80
• Gasoline	liter	50,415.56	98,128.65	142,752.47
• Diesel	liter	9,034.17	6,904.85	10,195.31
• LPG [15]	liter	8,500.00	/	60.00
Indirect Energy Consumption				
Purchased electricity [16]	kWh	4,582,439.62	5,507,130.79	7,390,405.62
• Purchased Electricity in China	kWh	4,385,160.00	5,166,205.85	6,579,233.25
• Overseas purchased electricity	kWh	197,279.62	340,924.94	811,172.37

[13] To provide a more comprehensive reflection of the Company's ESG performance, the reporting boundary for environmental data during the reporting period has been expanded to include the overseas operating entities of AlphaESS. Accordingly, the environmental data for 2023 has been restated. Except for this adjustment to the reporting boundary, the statistical and calculation methodologies applied to the relevant indicators remain unchanged.

[14] During the reporting period, the increase in total gasoline and diesel consumption was primarily attributable to: 1) enhanced data granularity and completeness achieved through refined management policies for business travel and private-vehicle-for-business use, including improved fuel card tracking systems; and 2) higher actual fuel consumption driven by increased commuting and inter-site travel frequency across operational regions, corresponding to business volume growth.

[15] LPG consumption decreased significantly in 2024, mainly because the canteen at the Tongzhou Base has been operated by an external contractor starting from 2024. Consumption rebounded slightly in 2025, primarily due to minor LPG usage for cooking purposes following the establishment of the Kenya subsidiary in August 2025.

[16] During the reporting period, the increase in total purchased electricity was primarily attributable to: 1) the inclusion of electricity consumption data from overseas operating entities into the Company's consolidated measurement and reporting scope; and 2) higher production output driven by business expansion, which correspondingly increased electricity consumption in manufacturing processes.

Indicator	Unit	2023	2024	2025
Renewable energy consumption				
Total Rooftop PV output	kWh	149,548.00	1,828,655.00	2,405,853.70
• Rooftop PV output in China	kWh	140,000.00	1,820,000.00	2,403,083.40
• Overseas rooftop PV output [17]	kWh	9,548.00	8,655.00	2,770.30
Water Resources [13]				
Total water consumption [18]	m^3	50,087.30	48,154.17	57,264.36
• Water consumption in China	m^3	50,084.00	44,309.00	52,278.00
• Overseas water consumption	m^3	3.30	3,845.17	4,986.36
Water consumption intensity	m^3/RMB 10,000 revenue	0.2044	0.1986	0.2005
Packaging Materials [13]				
Total packaging material consumption [19]	ton	309.18	325.52	945.62
• Plastics	ton	8.80	9.26	27.23
• Cartons	ton	260.34	276.78	742.96
• Wooden Crates	ton	40.04	38.44	167.92
• Others	ton	0.00	1.04	7.51
Packaging material intensity	ton/RMB 10,000 revenue	0.0013	0.0013	0.0033
Waste				
Total hazardous waste [20]	kg	110.00	2,045.00	6,227.00
Hazardous waste intensity	kg/RMB 10,000 revenue	0.0004	0.0084	0.0218
Total non-hazardous waste [21]	ton	635.84	450.41	833.17
Non-hazardous waste intensity	ton/RMB 10,000 revenue	0.0026	0.0019	0.0029
Environmental management				
Number of Penalties & Litigations for Environmental Compliance Violations	Case	0	0	0

[17] Rooftop solar PV generation data from overseas operations is sourced from the Company's Germany office. The notable decrease in this metric in 2025 was primarily due to the office relocation completed in February 2025, with the current reporting scope covering only the PV generation prior to the relocation.

[18] During the reporting period, the increase in total water consumption was primarily attributable to: 1) the inclusion of water usage data from overseas operating entities into the Company's consolidated measurement and reporting scope; and 2) higher domestic water consumption driven by the continued growth in employee headcount.

[19] During the reporting period, the increase in packaging material consumption was primarily driven by business expansion and higher sales volume, which correspondingly increased packaging usage across product distribution and logistics processes.

[20] During the reporting period, the increase in hazardous waste generation was primarily attributable to higher production output driven by business expansion, which correspondingly increased waste generation from manufacturing processes.

[21] Non-hazardous waste data only include general industrial solid waste. During the reporting period, the increase in non-hazardous waste generation was primarily attributable to higher production output driven by business expansion, which correspondingly increased waste generation from manufacturing processes.

Social

Indicator	Unit	2023	2024	2025
Number of Employees				
Total number of employees	person	1,106	930	1,104
Total number of new employees	person	524	218	348
By Gender				
Male employees	person	734	622	730
Female employees	person	372	308	374
Percentage of male employees	%	66.37	66.88	66.12
Percentage of female employees	%	33.63	33.12	33.88
By Age				
Number of employees aged 30 and below	person	589	516	560
Number of employees aged 31-40	person	398	333	454
Number of employees aged 41-55	person	115	77	87
Number of employees aged above 55	person	4	4	3
Percentage of employees aged 30 and below	%	53.25	55.48	50.72
Percentage of employees aged 31-40	%	35.99	35.81	41.12
Percentage of employees aged 41-55	%	10.40	8.28	7.88
Percentage of employees aged above 55	%	0.36	0.43	0.27
By Position Level				
Number of senior managers	person	20	18	17
Number of middle managers	person	48	54	59
Number of general employees	person	1,038	858	1,028
Percentage of senior managers	%	1.81	1.94	1.54
Percentage of middle managers	%	4.34	5.81	5.34
Percentage of general employees	%	93.85	92.26	93.12
By Job Function				
Number of management employees (M sequence)	person	68	72	76
Number of professional employees (P sequence)	person	477	443	510
Number of technical employees (T sequence)	person	227	236	266
Number of operational employees (O sequence)	person	334	179	252

Indicator	Unit	2023	2024	2025
By Job Function				
Percentage of management employees (M sequence)	%	6.15	7.74	6.88
Percentage of professional employees (P sequence)	%	43.13	47.63	46.20
Percentage of technical employees (T sequence)	%	20.52	25.38	24.09
Percentage of operational employees (O sequence)	%	30.20	19.25	22.83
By Location				
Number of employees in China	person	963	793	929
Number of employees in Europe	person	58	63	65
Number of employees in other Asian regions (South Korea, Japan, Malaysia, Singapore)	person	48	39	70
Number of employees in the Americas	person	3	0	0
Number of employees in Africa	person	7	4	5
Number of employees in Oceania	person	27	31	35
Percentage of employees in China	%	87.07	85.27	84.15
Percentage of employees in Europe	%	5.24	6.77	5.89
Percentage of employees in other Asian regions (South Korea, Japan, Malaysia, Singapore)	%	4.34	4.19	6.34
Percentage of employees in the Americas	%	0.27	0.00	0.00
Percentage of employees in Africa	%	0.63	0.43	0.45
Percentage of employees in Oceania	%	2.44	3.33	3.17
Employee Turnover Rate				
Overall employee turnover rate	%	12.00	49.25	23.73
By Gender				
Turnover rate of male employees	%	/	48.87	25.48
Turnover rate of female employees	%	/	50.00	20.32
By Age				
Turnover rate of employees aged 30 and below	%	/	50.81	27.32
Turnover rate of employees aged 31-40	%	/	44.44	18.64
Turnover rate of employees aged 41-55	%	/	60.49	27.47
Turnover rate of employees aged above 55	%	/	50.00	66.67
By Position Level				
Turnover rate of senior managers	%	/	12.50	30.43
Turnover rate of middle managers	%	/	10.42	9.43
Turnover rate of general employees	%	/	52.45	24.32
By Job Function				
Turnover rate of management employees (M sequence)	%	/	11.11	15.79
Turnover rate of professional employees (P sequence)	%	/	44.70	25.24
Turnover rate of technical employees (T sequence)	%	/	24.58	16.23
Turnover rate of operational employees (O sequence)[22]	%	/	108.38	30.95
By Location				
Turnover rate of employees in China	%	/	48.48	22.07
Turnover rate of employees in Europe	%	/	31.75	32.31
Turnover rate of employees in other Asian regions (South Korea, Japan, Malaysia, Singapore)	%	/	75.00	28.57
Turnover rate of employees in the Americas	%	/	/	0.00
Turnover rate of employees in Africa	%	/	50.00	120.00
Turnover rate of employees in Oceania	%	/	61.29	28.57
Employee Training				
Total training hours of employees	hour	35,425.18	11,820.30	10,156.80
Average training hours per employee	hour	32.03	12.71	9.20
By Gender				
Average training hours per male employee	hour	32.03	12.38	9.28
Average training hours per female employee	hour	32.03	13.38	9.05
By Job Function				
Average training hours per management employee (M sequence)	hour	69.55	38.83	41.00
Average training hours per professional employee (P sequence)	hour	37.21	11.82	13.72
Average training hours per technical employee (T sequence)	hour	/	6.42	11.07
Average training hours per operational employee (O sequence)	hour	/	12.71	5.88

[22] In 2024, the personnel changes for this employee group were primarily driven by the Company's capacity integration and staff resettlement at the Guangde manufacturing base, as part of its overall manufacturing layout strategy. Throughout this process, the Company strictly complied with legal requirements by providing advance notice and conducting consultations, and duly paid economic compensation to the affected employees. As of the end of the reporting period, no labor arbitration claims, lawsuits, or administrative penalties had arisen from such adjustments.

Indicator	Unit	2023	2024	2025
Employee Rights				
Number of employee suggestions	item	/	/	338
Number of employee suggestions adopted	item	/	/	254
Occupational Health and Safety				
Investment in safety hazard identification	RMB	1,982,000.00	3,224,628.54	2,863,011.65
Total number of safety hazard inspections	item	1,506	1,406	1,645
Safety hazard rectification rate	%	100	100	100
Number of work safety training	session	32	25	32
Total hours of work safety training	hour	3,440	2,417	2,440
Number of safety emergency drills	/	10	12	13
Number of work-related fatalities	person	0	0	0
Number of working days lost due to work-related injuries	day	0	0	0
Innovative R&D				
Investment in R&D[23]	RMB million	164	149	143
Number of patents held	item	203	251	307
• Utility model patents	item	112	119	135
• Invention patents	item	26	49	70
• Design patents	item	70	83	102
Total number of registered trademarks	item	40	54	57
Total number of software copyrights	item	132	160	203
Product Responsibility				
Product Quality				
Product Recall Rate	%	0	0	0
First Pass Yield≥96.5%	Achieved/ Not Achieved	Achieved	Achieved	Achieved
Incoming Quality Control Pass Rate≥98%	Achieved/ Not Achieved	Achieved	Achieved	Achieved

[23] The R&D expenditure for 2023 has been adjusted in accordance with the audited financial statements.

Indicator	Unit	2023	2024	2025
Information Security and Customer Privacy				
Number of information security audits	/	1	0	1
Number of data security training	/	1	1	1
Number of information security emergency drills	/	1	0	1
Major cybersecurity and data privacy incidents	case	0	0	0
Responsible Marketing				
Number of responsible marketing training	session	/	20	13
Number of employees in responsible marketing training	person	/	369	190
Number of administrative penalties and litigation resulting from false advertising or dissemination of misleading information	case	0	0	0
Customer Satisfaction				
Customer satisfaction	%	/	92.0	89.4
Supply Chain Management				
Total number of suppliers	/	269	307	351
• Number of suppliers in China	/	257	290	327
• Number of overseas suppliers	/	12	17	24
Percentage of suppliers signed the Supplier Code of Conduct	%	100	100	100
Percentage of suppliers signed with Environmental and Labor Requirement Clauses	%	100	100	100
Percentage of procurement employees passing sustainable procurement training	%	100	100	100
Community Investment				
Investment in educational philanthropy	RMB 10,000	/	35.60	70.00
Investment in the employee charity fund	RMB 10,000	14.65	13.85	13.40
Number of employees benefiting from the employee charity fund	person	83	84	97

Appendix II: ESG Content Indices

Chapter	ESG Reporting Code	ESRS
About the Report		
Report Overview		
Reporting Scope	PART B: REPORTING SCOPE	ESRS 2 BP-1
Basis of Preparation		ESRS 2 BP-1
Data Statement		
Reporting Principles	PART B: REPORTING PRINCIPLES	ESRS 2 BP-1, BP-2
Access to the Report		
Message from the Chairman		
Message from the Chairman		
Company Introduction		
Global Presence		ESRS 2 SBM-1
Business Focus		ESRS 2 SBM-1
Our History		
Honors and Awards		
Major Honors and Awards		
Key Sustainability Highlights		ESRS 2 BP-1, IRO-2
Sustainability Governance		
Board Statement	PART B: GOVERNANCE STRUCTURE	ESRS 2 GOV-1
Sustainable Development Structure	PART B: GOVERNANCE STRUCTURE	ESRS 2 GOV-1, GOV-2, GOV-3, GOV-5
Stakeholder Engagement		ESRS 2 SBM-2
Materiality Assessment	PART B: REPORTING PRINCIPLES	ESRS 2 SBM-3
Strengthening Corporate Governance		
Corporate Governance		ESRS 2 GOV-1, GOV-2, GOV-3
Compliance and Risk Management		ESRS 2 GOV-4, IRO-1
Business Ethics	PART C: B7, B7.1, B7.2, B7.3	ESRS G1-1, G1-3, G1-4
Information Security and Privacy Protection	PART C: B6, B6.5	ESRS S4-4

Chapter	ESG Reporting Code	ESRS
Focusing on Service Leadership		
Technology R&D and Innovation	PART C: B6.3	
Product Responsibility	PART C: B6, B6.1, B6.4	
Responsible Marketing	PART C: B6	
Customer Rights and Service	PART C: B6, B6.2	ESRS 2 SBM-3, S4-1, S4-2, S4-3, S4-4
Safeguarding a Green Future		
Respond to Climate Change	Part D: D(I), D(II), D(III), D(IV)	ESRS E1-1, E1-2, E1-3, E1-4, E1-9 GOV-3, SBM-3
Green Operations	PART C: A1, A1.1, A1.3, A1.4, A1.5, A1.6, A2, A2.1, A2.2, A2.3, A2.4, A2.5, A3, A3.1	ESRS E1-5, E2-1, E2-2, E2-3, E2-4, E3-1, E3-2, E3-3, E3-4, E4-1, E5-2
Empowering People for Shared Progress		
Human Capital Development	PART C: B1, B1.1, B1.2, B4, B4.1, B4.2	ESRS S1-1, S1-6, S1-9, S1-10
Employee Training and Development	PART C: B3, B3.2	ESRS S1-1, S1-13
Employee Rights and Benefits	PART C: B1	ESRS S1-1, S1-2, S1-3, S1-4, S1-8, S1-11, S1-12, S1-15
Occupational Health and Safety	PART C: B2, B2.1, B2.2, B2.3	ESRS S1-1, S1-14
Building a Responsible Ecosystem		
Supply Chain Management	PART C: B5, B5.1	ESRS S2-1, S2-2, G1-2
Practicing Responsible Procurement	PART C: B5, B5.2, B5.3, B5.4	ESRS S2-1, G1-2
Industry Collaboration and Engagement		
Delivering on Social Responsibility	PART C: B8, B8.1, B8.2	ESRS S3-1, S3-2, S3-3, S3-4
Appendix		
Appendix I: ESG Performance Indicators		
Appendix II: ESG Content Indices		
Reader Feedback Form		

Reader Feedback Form

Dear Reader,

Greetings,
Thank you for taking the time to read this Report. To improve our capabilities and standards in sustainability and to further enhance the quality of our sustainability report, we sincerely invite you to assist us in completing the questions in this feedback form. We look forward to hearing your views and suggestions!

(1) Are you overall satisfied with this Report?
○ Yes ○ Average ○ No

(2) Do you think this Report adequately reflects AlphaESS's work and material impacts in environmental, social and governance areas?
○ Yes ○ Average ○ No

(3) Do you find the information and indicators disclosed in this Report clear, accurate and complete?
○ Yes ○ Average ○ No

(4) Does this Report disclose and respond to issues of concern to stakeholders?
○ Yes ○ Average ○ No

(5) Are you satisfied with the overall design of this Report?
○ Yes ○ Average ○ No

(6) Please share any other comments or suggestions on the AlphaESS 2025 Sustainability Report.

You may share your valuable feedback with us through the following channels:

Address: No.1086, Bihua Road, Tongzhou District, Nantong City, Jiangsu Province, China
Telephone: 0513-80606891
Email: ir@alpha-ess.com

