



HANGZHOU HOYMILES POWER ELECTRONICS INC.

2022 ESG REPORT



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Reporting instructions

This is the first Environmental, Social and Governance (ESG) Report of Hangzhou Hoymiles Power Electronics Inc. (“Hoymiles Inc.”, “the Company”, or “we” in short). Hoymiles Inc. values communication with stakeholders and hopes that the release of this report would enable all parties to understand Hoymiles Inc.’s actions and achievements in ESG related fields.

The Company promises that there are no false records, misleading statements or major omissions in the contents of the report, and the Board of Directors of the Company is responsible for the authenticity, accuracy and completeness of the contents.

Reporting scope

Scope of organization:

This report focuses on Hoymiles Inc., covering all subsidiaries within the scope of consolidation of financial statements.

Reporting time range:

This report is an annual report, covering the period from January 1, 2022 to December 31, 2022 (referred to as the “reporting period”), with some contents beyond the above time range.

Basis of preparation

This report is prepared with reference to the China Securities Regulatory Commission’s Corporate Governance Guidelines for Listed Companies, Guidelines of Shanghai Stock Exchange for the Application of Self-Regulation Rules for the Listed Companies on the SSE STAR Market No.1 – Regulated Operation, Guidelines of Shanghai Stock Exchange for the Application of Self-Regulation Rules for the Listed Companies on the SSE STAR Market, and the Global Reporting Initiative’s GRI Standards.

Data description

The financial data herein are drawn from the 2022 annual report of Hoymiles Inc. In case of any inconsistency between the financial data in this report and the annual report, the annual report shall prevail. Other data come from the internal documents and relevant statistics of Hoymiles Inc. The monetary amounts involved in this report are measured in RMB, unless otherwise specified.

Language description

This report is prepared in simplified Chinese and English. In case of any ambiguity in understanding the two versions, please refer to the simplified Chinese version.

Accessibility

This report is released in electronic form. For online browsing or downloading, please visit the websites of Hangzhou Hoymiles Power Electronics Inc. (<http://www.hoymiles.com/>) or Shanghai Stock Exchange (<https://www.sse.com.cn/>).

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Message from the management

From 2012 to 2022, the first decade of Hoymiles Inc. is also a decade of innovation, struggle and perseverance. Ten years of ups and downs, ten years of tradition and transcendence, we march forward hand in hand. From the renovation of the former Zhejiang University bathhouse to the construction of the Hoymiles Global R&D Center and Smart Manufacturing Base; from obtaining the first microinverter certification to the development of a sales and service network covering more than 70 countries and regions; from receiving the first product sales contract to the sales of 1.16 million microinverters in 2022; from a national high-tech enterprise to a listed company on the SSE STAR market... Hoymiles Inc. with a world-leading power electronics research and development (R&D) team and a core technology platform aspires to become a great enterprise and develop steadily in many aspects such as technological innovation, international presence, social responsibility, compliance and green development.

Technological innovation promotes industrial development. The establishment of Hoymiles Inc. was inspired by a firm belief and vision: **to provide the most competitive products and services for new power and new energy worldwide, and to become a world-class smart energy partner.** In light of the leading-edge technology in the photovoltaic sector and our own accumulation in the industry, we have been increasing our investment in product technology innovation and R&D and constantly improving our technological advancement. By far, we have been deeply involved in the field of microinverters for ten years, forming an efficient R&D system based on the “Provincial High-tech Enterprise R&D Center.” The R&D technology covers microinverters and monitoring equipment, rapid shutdown devices, energy storage inverters, energy storage systems, photovoltaic power generation systems and other fields.

Expand global presence to build an international brand. Hoymiles Inc. is always committed to our strategic goal of global development, with our products reaching more than 70 countries and regions such as America, Europe, and Asia. In 2022, we held the Hoymiles Energy Solutions Tour Exhibition in ten representative cities around the world to present our stable and efficient photovoltaic power generation system solutions. Next, we will continue to promote the process of our global development, by speeding up product certification in various regions abroad, strengthening overseas localization, and improving global sales. At the same time, we will persist in strengthening the quality and safety management of products and services, actively create high-quality products, improve our smart energy solutions, advance our service quality, and strive to offer all-round technical support and reliable after-sales guarantee for customers around the world.

Pay back to the society and highlight our brand’s social responsibility. Committed to the people-centered approach and the concept of mutual respect, we strive to provide employees with a competitive salary and welfare system, fair promotion channels, a perfect training system and an inclusive working environment, promoting the healthy development of employees’ careers and achieving a win-win situation for the Company and the employees. Following the national strategy of “Promoting Rural Revitalization in an All-round Way,” we have invested in and provided technical support for the construction of agricultural complementary photovoltaic power stations in many rural areas, cooperated with local agricultural offices to invest in the construction of such projects, actively promoted the three-dimensional value-added utilization of land, helped to achieve a win-win situation for photovoltaic development and agricultural production, thus contributing to building a grand blueprint for a great modern socialist country in all respects.

Compliance ensures the development of the Company. Committed to the main line of compliance management, we establish and improve our corporate governance structure and system, constantly optimize the internal control and compliance management mechanism, continuously improve the comprehensive risk management system, and ensure

compliance management and transparent operation, to guarantee the Company’s sustainable and high-quality development. At the same time, we effectively protect the legitimate rights and interests of the Company and shareholders, and provide a solid foundation for the sustainable and healthy development of the enterprise. Hoymiles Inc. is committed to establishing an equal, mutually beneficial, close and stable relationship with excellent partners. By constantly improving the supply chain management system, optimizing business processes, promoting the construction of a sustainable supply chain, and working together to create a sunny, honest and transparent supply chain ecology, the Company ensures the fairness, openness and transparency of the supply chain management.

Our green development closely addresses the dual goals of carbon peaking and carbon neutrality. We actively respond to the national carbon peaking and carbon neutrality strategy. While providing better products for the new energy industry, we continue to optimize our own green performance, and simultaneously implement measures for environmental protection, energy conservation and emission reduction at the production end and the operation end to protect the green environment. In 2022, in order to promote industrial green transformation, our manufacturing related departments moved to a brand-new green intelligent manufacturing base, implemented several energy-saving projects, and introduced a number of automation equipment, with an aim to accelerate the process of green transformation.

In the future, we will never forget our initial aspiration, always follow the corporate mission of **“making electrical energy smarter,”** commit ourselves to providing smart energy solutions to customers around the world, and keep moving towards the vision of “becoming a world-class partner for smart energy.” Hoymiles Inc. will continue to improve the level of ESG management, implement the concept of sustainable development, grow together with all our stakeholders, keep our leading strength in the new energy industry, and contribute to the realization of the goals of carbon peaking and carbon neutrality and the long-term development of renewable energy!

About Hoymiles Inc.

Company profile

Hoymiles Inc. (stock code “688032”) is mainly engaged in the research, development, manufacturing and sales of photovoltaic inverters and related products, energy storage related products, and electrical equipment and related products. Photovoltaic inverters and related products mainly include microinverters and monitoring equipment, rapid shutdown devices, and photovoltaic power generation systems. Energy storage related products mainly include energy storage inverters and systems. Electrical equipment in complete set and related products mainly include high-voltage switchgears, low-voltage switchgears, and distribution boxes.

Since the establishment in 2012, Hoymiles Inc., relying on independently developed theoretical achievements such as circuit topology and control algorithm, has built a number of power electronic inverter development platforms, including microinverters and module level inverters. The Company keeps optimizing the performance, reliability, and cost of photovoltaic inverter products, launching a number of products with high market competitiveness. The Company has by far emerged as one of the enterprises with considerable advantages in technology and market in the field of microinverters, and our products are widely used in the field of global distributed photovoltaic power generation systems, with customers all over America, Europe, Asia and other regions.

Our core products have been certified by the CSA in North America, the BV in Europe, TUV NORD, SAA in Australia, the CQC in China, among other international authorities. By the end of December 2022, the Company held 216 authorized intellectual property rights, including 32 invention patents, 44 utility model patents, 8 design patents and 62 software copyrights, and 70 trademarks.

The Company has more than 1,100 employees, including 213 R&D professionals, accounting for 18.83% of the total employees. Since the inception, the Company has won many titles such as national high-tech enterprise, Zhejiang high-tech enterprise research and development center, national key software enterprise and photovoltaic manufacturing industry standard enterprise of the Ministry of Industry and Information Technology. Yang Bo, General Manager of the Company, won the second prize of the National Natural Science Award in 2016 for his “Regulation Mechanism and Topology Derivation Principle of High Step-Up Power Converters.”

Committed to becoming the leading supplier of photovoltaic products globally, the Company perseveres in independent innovation and R&D to drive the Company’s sustainable development with technological innovation, always providing customers with the best products and services.



The Company held

216

authorized intellectual property rights



The Company has more than

1,100 employees

Company culture

10th anniversary of Hoymiles Inc.:

September 4, 2022 marked the tenth anniversary of Hoymiles Inc. Over the past decade, more and more employees, partners and suppliers have joined the “Journey to Open Energy,” growing up together with the brand, overcoming various difficulties and witnessing one highlight after another.

Persistence and concentration

Since 2016, Hoymiles Inc. has been focusing on the field of distributed photovoltaic systems and realizing innovations in module-level power electronics technology. After ten years of intensive and meticulous development, Hoymiles Inc.’s module-level technologies and products have been widely used in global distributed photovoltaic power generation systems.

Passion and specialization

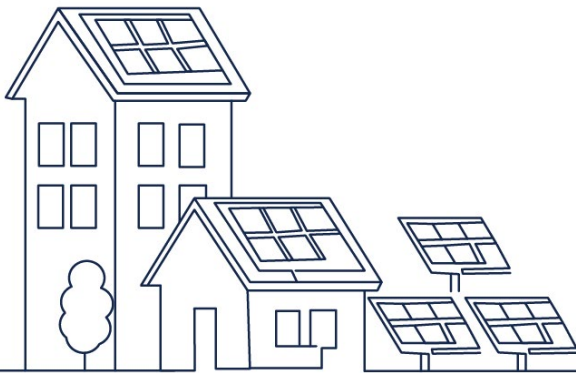
Most people in the R&D team of Hoymiles Inc. still maintain their aspirations to make R&D breakthroughs and create better products and technologies. In the meantime, Hoymiles staff are really keen on this technology, this discipline and this direction. How to make better microinverters, how to provide integrated services for customers, etc., which are always Hoymiles staff’s pursuits.

Efficiency and leading position

Pursuing high-quality products and technologies, Hoymiles Inc. has been working hard towards the target of “making world-class products,” focusing on technological innovation as an important means of the Company’s production and development, constantly upgrading core technologies and optimizing design schemes, to provide safe, efficient technologies and products to customers all over the world.

Diversity and inclusiveness

As a global enterprise, Hoymiles Inc. brings together employees from different regions, countries and working backgrounds by shaping a diversified and inclusive corporate culture, to stimulate the potential of Hoymiles staff to the greatest extent, and to enable every employee to fulfill his/her aspirations and ideals.



Company vision

Become a world-class partner for smart energy

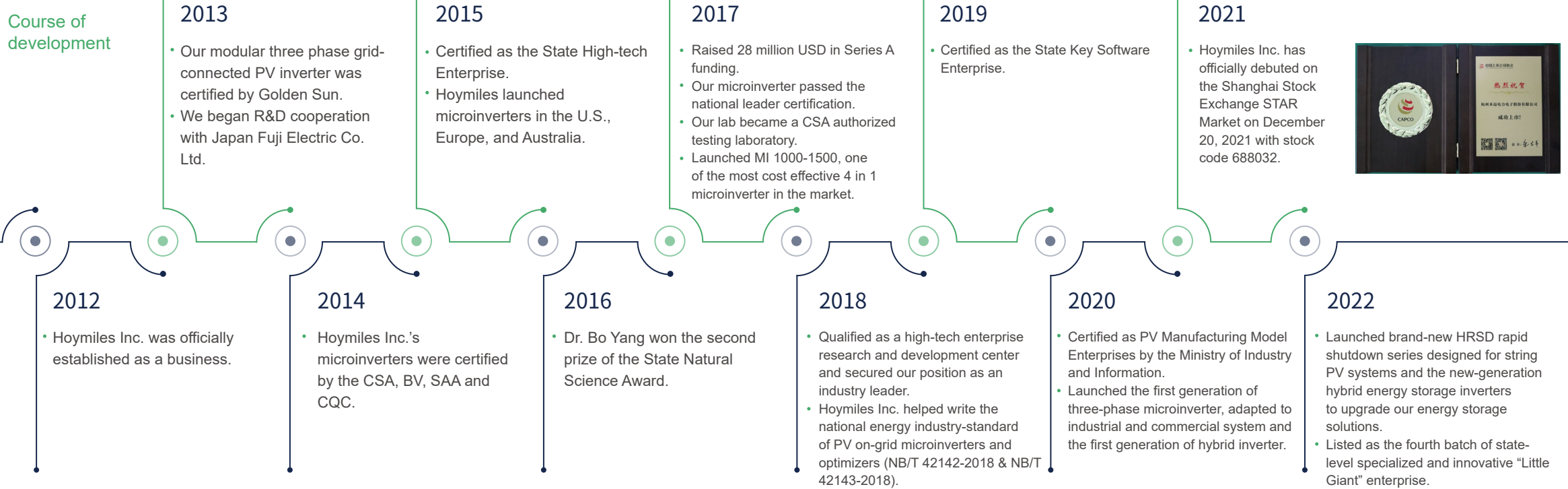
Company mission

Make electrical energy smarter

Company value

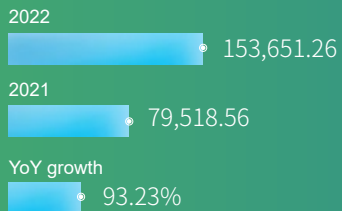
Honesty, Responsibility, Profession, High efficiency

Course of development



Our 2022

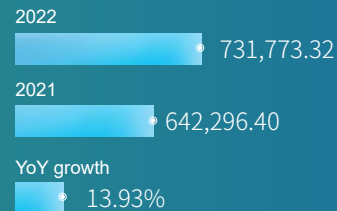
Operating income (RMB 10,000)



Net profit attributable to shareholders of the listed Company (RMB 10,000)



Total assets (RMB 10,000)



Sales volume of microinverters (10,000 units)



Sales volume of monitoring devices (10,000 units)



Honors

March 2022

General Manager Yang Bo was awarded the 2021 Zhejiang Youth Entrepreneurship Award Zhejiang Provincial Committee of the Communist Youth League
Zhejiang Provincial Department of Human Resources and Social Security
Zhejiang Youth Federation



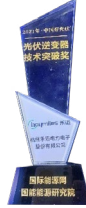
July 2022

Top Ten Suppliers of China Excellent Photovoltaic Brands · Distributed Inverter in 2021
International Energy Network, National Energy Research Institute



July 2022

2021 China Excellent Photovoltaic Brands · Photovoltaic Inverter Technology Breakthrough Award
International Energy Network, National Energy Research Institute



August 2022

2022 Excellent Photovoltaic Enterprises
World Solar Photovoltaic Industry Expo, Guangdong Grandeur Exhibition Group Co., Ltd.



August 2022

2022 High-quality Photovoltaic Inverter Enterprise
World Solar Photovoltaic Industry Expo, Guangdong Grandeur Exhibition Group Co., Ltd.



September 2022

General Manager Yang Bo was selected as one of the Ten Outstanding Young Talents of Hangzhou
Hangzhou Municipal Committee of the CPC
Hangzhou Municipal People's Government



January 2023

Shortlisted in "2022 Hurun China Top 500"
Hurun Research Institute

December 2022

Jinniu Science and Technology Innovation Award
China Securities Journal, Haikou Municipal People's Government, Haikou National High-tech Industrial Development Zone



December 2022

LinkedIn China 2022 Most in B2B Brand Building Award
LinkedIn



November 2022

2022 Excellent Photovoltaic Microinverter
Photovoltaic Box



November 2022

General Manager Yang Bo was awarded the Outstanding Young Entrepreneurs in Yangtze River Delta in 2022
China Youth Entrepreneurs Association, youth league committees of Shanghai, Jiangsu, Zhejiang and Anhui provinces, and youth entrepreneurs associations of the four places



September 2022

State-level specialized and innovative "Little Giant" enterprise
Ministry of Industry and Information Technology (document)

September 2022

On-site test laboratory of manufacturers of the Power Electronics Department of Bureau Veritas
Bureau Veritas



ESG management

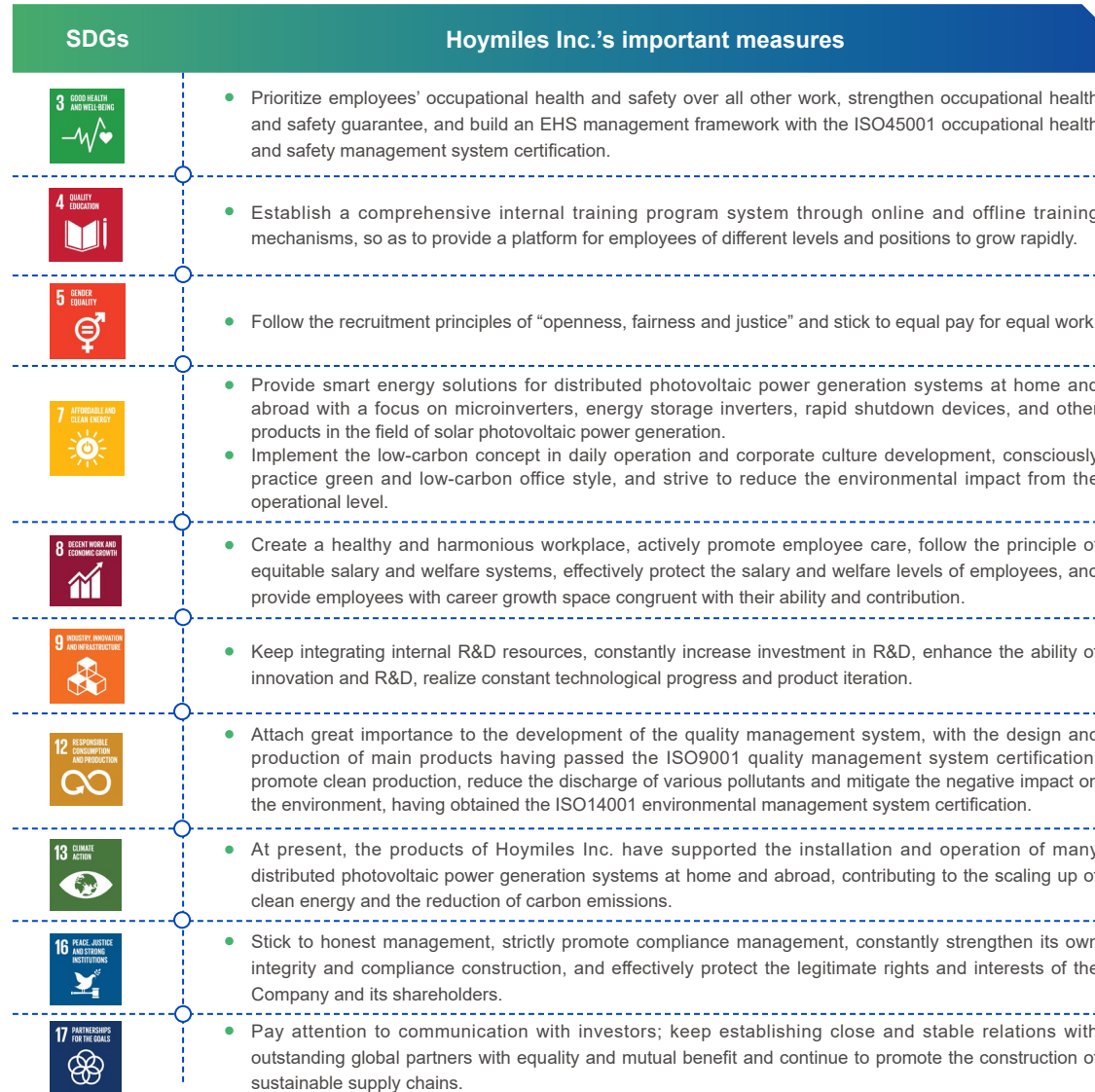
ESG management concepts

Hoymiles Inc. has always been following the ESG concept of “*Open Energy for All.*” By releasing the first ESG report, the Company puts forward the ESG vision and objectives, and more profoundly integrates the ESG concept into our strategy and business. The ESG concept has become an important guide for our long-term development as we will continuously deepen the practice of sustainable development.

Our ESG vision: strengthen R&D and innovation, and boost the development of renewable energy and the construction of a low-carbon society; care for employees' development, offer smooth career development channels, create an inclusive, friendly and open workplace, and promote the common growth of employees and the Company; improve the corporate governance structure, adhere to compliance, and provide a strong institutional guarantee for the Company's high-quality and sustainable development.

ESG responsibility plan

The 17 sustainable development goals (SDGs) of the United Nations (UN), with a focus on development issues in economic, environmental, and social dimensions, identify common challenges related to poverty, inequality, climate change, environmental degradation and prosperity, as well as peace and justice, thus building a beautiful blueprint for the sustainable development of all mankind. Hoymiles Inc. has connected our own business development with the UN SDGs, and constantly deepens our responsibility fulfillment methods and responsibility management system, with a focus on 10 core SDGs as the key development direction of Hoymiles Inc. based on the Company's current main products and services, technological development, and strategic plans.



Support the following goals through cutting-edge products and technical services



Support the following goals through sound enterprise management

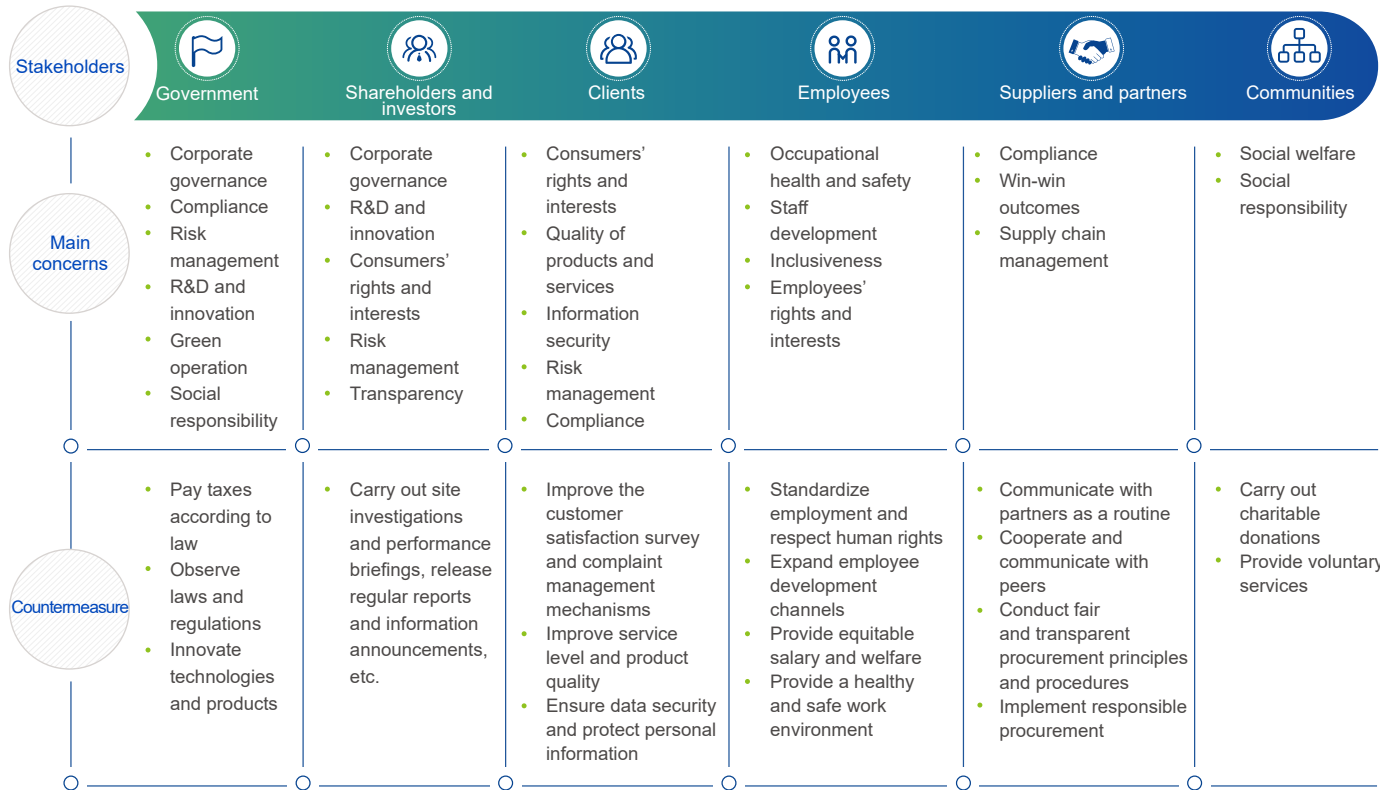


Support the following goals through active communication with stakeholders



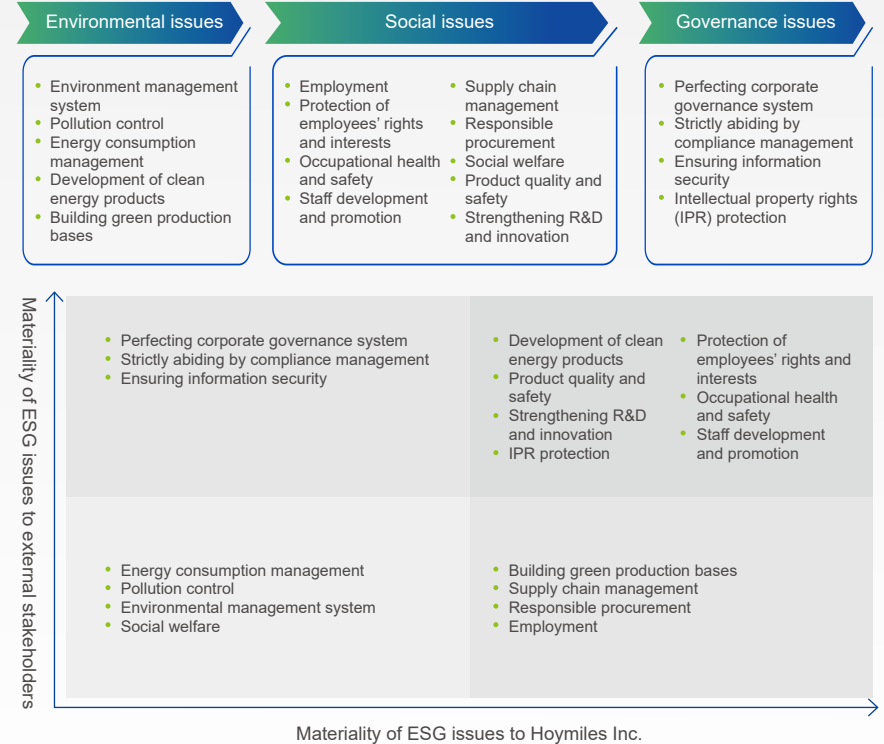
Communication with stakeholders

Hoymiles Inc. attaches great importance to communication with all stakeholders, follows the relevant GRI principles, such as inclusiveness, significance and integrity of stakeholders, constructs three steps of identification, analysis and confirmation, continuously expands communication channels, fully listens to the opinions and feedback of stakeholders, and takes effective measures to respond to the expectations and demands of stakeholders in a timely and sincere manner and earnestly fulfills the ESG related responsibilities.



ESG issue analysis

Combining the concept of ESG with the characteristics of Hoymiles Inc.'s own development strategy and business activities, we carried out the identification, evaluation, and screening of ESG issues from the two dimensions, internal and external stakeholders, from the end of December 2022 to mid-January 2023 by issuing questionnaires. After being reviewed by the Company's management, 18 ESG topics significant to the Company and stakeholders were identified, about which key disclosures and responses are made herein.



Materiality of ESG issues to Hoymiles Inc.

01

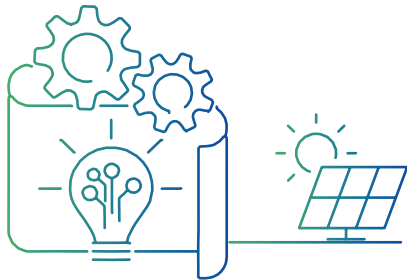
SPECIAL TOPIC: BOOSTING THE DEVELOPMENT OF SOLAR POWER AND PROMOTING THE REALIZATION OF THE CARBON PEAKING AND CARBON NEUTRALITY GOALS

In recent years, in the face of the increasingly prominent conflicts between energy resource consumption and environmental protection, many countries in the world have actively set the goals of carbon peaking and carbon neutrality after signing the Paris Agreement, and accelerated the development and utilization of renewable energy to replace traditional energy. Being “clean, low-carbon, stable, safe and efficient”, solar photovoltaic power will play a pivotal role in building a new power system mainly composed of new energy.

Hoymiles Inc. continuously supports and practices global green actions, implements the Chinese government’s decisions and plans on carbon peaking and carbon neutrality goals, and makes efforts in many aspects, such as boosting photovoltaic development, promoting product innovation, supporting rural development, and expanding global presence, to enhance the Company’s ability to support carbon peaking and carbon neutrality and help achieve low-carbon transformation and development of the economy and society.

Promoting industrial development

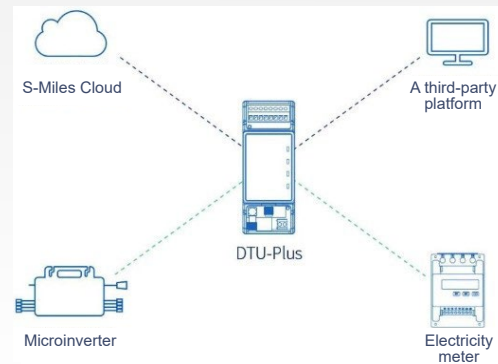
Hoymiles Inc. specializes in microinverters with related products, energy storage inverters, energy storage systems, rapid shutdown devices, and other products in the field of solar photovoltaic power generation, providing smart energy solutions for photovoltaic power generation systems at home and abroad. Hoymiles Inc., in the light of the latest cutting-edge technology and its own experiences in the industry, and with a focus on the R&D of hardware circuits and software algorithms, continues to reform the existing circuits and algorithms. In addition, the Company is developing and landing products in the form of projects to realize the R&D of new products and technologies for power electronics, enhance the ability of independent innovation, and constantly improve the performance of the Company's products, thus boosting the development of the solar photovoltaic industry.



Microinverters and monitoring equipment

Safe and reliable

The microinverters have a very low failure rate and provide built-in surge protection function. Data transfer unit (DTU) records can be used to accurately locate the fault points, which is conducive to efficiently completing after-sales operation and maintenance.



Working diagram of DTUs

Flexible adjustment

The microinverters are divided into 1-in-1, 2-in-1, 4-in-1, and 6-in-1 inverters according to the number of connected photovoltaic modules, which is, each microinverter can be connected with one to six solar panels, with the power output increasing accordingly to adapt to different application requirements and scenarios. Our microinverters can be flexibly installed according to the layout of the whole system and modules.



Portfolio of inverters and DTUs

Easy to monitor

Hoymiles Inc. has developed DTUs to collect microinverter operation data, suitable for all kinds of photovoltaic systems. Users can monitor power generation on the S-Miles Cloud platform, easily realizing module-level monitoring. At the same time, the microinverters are equipped with external antenna with stronger telecommunication ability, able to realize more stable monitoring.



Diagram of S-Miles Cloud

Easy to install

Hoymiles Inc.'s plug-and-play microinverters start the solar photovoltaic power generation system faster and can be put into operation more quickly.

Efficient operation

The peak efficiency, CEC efficiency and dynamic maximum power point tracking (MPPT) efficiency of the microinverters reach 96.7%, 96.5% and 99.8% respectively, which can convert more solar module capacity into usable electric energy.

Energy compliance

The microinverters have obtained more than 1,000 certifications worldwide, and their product performance and safety quality have been affirmed by authoritative organizations in Europe, North America, Latin America, Asia-Pacific and other regions.

Rapid shutdown devices

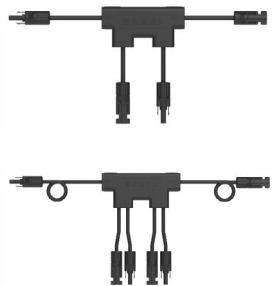
In 2022, Hoymiles Inc. launched a brand-new product, **module-level rapid shutdown device**. The shutdown system products are used in conjunction with traditional series inverters and centralized inverters, including shutdown devices, transmitters, and other products.

Rapid shutdown

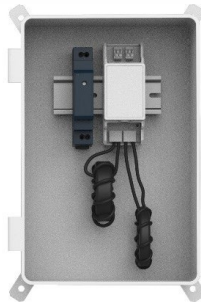
Based on self-developed technology, Hoymiles Rapid Shutdown Device (HRSD) offers industry-leading rapid shutdown functionality that can cut off the high voltage in the DC side within 30 seconds after being initiated to reduce the electrical voltage of solar panel systems to safe levels in case of emergency, ensuring the safety of people's lives and property.

Real-time monitoring

Hoymiles Inc.'s rapid shutdown devices will realize module-level monitoring functions afterwards, able to monitor the voltage, current, power, and other information at module level, realize accurate positioning through the layout chart, and monitor the power generation status of each module remotely and in real time around the world.



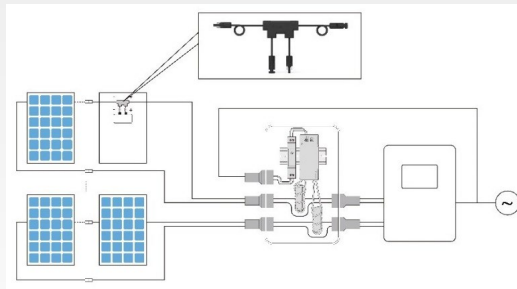
1-in-1 and 1-in-2 shutdown products



Transmitter set (waterproof case)

Safety and compliance

Hoymiles Inc.'s shutdown system products have passed certifications such as NEC2017/2020, UL1741, SunSpec RSD.



Working diagram of shutdown products

Low noise and stability

The working noise of Hoymiles Inc.'s rapid shutdown devices is far lower than the "dangerous noise warning line" set in the photovoltaic system under normal circumstances, so as to prevent the system from misjudging and emergency shutting-off, and effectively ensure the stable operation of the photovoltaic system.

Full compatibility

Hoymiles Inc.'s rapid shutdown products include many series, such as 1-in-1 and 1-in-2, compatible with mainstream photovoltaic modules in market with simple and fast installation. Transmitter products include different forms such as independent installation and waterproof case installation, able to meet different configuration requirements.

Energy storage inverters

The energy storage inverter is the core device of the energy storage system. With its characteristics of energy storage and energy transfer in time and space, it can effectively adjust the balance between supply and demand of the power supply system and play different roles in different application scenarios.

Multi-mode switching

Hoymiles Inc. has introduced single-phase and three-phase hybrid and AC coupled energy storage inverters according to the types of power grid, batteries to be matched, and system structures, such as HYS-LV-G1 series, HAS-LV-G1 series, HYT-HV-G1 series, and HAT-HV-G1 series, with each series covering multiple power models to meet the needs of different applications. Moreover, the inverters come with a smart energy management system (EMS) that can switch four modes: photovoltaic, storage battery, power grid and generator, meeting different application scenarios by seamlessly switching power supply modes.

High efficiency

Hoymiles Inc.'s energy storage inverters have an industry-leading DC/AC ratio of 1.5, which significantly reduces the cost compared to other products with the same capacity. The products' 14A MPPT current is seamlessly compatible with all household mainstream photovoltaic modules in the market today. The highest conversion efficiency can amount to 97.6%, occupying a leading position in the market.

Energy storage inverters

Intelligent operation and maintenance

Paired with DTS-G1 series of energy storage data communication sticks independently developed by Hoymiles Inc., three modes of operation concerning the energy storage system can be realized, including spontaneous self-use mode, economical mode and backup power supply mode. Intelligent Internet connection can also be realized, with real-time monitoring and remote operation and maintenance realized by monitoring the S-Miles Cloud platform.



Energy storage inverters



DTS-G1 series of energy storage data communication sticks

Energy storage systems

Based on the comprehensive understanding of load characteristics in different scenarios, the energy storage systems of Hoymiles Inc. are suitable for public utilities, large industrial and commercial businesses, residential properties, buildings, data centers, communication base stations, power plants, new energy, micro grid and other application scenarios, combined with the Company's professional integration and innovation ability.

Safety

Standardized cabinets realize the divisional safety and isolation of battery systems to ensure the safety and control of energy storage systems, based on single-cell thermal management technology, level 9 active safety monitoring, PACK level active safety warning and immersive fire protection technology.

High efficiency

Efficient multilevel topology and minimum loss frequency conversion modulation technology, precise liquid-cooled temperature control technology, as well as PCS and battery voltage optimal fitting technology, make the system efficiency exceeding 91%.

Grid friendly

Support primary and secondary frequency modulation, high and low voltage crossing, source network load, AGC/AVC, and inertial control strategy, with grid dispatching power response time less than 50ms. User side control strategies embedded such as peaking and valley filling, demand control, etc., enable each device to operate independently.

Smart operation and maintenance

Infinite parallel connection can achieve flexible expansion and modular maintenance of energy storage power stations. The running data can be accessed through WIFI, 5G, LAN and other methods to truly realize the unmanned operation and maintenance of energy storage stations.



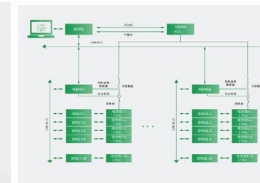
Liquid-cooled energy storage integrated system (cabinet)

Outdoor liquid-cooled energy storage integrated system

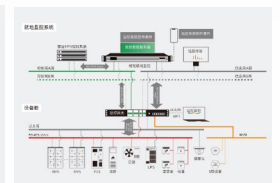
Liquid-cooled energy storage integrated system



Household energy storage batteries



Battery management system (BMS)



Energy management system (EMS)

Photovoltaic power generation systems

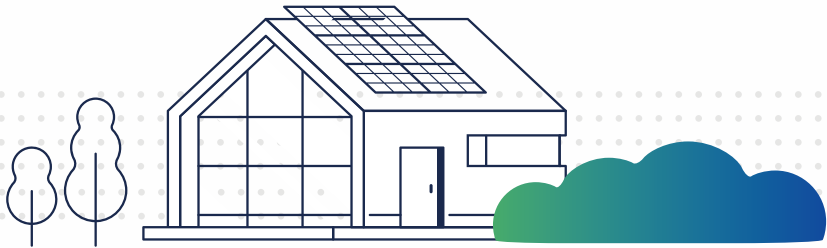
The photovoltaic power generation system solutions of Hoymiles Inc. assemble the Company's inverters and monitoring equipment with externally purchased photovoltaic modules, brackets, etc., which can be installed directly. Through the multiple guarantees of the Company's module-level power electronics technology, the pain points of the current distributed photovoltaic systems can be effectively addressed:

Safety challenge

Hoymiles Inc.'s microinverters are connected to a photovoltaic system in parallel, so that the DC side in the system is kept at a low voltage of about 40V, thus fundamentally precluding the fire hazard and electric shock risk. Users therefore do not have to worry about fire caused by DC arc in the microinverter photovoltaic power station. Even if the microinverter system is brought into an emergency by any external factors, after the system is shut down, the emergency workers will not face the risk of electric shock because there is no DC high voltage in the photovoltaic power station.

Barrel effect

Our microinverters' module-level MPPT controllers track the maximum power point of each photovoltaic module respectively. Even if one photovoltaic module is inefficient, the MPPT controllers of other modules will continue to maintain their respective maximum productivity efficiency, thus minimizing the impact on the whole photovoltaic system.

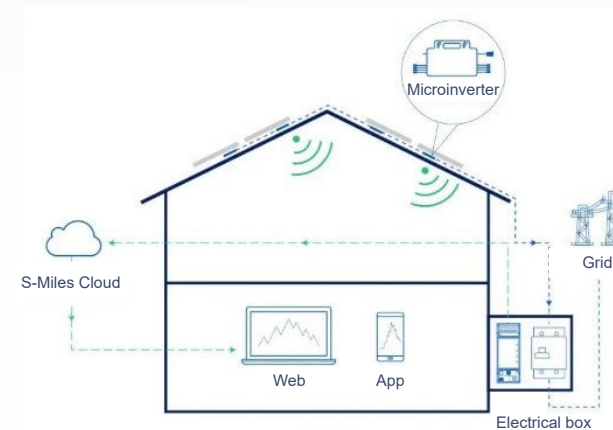


Operation and maintenance challenges

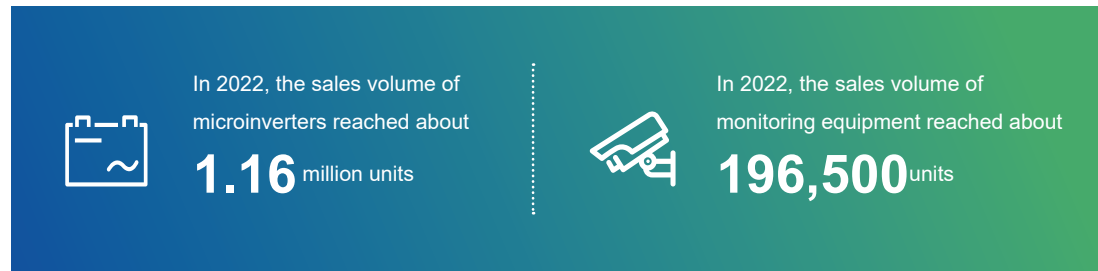
Our microinverters are capable of module-level monitoring. It can monitor the voltage, current, power, and other information at the module level, achieve accurate positioning through online layout charts, remotely monitor the power generation status of each module in real time around the world, and easily locate fault points and types.

Unstable quality

Our microinverters adopt mature topology schemes in the power supply industry, featuring a reliable structure. The aluminum casing is employed to enhance the thermal conductivity of power devices to the casing and reduce the internal thermal stress. The IP67 rating of the shells ensures that the microinverters is waterproof and can be used outdoors. EPCOS lightning protection devices are used, which have passed the most stringent 6000V surge lightning strike test in North America. In addition, a 12-year basic warranty is offered, which can be extended flexibly, to 25 years at most, truly realizing worry-free after-sales services.



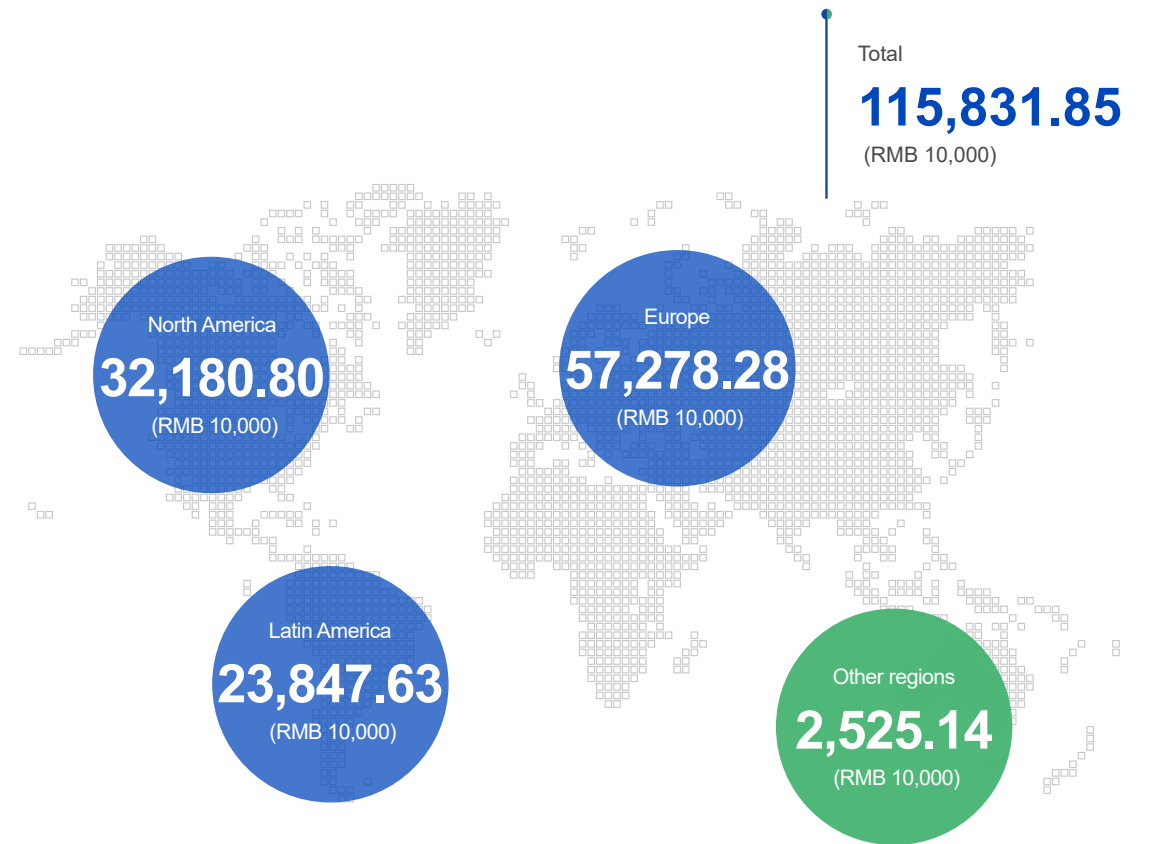
In 2022, Hoymiles Inc.'s products and services saw a good momentum of development. In 2022, the sales volume of microinverters and monitoring equipment reached about 1.16 million units and about 196,500 units, increasing by 187.86% and 174.06% respectively. By far, the products and services of Hoymiles Inc. have supported the installation and operation of many distributed photovoltaic power generation systems at home and abroad, contributing to the growth of clean energy scale and the reduction of carbon emissions.



Environmental benefits of Hoymiles Inc.'s products		2022	Accumulative total
Solar photovoltaic power generation supported by inverters (GWh)	Estimate by shipment	1,588	2,422
	Record by the monitoring platform	661.01	1,102.23
Total installed capacity of solar photovoltaic supported by inverters (GW)	Estimate by shipment	1.747	2.591
	Record by the monitoring platform	0.56	1.36
Carbon emission reduction from photovoltaic facilities supported by inverters (Ton)	Estimate by shipment	1,583,236	2,414,734
	Record by the monitoring platform	659,024	1,098,919

Expanding global presence

Following the strategic plan of global development, Hoymiles Inc.'s products have reached more than 70 countries and regions in America, Europe, and Asia, enjoying high visibility and reputation in the industry. Hoymiles Inc. will continue to promote the process of global development by accelerating product certifications in various overseas regions, strengthening overseas localization, and improving the influence of global sales.



Global product certification

By the end of 2022, Hoymiles Inc.'s microinverters had received over 1,000 certifications worldwide, with product quality and performance affirmed by many regional authorities in Europe, North America, Latin America, and the Asia-Pacific Region. The series of energy storage products have also passed the grid connection certification in Germany, Poland, France, the UK, Australia, Austria, Pakistan, and other important countries, which means that Hoymiles Inc.'s new generation of energy storage products will gradually reach the globe.

North America

- New North American Standard IEEE1547-2018
- California CEC efficiency certification, California CEC listing
- Hawaiian HECO listing

Latin America

- Mexico IEEE1547, UL1741
- Brazil's Anatel certification, Inmetro listing

Asia-Pacific Region

- Thailand MEA/PEA grid connection certification
- Chinese NB/T 32004-2018

Europe

- European CE
- European standard EN50549-1: 2019
- France VFR2019
- Germany VDE4105: 2018
- Polish grid connection certification, PTPIREE listing
- Austrian TOR2019
- Spanish RD647
- Italian CEI 0-21: 2022

Influence of brand

Hoymiles Inc. held a tour exhibition of the Company's energy solutions in ten representative cities around the world in 2022, in an effort to further promote our green smart energy solutions to the global market and help more and more people use green energy.

5.11-5.13

Intersolar Europe



6.14-6.16

Genera in Spain



8.9-8.11

Solar PV World Expo



8.23-8.25

InterSolar South America



9.6-9.8

Green Expo in Mexico


9.20-9.22

Re+ in the US


10.26-10.27

All-Energy in Australia


9.14-9.16

Renewable Energy in Thailand


9.22-9.24

Exposolar Colombia


10.26-10.28

Electricity Transformation Canada



Hoymiles Inc. was also invited to participate in the China Distributed Photovoltaic Conference, the Malaysian International Photovoltaic Conference, the Southeast Asia International Solar Energy Storage Conference, and other industry conferences, sharing experiences on *distributed photovoltaic system safety* and *intelligent solutions* at the conferences to jointly safeguard and improve the safety of photovoltaic power stations and contributing to the healthy and orderly development of the photovoltaic industry.



Sales Manager of Hoymiles Inc. in Asia-Pacific Region delivered a speech themed "Making Energy Safer and Smarter" at the 2022 Southeast Asia International Solar Energy Storage Conference.

Typical projects

The products, technologies, and services of Hoymiles Inc., verified by many photovoltaic power generation projects and trusted by users, operate stably from sunrise to sunset, delivering high-quality energy year after year. The photovoltaic power generation systems using Hoymiles Inc.' microinverters have covered many countries and regions around the world.

Domestic projects

Case BIPV Project in LEADER Group, Qingdao, Shandong

The BIPV project in the Park of Shandong LEADER Technology Group Co., Ltd. is located in Tianzhuang Town, Pingdu, Qingdao, Shandong Province. The whole system of this project, safe and efficient, waterproof and fire-proof, features an installed capacity of 8.245 MW, an average annual power generation of 8,559.6MWh, and an average annual reduction of 8,533.92 tons of carbon dioxide emissions. The roofs of all the industrial plants in the Park are installed with Hoymiles Inc.'s module-level inverters and photovoltaic building materials for BIPV, which, through scientific overall design, realizes natural ventilation, natural lighting, and new energy utilization, achieving the most economical and reasonable consumption of energy and resources and the least impact on the environment. The BIPV project not only provides clean energy for the park, but also becomes a local demonstration project of green buildings.



an average annual reduction of
8,533.92
 tons of carbon dioxide emissions

Case BIPV Project at Anqiu Kangle Hotel

Solar water heaters were originally installed on the hotel roof but due to the high equipment failure rate and unstable hot water supply, the hotel owner changed to a BIPV system to provide hot water for the hotel in the form of electric heating. The BIPV system adopts safe and reliable Hoymiles Inc.'s microinverters, considering the complex and changeable conditions on the roof. Hoymiles Inc.'s products are small and easy to hide, and can be installed flexibly in line with the roof shape; while the products' module-level MPPT technology is free from the impact of such factors as roof tilt, orientation and shading, always tracking the maximum power point. It is estimated that the installed capacity of the system is 139.1 kW and its average annual power generation capacity is 106.5MWh, able to reduce about 106.2 tons of carbon dioxide emissions every year.



Case BIPV Project in Baishui Industrial Park

The project located in Baishui Industrial Park, Shaanxi Province, features an installed capacity of 1,200 kW. Different from traditional industrial and commercial roofs, the project combines Hoymiles Inc.'s microinverters and photovoltaic building materials for BIPV, and follows the policy of "safety, high efficiency, and environmental protection," perfectly integrating the photovoltaic systems and buildings, realizing both benefits and field application, and promoting the new development of the photovoltaic industry.



International projects

Case Large photovoltaic power station in South Africa

When Hoymiles Inc.'s partner wanted to build an ambitious rooftop photovoltaic power station in South Africa, they turned to Hoymiles Inc.'s microinverters, which support module-level monitoring, enabling users to monitor and control the photovoltaic system at any time while reducing levelized cost of electricity (LCOE). The project was the first of its kind in South Africa and Hoymiles Inc.'s equipment made it possible to build and operate a higher-yielding photovoltaic power station than ever before.



Case A photovoltaic system on a U.S. farm

Hoymiles Inc. worked with Red Bar Solar to help a meat and poultry farmer in central Missouri install several photovoltaic systems: two 98.8 kW solar systems supplying power to four of the poultry barns, a 60.8 kW system supplying power to two poultry barns, and a 22.8 kW system supplying power to an office, the house, and side businesses. Hoymiles Inc. also installed four electricity meters, so that the owner could monitor and learn energy consumption. The total scale of the project is 281 kW. With the solid technical and engineering expertise of Hoymiles Inc., the energy cost of the farm has been greatly reduced.



Case Rooftop photovoltaic power station in Brazil

Dicomp Distribuidora, a leading distributor and technology solution provider in Maringa City, Brazil, cooperated with Hoymiles Inc. to finish a rooftop photovoltaic power station using 50 units of Hoymiles Inc.'s MI-1500 microinverters with wide DC input operating voltage and low start-up voltage, making the whole system safe and efficient, and with output power up to 1,500 watts, suitable for mainstream high-power modules. The innovative design of the system connecting four photovoltaic modules independently significantly saves the installation cost and improves the power generation efficiency of the photovoltaic power station.



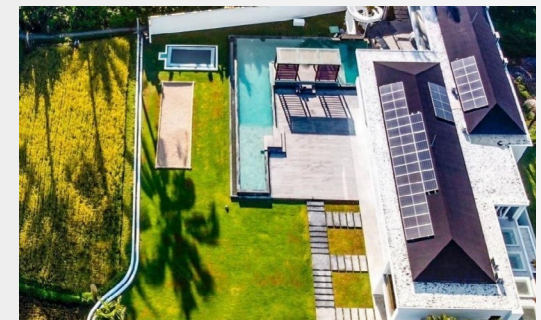
Case A commercial renewable energy retrofit project in Nova Scotia, Canada

Hoymiles Inc. partnered with SKYLIT and LG Electronics to build a 94.3 kW system for the Old Orchard Inn Hotel and the Convention Centre in Wolfville. Featuring Hoymiles Inc.'s MI series microinverters, the system helps provide sufficient clean, renewable energy to the convention center, while feeding excess green energy into the local grid.



Case A rooftop photovoltaic power station project in a villa on Bali Island, Indonesia

A villa owner on Bali Island, Indonesia decided to turn the villa into a green property and cut back on energy costs by building a 13.2 kW photovoltaic power system. Hoymiles Inc.'s microinverters can help to design an ideal installation scheme by placing photovoltaic panels on the roof in various directions, which is impossible for traditional series inverters.



Support rural development

Hoymiles Inc. closely follows the national strategy of “Promoting Rural Revitalization in an All-round Way” to invest in the construction of innovative agricultural complementary photovoltaic power stations in several rural areas and provide technical support. This kind of power stations not only feature no pollution and zero emission, but also actively promotes the three-dimensional value-added utilization of land and enables both photovoltaic development and agricultural production. At the same time, Hoymiles Inc. has cooperated with government agencies of Qujiang District and Suichang County to invest in the construction of agricultural complementary photovoltaic power stations, supporting the grand blueprint for building a socialist modernization country in an all-round way.

Case The household BIPV project in Weiqiao Village, Ningxia

The BIPV project in Weiqiao Village, Qingtongxia City, Ningxia Hui Autonomous Region is estimated to have a total installed capacity of 126.75 kW, an average annual power generation of 162,700 kWh, and an average annual reduction of 162.24 tons of carbon dioxide emissions. This project not only helps rural areas realize energy transformation and achieve considerable power generation benefits, but also becomes a demonstration project for local construction of a beautiful countryside.



Case 30 MW agricultural complementary photovoltaic power station in Zhoujia Township

The project covers a total land area of 750 mu, with a total investment of about RMB 120 million and a total installed capacity of 30 MW. Most of the project plots are irrigated fields converted from dry land. After the completion of the power station, crops are planted under the photovoltaic panels as usual, thus realizing the development strategy of integrating agriculture with the photovoltaic power system.



Case Agricultural complementary photovoltaic power station in Hunan Town, Qujiang District

The project is jointly invested and constructed by Hoymiles Inc. and the government agency of Qujiang District, with a total land area of more than 4,000 mu, a total investment of about RMB 595 million, a total installed capacity of 85 MW, and an average annual power generation of about 82.3 million kWh. The plots of the project are mainly mountainous areas, and photovoltaic technology is employed in the form of agricultural-photovoltaic complementary development, which addresses the weak collective economy in the reservoir area without compromising the original ecology.



Case Agricultural complementary photovoltaic power station in Suichang County

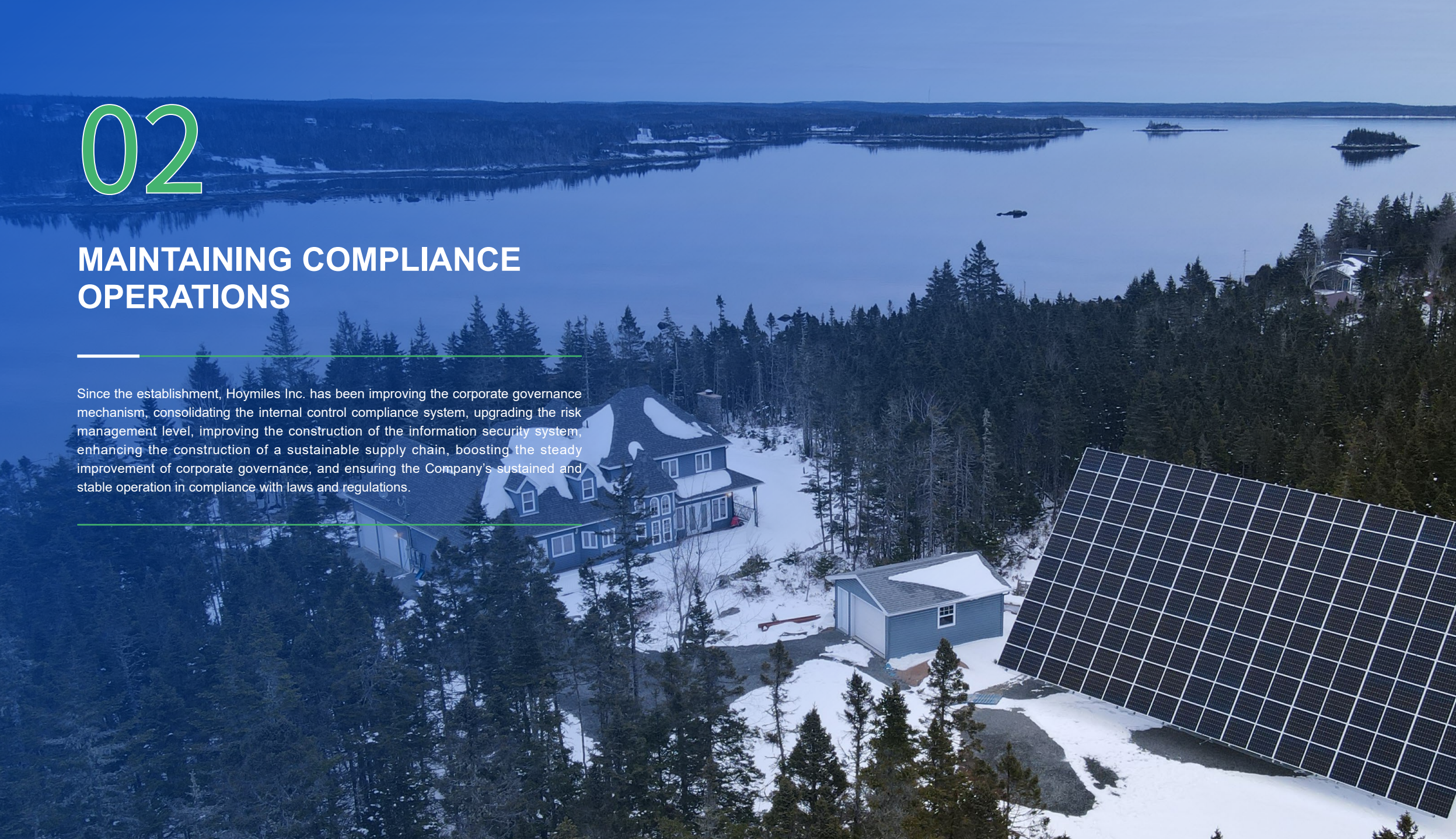
The project is jointly invested and constructed by Hoymiles Inc. and the government agency of Suichang County, with a total land area of 1,100 mu, a total investment of about RMB 270 million, a total installed capacity of 38 MW, and an average annual power generation of about 38 million kWh. Most of the project plots are farmland. The construction is carried out on the premise of not destroying the original cash crops such as tea and rice. In this way, not only are the normal revenues of cash crops maintained, but also the local electricity consumption gap is filled up, achieving a win-win integration of photovoltaic development and agriculture.



02

MAINTAINING COMPLIANCE OPERATIONS

Since the establishment, Hoymiles Inc. has been improving the corporate governance mechanism, consolidating the internal control compliance system, upgrading the risk management level, improving the construction of the information security system, enhancing the construction of a sustainable supply chain, boosting the steady improvement of corporate governance, and ensuring the Company's sustained and stable operation in compliance with laws and regulations.

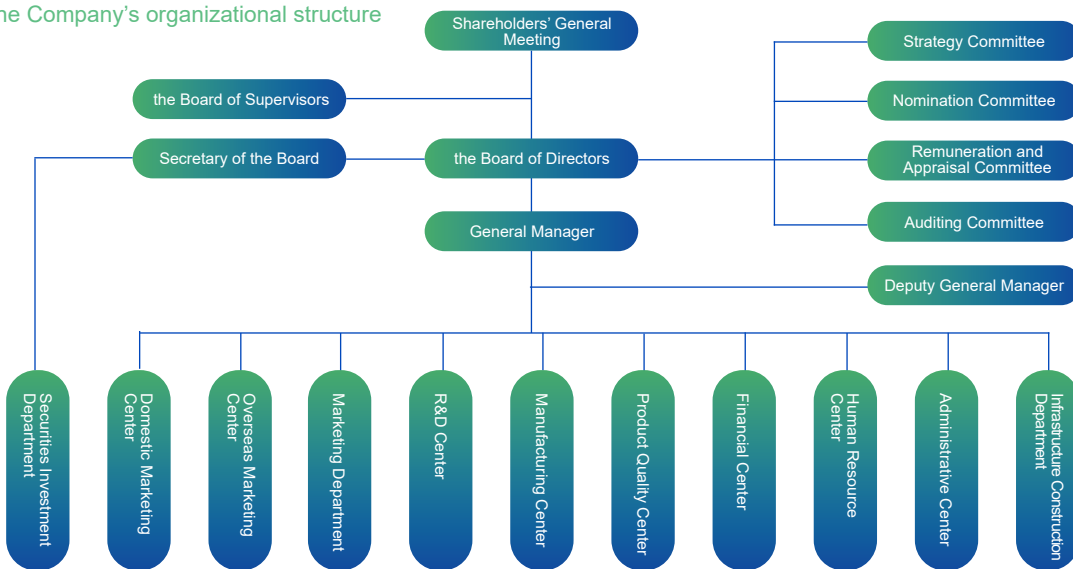


Upgrading the level of governance

Hoymiles Inc. has always been following and strengthening the overall leadership of the CPC, keeps improving the “three boards and one management” governance structure and promoting the standardization and effectiveness of corporate governance, enhances the diversification of the Board of Directors, protects shareholders’ rights and interests, builds and improves the information disclosure system and communication channels for investors, strengthens communication with all stakeholders, and promotes the corporate governance and operation mechanisms to improve the governance system.

Strictly abiding by the Company Law of the People’s Republic of China, the Code of Corporate Governance for Listed Companies in China, and other laws, regulations and relevant regulatory documents, the Company has formulated a series of rules and regulations such as the Rules of Procedure for the Board of Supervisors, the Rules of Procedure for the Board of Directors, the Rules of Procedure for the Shareholders’ General Meeting, the Return-on-Equity Plan for the Next Three Years (2021-2023), the Work Rules for Independent Directors, the Work Rules for the Auditing Committee, the Work Rules for the Nomination Committee, the Work Rules for the Remuneration and Appraisal Committee, and the Work Rules for the Strategy Committee. The Company has also established a corporate governance structure consisting of the Shareholders’ General Meeting, the Board of Directors, the Board of Supervisors, and the management, effectively improving the company’s management and operation levels.

The Company’s organizational structure



The Shareholders’ General Meeting, which decides the major issues of the Company’s operation and management, is the highest authority of the Company. In 2022, the Company held four shareholders’ general meetings.

The Board of Directors, as the decision-making body of the Company’s major affairs, takes charge of the Company’s affairs internally and represents the Company’s business decision-making and execution externally. The Company firmly believes that the diversification, professionalism, and independence of the Board of Directors are of great importance to improve the strategic decision-making level of the enterprise and reduce operational risks. As of the end of December 2022, the Board of Directors of the Company consisted of 9 directors, including 3 independent directors. In 2022, the Board of Directors held 12 meetings. All directors actively attended the meetings and performed their duties diligently during the year, with the average attendance rate of the board meetings hitting 100%.

The Board of Supervisors, the supervisory body of the Company, is accountable to and reports its work to the Shareholders’ General Meeting. By the end of December 2022, the Board of Supervisors of the Company was composed of three supervisors, including one employee representative supervisor and one external supervisor. In 2022, the Board of Supervisors held a total of 11 meetings.

In 2022, the Company held **4** shareholders’ general meetings.

The Board of Directors held **12** meetings, the average attendance rate of the board meetings hitting **100%**.

By the end of December 2022, the Board of Directors of the Company consisted of **9** directors, including **3** independent directors.

By the end of December 2022, the Board of Supervisors of the Company was composed of **3** supervisors, including **1** employee representative supervisor and **1** external supervisor.

In 2022, the Board of Supervisors held a total of **11** meetings.

Proactive information disclosure

As a listed company on the SSE STAR Market, Hoymiles Inc. has formulated such systems as the Information Disclosure Management System, the Management System of Information Disclosure Suspension and Exemption, the Management System of External Information Submission and Use, and the System of Internal Reporting of Major Information, and implemented the Company's information disclosure management system in accordance with the five basic principles of truthfulness, accuracy, completeness, timeliness, and fairness. The Company discloses information in various aspects in time through multiple channels such as the information disclosure website designated by the Shanghai Stock Exchange, major designated media (*Shanghai Securities News*, *Securities Times*, *China Securities Journal*, *Securities Daily*, and *Economic Information Daily*), performance briefings, investor exchange meetings, and other channels to ensure the truthfulness, transparency, completeness, and accuracy of the information.

Protection of investors' rights and interests

Hoymiles Inc. fully respects the rights and interests of investors, strives to safeguard investors' right to know, participate, and benefit, and actively creates conditions for the exercise of their rights. Hoymiles Inc. has formulated the Investor Relations Management System. In 2022, the Company communicated with investors through on-site research, brokerage strategy meetings, online teleconferences, performance briefings, Hoymiles Inc.'s official website and WeChat official account, etc., fully listened to investors' opinions and suggestions, answered investors' concerns in time, and effectively protected investors' legitimate rights and interests.

Strictly observe the compliance bottom line

Hoymiles Inc. strictly advances compliance management, continuously strengthens the Company's integrity and compliance by improving compliance management policies and systems, optimizing compliance management processes and mechanisms, and exploring best compliance management practices, and strictly implements relevant systems to provide a solid foundation for the sustained and healthy development of the enterprise.

Clean and honest administration

Hoymiles Inc. adheres to honest management, strictly abides by laws and regulations such as the Law of the People's Republic of China on Anti-money Laundering and the Anti-Unfair Competition Law of the People's Republic of China, and issues the Integrity Management System, which regulates the Company's own behavior with high standards of business ethics and actively strengthens the internal integrity management. At the same time, Hoymiles Inc. also signed the Sunshine Agreement with suppliers and the Integrity Agreement with employees to make supervision concrete and normalized, creating a clean and honest business ecology, and building stable, healthy, and sustainable partnerships.

In October 2022, Hoymiles Inc. carried out integrity training for the personnel in the Company at the middle-level and above. At the meeting, the Company's attitude of zero tolerance for corruption was clarified, and the "seven red lines" was emphasized, including prohibiting abuse of power, corruption and bribery, favoritism, fraud, disclosure of technical information and business secrets of the Company.

Risk management

Hoymiles Inc. pays attention to the management and prevention of risks regarding policies, markets, customers, finance, laws, teams, and natural disasters, adheres to the concept of prudent and steady risk management, and takes appropriate measures to address different risks and carry out whole-process risk management, including purchasing product liability insurance, global cargo insurance, and export credit insurance, to ensure the Company's sustained and high-quality development.

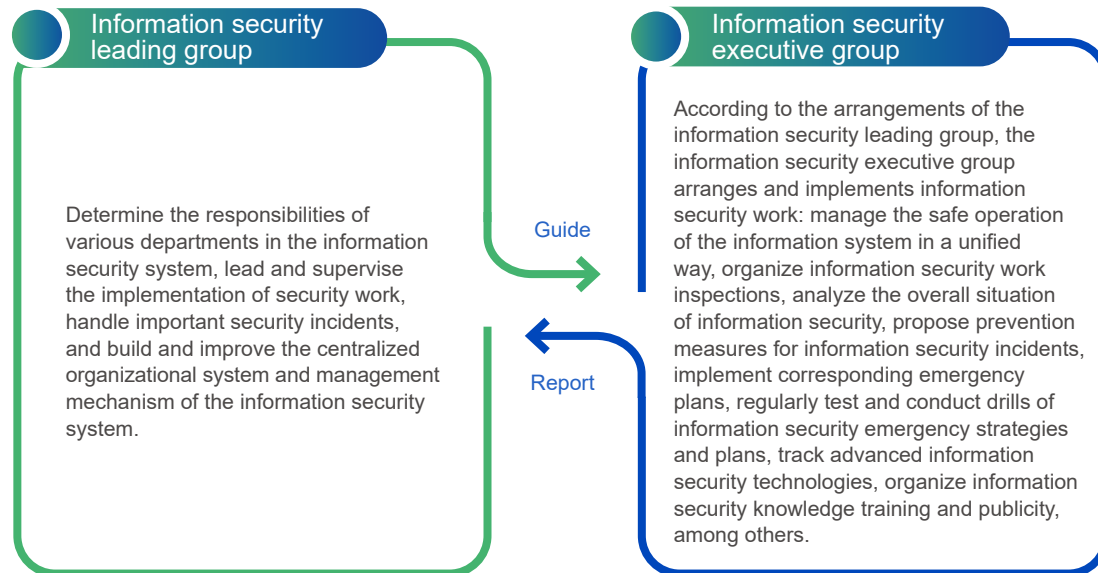
Risk type		Countermeasures
Policy risk		Improve product competitiveness through constant cost reduction, adjust product and marketing structures, and expand market through multiple channels to ensure the sound development of the Company.
Market risk	Product market risk	With regard to systematic risks, the Company enhances its ability to resist risks by constantly upgrading product quality and improving enterprise management. Committed to brand promotion, maintain the Company's unique characteristics and brand image, and improve competitiveness through the brand effect.
	Capital market risk	Strengthen corporate compliance governance, enhance multi-channel communication with investors, and protect the rights and interests of minority shareholders.
Customer risk	Customer choice risk	Gain preliminary understanding of and conduct investigation on customers, and classify them for management.
	Customer satisfaction risk	Constantly improve product quality and conduct whole-process services to improve customer satisfaction.
	Customer credit risk	By setting indicators, classify customers for management, and determine their credit level according to different client categories.
Financial risk		By formulating an internal regulatory system, strengthen the management of financial risks from the aspects of financial fund safety and accounting standard.
Legal risk		Establish a legal department, add legal review to all aspects of the Company's operation, and reduce related legal risks.
Team risk		Through an effective performance appraisal system, standardize employees' work, define the corresponding objectives, and listen to employees' demands in daily management. Through internal training, constantly enhance employees' professional competence and management capabilities.

Ensuring information security

Hoymiles Inc. pays attention to protecting the Company's core data and the privacy of customers. On the one hand, we keep the Company's core data including but not limited to R&D data and customer information confidential through the authority and data encryption system; On the other hand, according to the requirements of the General Data Protection Regulation (GDPR) of the European Union and the ISO27001 information security management system, an information security management system has been established to strengthen standardized management of personnel, servers, and information security risks.

System construction

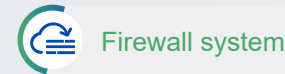
Constantly promoting the construction of the information and data security system, Hoymiles Inc. issued the latest Information Security Management Measures in August 2022. Meanwhile, an information security system is developed with reference to the ISO27001 information security management system. In addition, an information security leading group and an information security executive group have been established within the Company, to clarify relevant responsibilities and safeguard and guarantee the Company's information security.



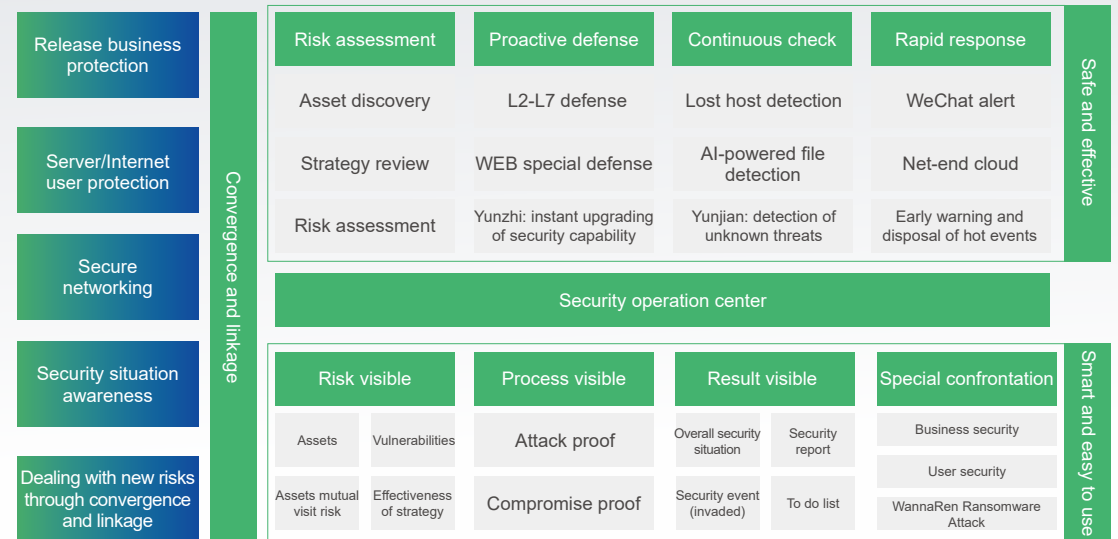
Comprehensive information protection

Hoymiles Inc. has developed an information protection system including firewall system, network access control system, online behavior management system, data encryption system, anti-virus system, backup and disaster recovery system, enterprise network disk system, monitoring cloud platform, OA, CRM, SRM, EHR, and ERP to ensure the information safety of products and customers.

During the reporting period, Hoymiles Inc. did **not** have any major incident concerning information security and customer privacy breaches.

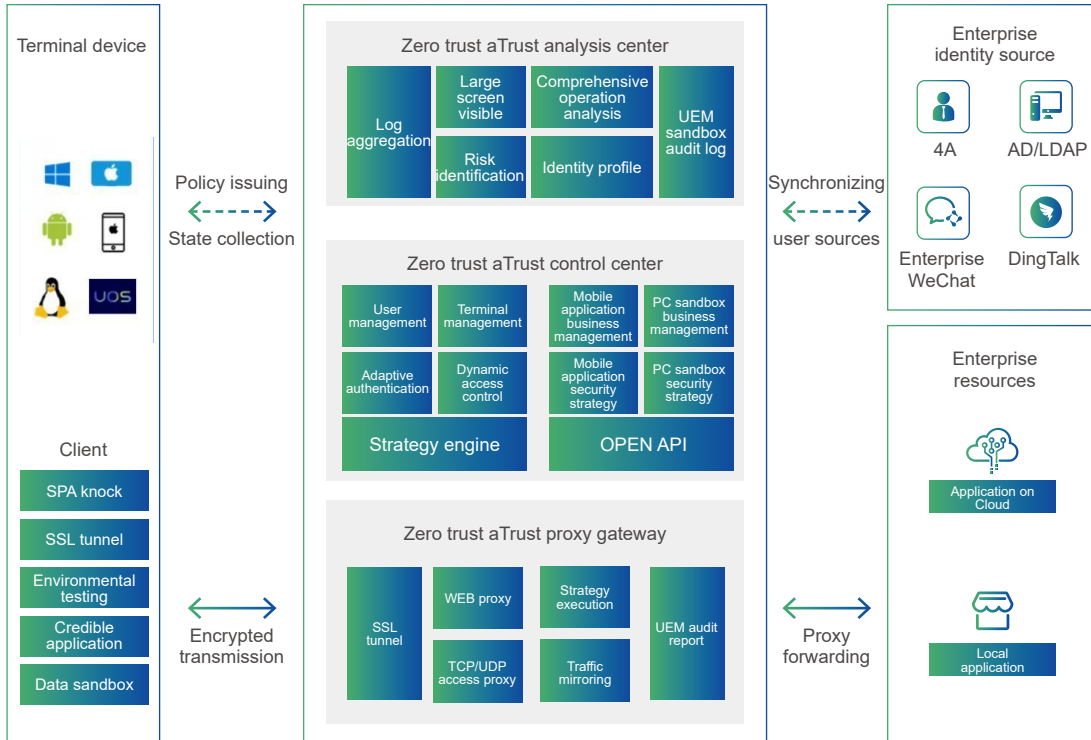


By applying a diversity of innovative security defense technologies and easy-to-use product design concepts, Hoymiles Inc. enhances the security check and prevention capabilities of network boundaries, realizes the visual display and rapid disposal of any network security risks, and makes the construction of the organizational network boundary security more effective and simpler.



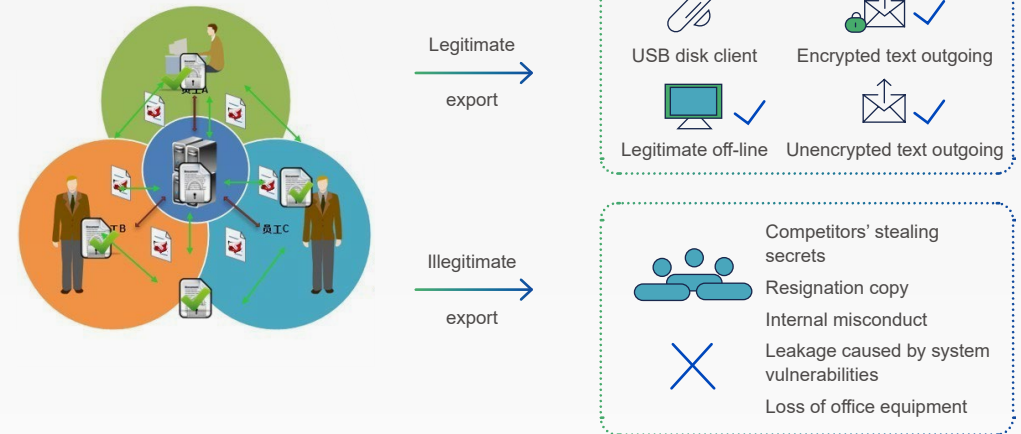
Network access control system

The technologies involved in the network access control system include network access control and server access control. The system can protect the internal network of the whole enterprise, including manageable (enterprise desktops, laptops, servers) and unmanageable (external visitors, partners, customers) terminals. It can mandatorily improve the security of enterprise network terminals, ensure the enterprise network protection mechanism uninterrupted and the configuration correct, so that the network security can be improved more effectively.



Data encryption system

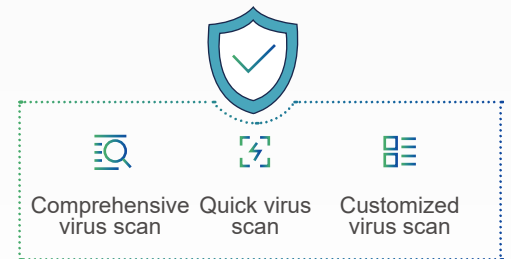
Through the intelligent dynamic encryption and decryption technologies, files are mandatorily, automatically encrypted from the time of file creation, and life-cycle supervision is carried out during the circulation process to ensure the transparent and safe use of core data within the Company. Barrier-free flow of core data is achieved internally, and is controllable externally.



Anti-virus system

The anti-virus system can track and analyze the chain circuit through which viruses invade the system, lock the most commonly used directories, files and registry positions, prevent virus and immunize popular viruses. At the same time, through the vulnerability repair function, it helps to effectively and timely repair system vulnerabilities and block hidden danger risks.

Protecting your computer.





Monitoring cloud platform

The S-Miles Cloud monitoring platform of Hoymiles Inc. adapts to the web page and mobile terminal, and is able to comprehensively monitor, manage, and troubleshoot photovoltaic systems, thus maximizing the performance, controlling the operation of the photovoltaic systems in real time, and making data-based decisions anytime.



In terms of information security technologies, Hoymiles Inc. constantly upgrades and improves relevant technologies and management measures from four aspects of data, network, terminal, and cloud.

Data security

Deploy an encryption system to encrypt core data assets, and conduct vulnerability scanning and penetration testing on the core data system on a regular basis to reduce the risk of data leakage. Deploy data disaster tolerance and backup systems locally and in different places to ensure data integrity and availability.

Network security

Build a network architecture with the next generation firewall as the core, integrate the unified security capabilities of IPS, AV, and WAF, and realize the traffic security from intranet to intranet and from intranet to internet.

Terminal security

Deploy the “access + desktop management” client, implement access control for unknown users, and configure the online behavior management system under which unauthorized users cannot access the network. At the same time, each terminal is equipped with anti-virus software in a standard way to realize all-round security of the terminal.

Cloud security

Respect privacy and abide by related regulations and laws, strictly evaluate the security control of cloud service providers, and form a consistent scheme to achieve system security, application security, data security, and content security.

To constantly strengthen employees' awareness of information security, in addition to information security promotion for new employee orientation, Hoymiles Inc. conducted two training sessions on information security for employees in 2022, with a total of 286 participants. Hoymiles Inc. will continue to improve the information security awareness of all employees through orientation training for new employees, semi-annual information security training, and annual information security training, and gradually obtain data security and information security-related certifications according to the requirements of information security level protection and the ISO27001 information security management system and the actual development of the Company.

Strengthening supply chain management

Well aware of the importance of good supply chain management for providing quality services and promoting enterprise development, Hoymiles Inc. is committed to establishing equal, close and stable relationships with excellent partners for mutual benefits. By constantly improving the supply chain management system, we optimize business processes, promote the development of a sustainable supply chain, and work together to create a sunny, honest, and transparent supply chain ecology. Meanwhile, we endeavor to improve our own supply chain management ability, and expand the professional knowledge reserve of our procurement personnel by providing supply chain-related training to ensure the effective implementation of the supply chain management system and reduce supply chain-related risks.

Supplier management

Administrative policy

Pursuit of excellence, green and environmental protection, safety and health.

Information-based management

To further improve the management efficiency, Hoymiles Inc. relies on the SRM supply chain management system to meet the procurement management needs of the whole process, including the whole process of integrated control order coordination with FCST plans, incoming inspection, bar code label printing, quality coordination, automatic reconciliation and invoice processing, supplier performance evaluation, and online inquiry and bidding.

Responsible procurement

To constantly promote responsible procurement, Hoymiles Inc. has formulated internal system regulations such as the Procurement Control Procedure, the Management Measures for Supplier Development, and the Management Measures for Qualified Suppliers, defined the responsibilities of all departments in the procurement process, followed the principles of “openness, fairness, impartiality, competition, efficiency, honesty and credibility”, and focused on suppliers’ ESG performance in business reputation, environmental protection, occupational health and safety and standardized management in the selection of qualified suppliers. The specific measures are as follows:

- Test suppliers’ samples and conduct on-site inspection, examine and evaluate suppliers’ qualifications, including logistics suppliers.
- Sign the Procurement Framework Agreement and the Supplier Quality Assurance Agreement, and define the product procurement requirements and suppliers’ responsibility for product quality.
- Evaluate suppliers every month and check and update the information provided by suppliers every year to ensure that the information is within the validity period.
- Sign the Notice on Environment Protection, Occupational Health and Safety with all suppliers to urge them to protect the environment, save energy and reduce consumption.
- Re-confirm the qualifications of suppliers with which no trade is conducted for more than 12 months.

Environmental management requirements

Hoymiles Inc. also attaches importance to suppliers’ green environmental performance in the procurement process, and prepares system documents according to ISO9001 standards and the latest definitions. In the meantime, the Company requires the restricted substances provided by suppliers to comply with the RoHS directives of the European Union and China and the IEC’s relevant regulations and requirements on halogen. The specific measures are as follows:

- Make rational use of the natural environment and energy resources, be committed to energy saving and consumption reduction, and prevent environmental pollution and ecological damage.
- Identify, analyze, and evaluate environmental factors related to activities, products, and services, ensure the control and management of major environmental factors and hazardous sources, and reduce and prevent environmental pollution.
- Under the premise of ensuring quality, the use of pollution-free or less polluting production processes and equipment is prioritized.
- Supervise and urge suppliers to standardize their management conduct concerning environment protection and occupational health and safety. With regard to suppliers that do not meet the requirements, the Company will put forward rectification opinions, reduce orders, suspend cooperation or change suppliers.
- The suppliers are required to change the carton packaging of large materials such as shell and wire harness into turnover box packaging for recycling, which is expected to save RMB 2 million for suppliers in carton packaging costs every year.

By the end of 2022,
Hoymiles Inc. had
217
cooperative suppliers

In 2022,
90%¹ of the suppliers have been
comprehensively reviewed in ESG-related
aspects such as environmental impact, labor
practice, human rights, and social impact.

Distributor management

Products of Hoymiles Inc. are basically sold to end customers through methods such as “integrator - installer,” “EPC,” distributors, and medium and large size installers. Through years of market development, Hoymiles Inc. has established a domestic and foreign marketing system and good cooperative relations with many well-known customers at home and abroad.

To further strengthen distributor management, Hoymiles Inc. has established a sound distributor management system, strengthened distributor qualification examination, optimized training support for distributors, and regularly surveyed customer satisfaction. Meanwhile, the Company has improved overseas technical support teams and business support teams to provide more complete, timely and fast pre-sales and after-sales support services for local customers. Hoymiles Inc. carries out comprehensive grading of distributors according to annual sales, market influence, and after-sales service quality. By the end of 2022, there were 399 distributors/installers at home and abroad, including 17 diamond-class distributors, 15 platinum-class distributors, and 20 gold-class distributors.

¹Due to some direct purchases with agents, it is impossible for Hoymiles Inc. to conduct a comprehensive review to all suppliers.

03

CO-BUILDING LONG-TERM VALUES

Always committed to independent R&D and innovation, Hoymiles Inc. focuses on module-level power electronics technologies and products, attaches importance to R&D professional training, constantly increases R&D investment, fully mobilizes all parties like the industry, universities and research institutes, conducts in-depth analysis and excavation of customer and market demand, and pursues and consolidates market-leading advantages in technological innovation while ensuring that the Company's products are closer to customer and market demand. On the basis of technological innovation, Hoymiles Inc. continues to strengthen the quality and safety management of products and services, actively launches high-quality products, provides smart energy solutions, constantly improve self-products and services, and dedicated to providing all-round pre-sales and mid-sales services, as well as reliable technical support and after-sales guarantee for customers around the world.



Independent innovation

To promote industrial development, enhance core competitiveness and sustainable development capabilities, Hoymiles Inc. has developed a highly efficient R&D system based on the “provincial high-tech enterprise research and development center,” and established a professional technical R&D team led by professionals with postdoctoral research experience or doctorate degrees, constantly deepening the cultivation in the fields of photovoltaic inverters, energy storage inverters and complete sets of electrical equipment and improving the enterprise’s technological advancement.

Strengthening R&D innovation

Sustained high-level R&D investment is the key for Hoymiles Inc. to maintain our core competitiveness. We constantly integrate internal R&D resources, and step up R&D efforts and investment, with a focus on the cutting-edge technologies of microinverters, energy storage inverters, complete sets of electrical equipment and other products and software algorithms. In addition, we gradually develop products based on projects to constantly improve the Company’s product performance and enhance the capability in independent innovation.

Increasing R&D investment

To meet the strategic development needs of new product development, technological innovation and product iteration, Hoymiles Inc. has been increasing investment in R&D and innovation, and improving the mechanisms of talent introduction, training, reserve and incentive. In 2022, the R&D expenditure amounted to RMB 97.3995 million, accounting for 6.34% of the operating income and increasing 112.75% compared to the R&D expenditure of the previous year.

Hoymiles Inc. has developed an experienced, skilled and innovative R&D team, while hiring experts to constantly enrich the R&D talent pool. By the end of December 2022, there were 213 R&D professionals in the Company, accounting for 18.83% of the total employees of the Company. Professionals with master’s and doctor’s degrees accounted for about 18.78% of the R&D personnel.



In 2022, the R&D expenditure amounted to RMB

97.3995 million

By the end of December 2022, there were

213

R&D professionals in the Company



Constant product innovation

By the end of December 2022, the Company had a number of innovative projects at the stages of development or trial production, involving the improvement of product power density, the R&D of the single-phase household energy storage system, the development of module-level power electronic data acquisition system and other projects, taking the lead in the industry.

In 2022, based on the previous technology accumulation and market demand analysis, the Company launched several innovative products, namely, hybrid energy storage inverters, AC coupled energy storage inverters, and module-level Hoymiles Rapid Shutdown Device (HRSD).

The energy storage inverter of a new generation

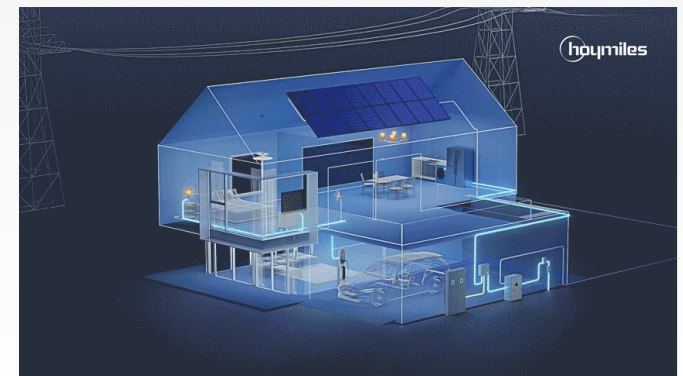
The “Green Power” Controller helps people have access to power in a smarter, more flexible, and more stable way through four power source modes and seven functions.

Seven functions

Reducing cost and increasing efficiency, extra income, smart monitoring, unbeatable compatibility, flexible coupling, endless scalability and effortless installation.

Four power source modes

Solar mode, battery mode, grid mode and generator mode.



Module-level Hoymiles Rapid Shutdown Device (HRSD)

- HRSD can rapidly shut down the connection between each module within 30 seconds, cut off the DC side high voltage, and reduce the voltage to 80V within one foot of the system and to 30V beyond one foot. HRSD can ensure the safety of operation and maintenance workers and firefighters in case of an emergency such as a fire in the photovoltaic power station.
- HRSD-1C and HRSD-2C multi-series product lines have been developed, achieving strong compatibility, able to match different brands, power series of photovoltaic modules.
- Hoymiles Inc. has conducted a lot of research and testing on the installation of HRSD, and finally realized “click and install,” saving time and labor costs, so that novices can get started quickly.
- The working noise of RSD is far below the “warning line” to prevent the misjudgment of the system causing an “emergency power cut”, stopping the system and causing losses, and ensure the power generation income of photovoltaic power stations.

Professional product certifications

With the concerted efforts of the R&D team, all products of Hoymiles Inc. have developed certain technical advantages. The core technical indexes such as power density, power range and conversion efficiency of the Company's microinverters have certain advantages compared with the same type of products. Three-phase energy storage inverters integrate smart energy management modules, flexibly adaptable to a variety of application scenarios.

International certifications received by microinverters:



New IEEE1547 standard Certification of North America



VDE AR-N 4105 certification of Germany



TOR2019 certification of Austria



New standard CEI 0-21:2022 certification of Italy



FCC part15B certification of the United States



PCCC certification of China



CQC certification of China



AS/NZS4777.2-2020 certification of Australia



PN EN 50549-1 certification of Poland



International certifications received by DTUs:



Anatel certification of Brazil



FCC part15B certification of the United States



CE-RED certification of Europe

International certifications received by shutdown products:



UL 1741 certification of North America



SunSpec certification



FCC part15B certification of the United States

International certifications received by transmitter products:



SunSpec certification



FCC part15B certification of the United States

International certifications received by energy storage inverters:



European safety regulation/IEC/EN62109-1/2 certification



British safety regulation UKCA-LVD certification



EMC/IEC61000-1/IEC61000-3 certification of Europe



British EMC UKCA-EMC certification



European grid connection / EN50549-1: 2019 certification



VDE AR-N 4105 certification of Germany



IEC61683:1999 certification of Pakistan



VFR2019 certification of France



AS4777.2 certification of Australia



TOR2019 certification of Austria



PO_EN50549 certification of Poland

Intellectual property protection

Hoymiles Inc. greatly values intellectual property rights (IPRs), strictly abides by domestic and overseas IPRs-related laws and regulations, constantly improves the internal intellectual property process of the Company, and protects the Company's innovation achievements in the whole process and multiple dimensions by formulating such systems as the Intellectual Property Application Process.

To actively encourage employees to apply for various IPRs, including patents and copyrights, the Company has also formulated such systems as the Intellectual Property Incentive System and the Patent Grading Evaluation System, and established a multi-level and all-round incentive mechanism for knowledge products as an important reference for individual or team performance evaluation. For the awards of IPRs, a system of "one prize, two installments" is adopted, that is, for each patent, 20% of the rewards are issued after it is accepted by the China National Intellectual Property Administration, and 80% are awarded after it is authorized by the China National Intellectual Property Administration. In 2022, the intellectual property awards totaled RMB 62,000, with 21 awardees.

Respecting others' intellectual property achievements, Hoymiles Inc. has established a comprehensive Intellectual Property Risk Identification and Management Process to avoid infringing on any others' IPRs in production and operation, and to create a fair and orderly competitive environment with the concept of win-win cooperation. In 2022, no IPR-related disputes occurred.

Indicator (unit: item)		Newly obtained in 2020	Newly obtained in 2021	Newly obtained in 2022	Number of patents obtained by the end of 2022
Patent	Invention	3	3	13	32
	Utility model	13	13	6	44
	Industrial design	3	3	3	8
Trademark		12	19	6	70
Software copyright		13	13	8	62



Common progress of the industry

Participating in standard making

Hoymiles Inc., concerned with the development of the industry, has participated in the formulation of *PV grid-connected microinverter T/ZBB 0229-2017*, *Technical Specification of Photovoltaic Grid-connected Micro Inverter NB/T 42142-2018*, *Technical Specification of Photovoltaic Module Power Optimizer NB/T 42143-2018*, *Technical Specification for Documentation, Inspection and Testing of Grid-connected Photovoltaic (PV) System T/CPIA 0010-2019*, *Residential Photovoltaic Grid-connected System - Part 2-4: Design Specification-Electrical Safety Design T/CPIA 0011.204-2019*, *Residential Grid-connected Photovoltaic (PV) System - Part 4: Code for Acceptance T/CPIA 0011.4-2019*, *Technical Requirements for Control and Power Distribution Equipment in Building Photovoltaic System T/CECS 10137-2021* and other industrial and organizational standards, providing basic support for the development of the industry.

Deepening cooperation and exchanges

While constantly improving the innovation capability, Hoymiles Inc. attaches great importance to cooperation and exchanges with peers and research institutions, actively joins domestic and foreign energy associations, actively participates in industry forums and exhibitions, studies key and forward-looking technical problems in the development of photovoltaic and energy storage industries with outstanding peers, shares strategic experience and market trends, and promotes constant innovation and progress in the new energy industry.

China

<p>Hangzhou Energy Storage Association Vice-president unit</p>	<p>Jiangsu Province Renewable Energy Industry Association Director unit</p>	<p>PGO Green Energy Ecosystem Organization Member unit</p>	<p>China Photovoltaic Industry Association Member unit</p>
<p>Guangdong Solar Energy Association Member unit</p>	<p>Zhejiang Green Building and Construction Industrialization Association – Carbon Peaking and Carbon Neutrality Service Promotion Branch Member unit</p>	<p>Zhejiang Renewable Energy Association Director unit</p>	<p>China New Energy Chamber of Commerce Member unit</p>
<p>Hangzhou Renewable Energy Association Director unit</p>	<p>Asian Photovoltaic Industry Association Member unit</p>	<p>Dongguan Photovoltaic Industry Association Member unit</p>	

Overseas

<p>California Solar & Storage Association (CALSSA) of the United States Member unit</p>	<p>Canadian Renewable Energy Association Member unit</p>	<p>Australian Clean Energy Council Member unit</p>
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Hoymiles Inc. actively joined domestic and foreign energy associations

Hoymiles Inc. actively trains a new generation of science and technology professionals, works closely with institutes of higher education, conducts technical exchanges and cooperates in the R&D of key projects. The Company cooperated with Zhejiang University and Hangzhou Dianzi University to develop the 2022 “Jianbing” and “Lingyan” R&D key projects in Zhejiang Province – “Research and Application of Power Semiconductor Chip Module Design and Packaging Test Equipment – Research and Application of Digital Design and Smart Evaluation Technology of Power Semiconductor Devices.” At the same time, the Company provides exchange internship opportunities for college graduates to help them understand the development of the industry and enhance their employment competitiveness. Fresh graduates and those with working experience who have joined the Company over the past years have constantly emerged as leading talents in technology and management.



Hoymiles Inc. started the campus recruitment project in September 2022. With the theme of “New” Light Illuminating and Empowering the Future, Hoymiles Inc. released recruitment information on the job-search websites of nearly 40 colleges and universities, and held onsite publicity activities in 12 colleges and universities, signing contracts with more than 70 college graduates.



Product quality management

Excellent product quality lays the foundation for the Company's long-term success. Hoymiles Inc. adheres to the quality policy of Pursuing Excellence, attaches great importance to the development of the quality management system, constantly optimizes quality management mode, and strives to create value for customers and provide high-quality products. The Company has established a quality management system according to international standards, and formulated a management manual, 26 program documents and various standards and systems according to the requirements of the quality management system, covering the Company's document control, knowledge management, risk response, accident control, legal requirements, product design, equipment operation, human resources, information exchange and so on. In recent years, the quality of the Company's products has been constantly and steadily improved, with all technical indicators being in line with domestic and foreign standards, and certified by various authoritative organizations. By far, the design and production of the Company's main products, microinverters and DTUs have passed the ISO9001 quality management system certification, and the scope of certification is being expanded.

Organizational and system guarantee

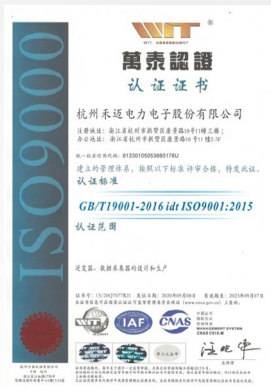
To ensure product quality, Hoymiles Inc. has established a quality management department with a QC inspection team to ensure the quality of our products. The supplier quality engineer supervises and improves supplier quality; the process quality engineer improves process quality; and the customer quality engineer maintains and guarantees after-sales quality. The sampling and inspection standards including the Control Procedure for Corrective/Preventive Measures, the Sampling Plan in Quality Control, the Feedstock Inspection Specification, the IPQC Inspection Specification, the Finished Product Appearance Inspection Standard, the Accident, Incident and Non-conformance Control Procedure have been formulated, implementing total quality management from feeding to process to delivery.

Comprehensive and regular training

Hoymiles Inc. attempts to popularize product quality-related knowledge, and regularly provides employees with product quality-related training, including electronic components and their packaging structures, finished product appearance standards, SPC/MSA, product certification marks, quality process control, 5W2H and case explanations. In 2022, quality-related employees were trained for 83 times, with training time amounting to 514 person-hours, in an effort to consolidate their product quality-related knowledge.



Employees attending product quality-related training



ISO9001 Quality Management System Certification



In 2022, the percentage of failures in the total number of Hoymiles Inc.'s core products, microinverters, was

0.173%



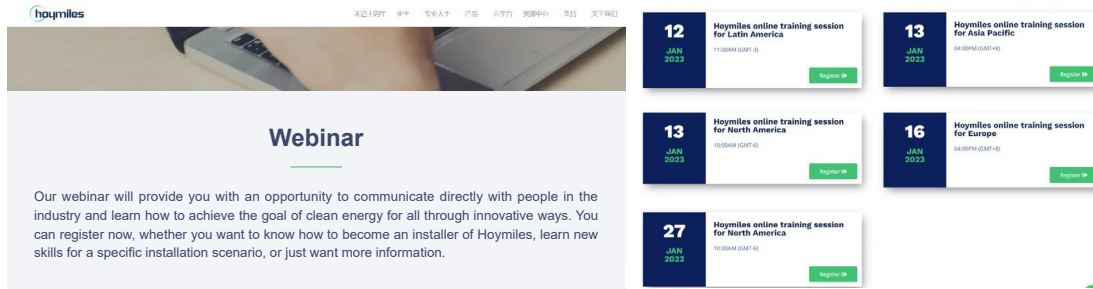
The number of products that must be recalled for safety and health reasons in the total number of products sold or shipped is

0

Optimizing customer services

Building a global network

Committed to becoming the preferred supplier of international photovoltaic products, Hoymiles Inc. is constantly optimizing and improving its global service layout. The Company's overseas marketing business is divided into four regions, each having a technical support service center to provide customers with all-round and integrated services. The Company has set up a localization service team to provide service support for local customers, further strengthen communication with customers and improve refined management in the service process. At the same time, we actively carry out online seminars, online training and exchange activities, to help customers access the Company's latest developments and product information in time with efficiency, effectiveness and high quality, respond quickly to global customer demands and create greater value for our customers.



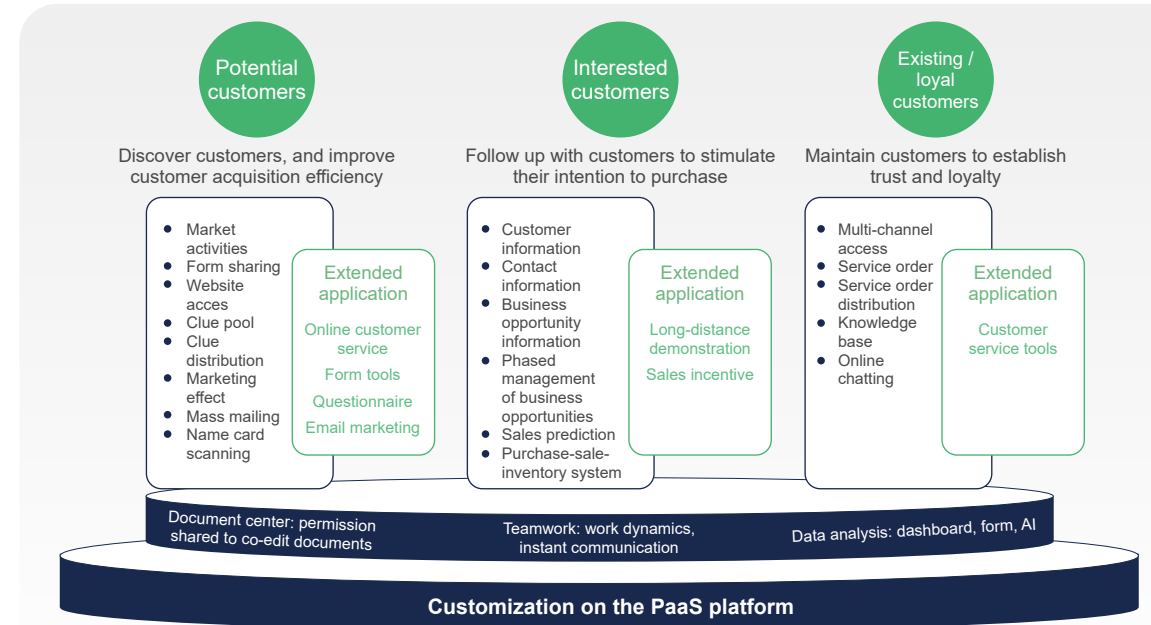
Webinar

Handling of customer complaints

To rapidly address customer complaints and actively safeguard customers' rights and interests, Hoymiles Inc. has formulated the Customer Complaint Process, and established a customer complaint response mechanism to quickly solve customers' problems. Meanwhile, the Company digs deep into the root causes, horizontally surveys and solves hidden product problems, and improves product quality, thus upgrading customer service quality and service level, and enabling the enterprise to win customers again. In 2022, the number of customer complaints was zero.

Customer management system

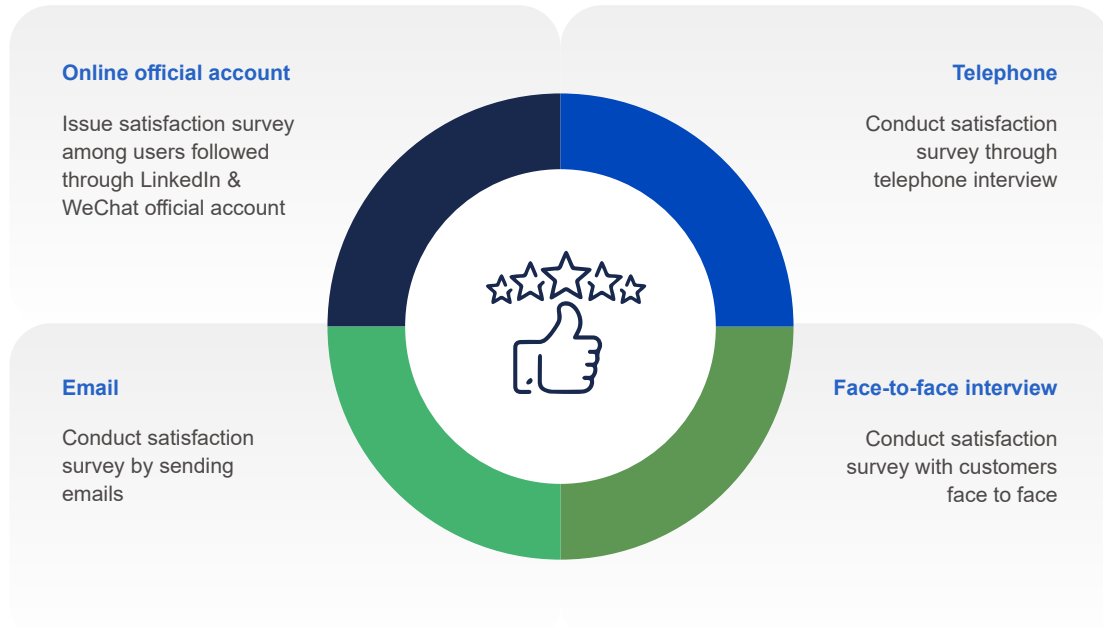
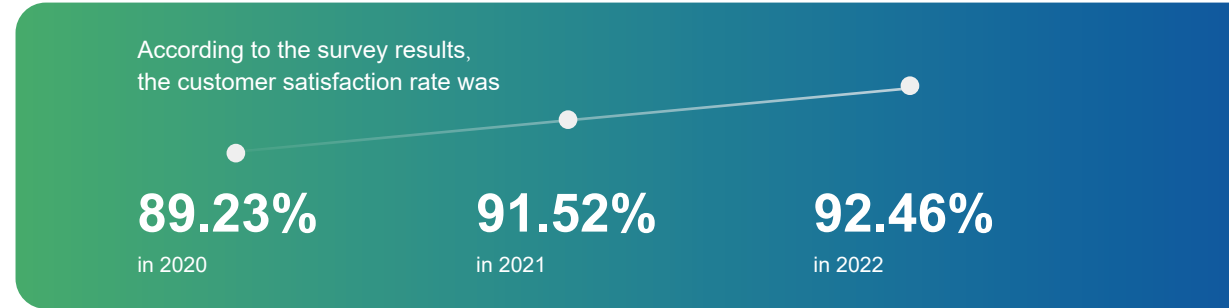
Hoymiles Inc. manages customer resources in a unified way through the information system, establishes a 360° customer view, ensures that the enterprise can keep track of customer information, and record customer information anytime and anywhere, and constantly improves the customer resource database. We support multi-dimensional duplication checking of customer information, effectively avoid sales repetition, realize automatic allocation of customer resources through customer allocation rules, improve efficiency, realize classified and hierarchical management of customers through labels, customize label content, realize meticulous management of customers, and build portraits of potential customers of the enterprise.



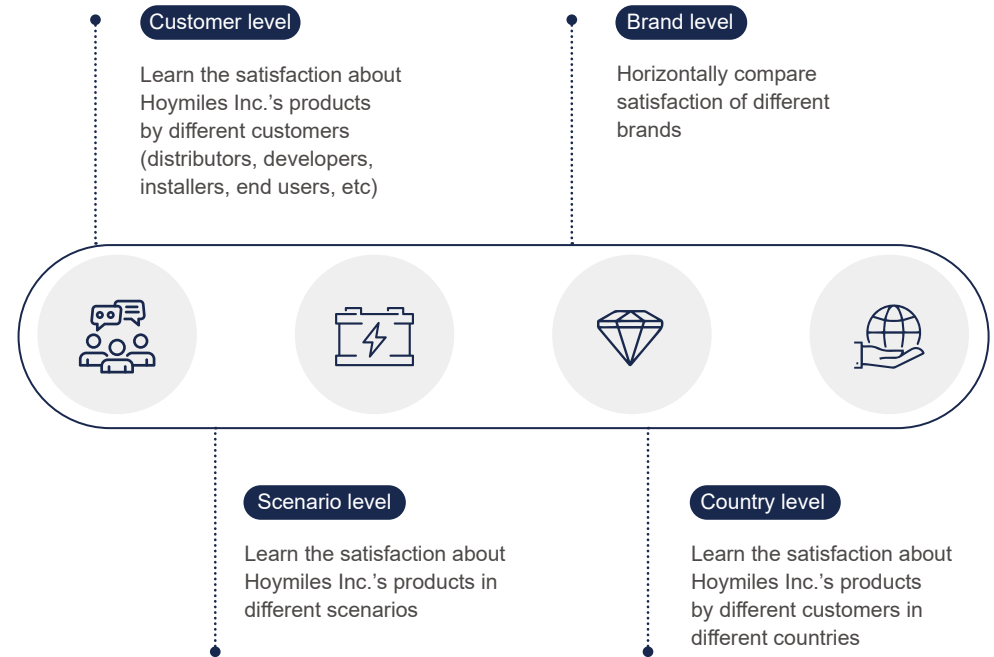
The customer management system

Customer feedback

Hoymiles Inc. regards customer feedback as an important basis for improving relations with customers. The Company is open to communication through the online WeChat official account, mail, telephone and face-to-face interviews to collect customer feedback. After communication, the Company actively analyzes customer feedback, forms a satisfaction survey report, and then improves product design and service level. Customers' satisfaction with us has increased year by year with our constant improvement of product quality and service level. According to the survey results, the customer satisfaction rate was 89.23% in 2020, 91.52% in 2021 and 92.46% in 2022 respectively.



Customer satisfaction survey methods



Customer satisfaction survey topics

04

PROTECTING THE GREEN ENVIRONMENT

Hoymiles Inc. actively responds to the national carbon peaking and carbon neutrality strategy, constantly optimizes its green performance, implements green environmental protection and energy conservation and emission reduction measures simultaneously at the production end and the operation end. While providing better products for the photovoltaic industry, the Company pays close attention to the energy and resource usage in daily operations, acts proactively in opposing waste and improving the efficiency of resource and energy use to protect the green environment.

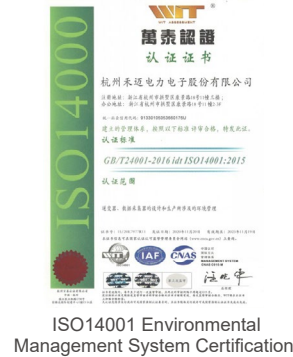


Active environmental management

Hoymiles Inc. has been improving its environmental management system and upgrading the EHS management framework. The Company has set up the Energy and Resources Management Procedure to reduce energy consumption, established the Water, Gas, Sound and Solid Waste Control Procedure to strengthen the management of emissions during production and reduce the intensity of pollution emissions, and established the Environmental Factors and Hazard Identification Management Procedure to avoid environmental risks. Meanwhile, we promote green offices, strengthen green consensus, and strive to achieve coordinated development with society and the environment.

Promoting clean production

Hoymiles Inc. strictly abides by the Environmental Protection Law and the laws, regulations and normative documents on pollution prevention and control, having formulated an internal environmental protection system, and established the environmental management policy: **pursuit of excellence, green and environmental protection, safety and health**. The Company has established a sound EHS management framework and assigned full-time EHS management personnel to reduce the discharge of various pollutants and mitigate the negative impact on the environment from all aspects of the industrial chain. The Company has obtained ISO14001 environmental management system certification. In 2022, **no major environmental violations occurred**.



ISO14001 Environmental Management System Certification



Solid waste treatment

Hoymiles Inc. abides by the requirements of the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (revised in 2016)*, the *Standard for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes (revised in 2013)* in the treatment of solid waste, and the *Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2001) (revised in 2013)* in the treatment of hazardous waste. Hazardous wastes and general solid wastes generated during the production and R&D are entrusted to qualify professional institutions for disposal. We classify and seal hazardous wastes, and post labels that meet the requirements on the surface of packaging containers. Before transportation, we apply to the local environmental authorities for the transfer of relevant hazardous wastes according to law, and declare the types, output, storage and disposal of hazardous wastes. General waste is delivered by the local qualified cleaning and removal service provider to the incineration plant or landfill designated by the government.



Waste gas treatment

The waste gas from factory production mainly comes from welding dust, and the emission shall follow the grade II in "Emission Limits of Air Pollutants from New Pollution Sources," that is, Table 2 of the *Integrated Emission Standard of Air Pollutants (GB16297-1996)*. We collect all the waste gas generated in the production process through the gas trap hood, and then filter it through activated carbon to ensure up-to-standard discharge from the exhaust pipe with a height of no less than 15m. The emission concentration of treated waste gas meet the requirements of industrial control standards and related laws and regulations.



Wastewater treatment

The production process of Hoymiles Inc. does not involve water and thus no industrial wastewater is caused. Domestic sewage shall be subject to Grade III standard in the *Integrated Water Discharge Standard (GB8978-1996) (NH3-N shall be subject to Indirect Discharge Standard for Nitrogen and Phosphorus Pollutants in Industrial Wastewater (DB33/887-2013))*. The drainage system in the factory area is divided into different parts. After being treated in a septic tank, the toilet sewage will be included in the sewage pipe network together with other domestic sewage, and the rainwater pipe network in the factory area is connected to the municipal rainwater pipe network after being collected.



Noise treatment

Class II standard of the *Emission Standard for Industrial Enterprises Noise at the Boundary (GB12348-2008)* is followed. The noise of the factory buildings mainly comes from fans, power distribution and water pump equipment. We put such equipment in a separate sound insulation room in the basement, add a static-pressure vibration reduction foundation during installation, and have a muffler installed at the fan outlet. At the same time, Hoymiles Inc. carries out noise control in the factory area by monitoring the working environment and checking occupational health to reduce the health hazards of the working environment to employees and other residents around.



Vehicle management

Electric forklifts are frequently used in the factory area of Hoymiles Inc. For motor vehicles entering and leaving the factory, we take the following measures: set up no-honking and speed limit signs on the roads close to the entrance and exit, and prohibit vehicles from whistling; use low-noise ramps at the entrance and exit of underground garages and add sound insulation ceilings to prevent any adverse effects on other residents around.

In June 2022, Hoymiles Inc. entrusted a third party to carry out environmental testing on the domestic sewage, exhaust gas, and noise at the factory boundary and work environment. The results showed that the domestic sewage, noise at the factory boundary and welding exhaust gas all reached the standard.

Indicator		Unit	Annual output
Total exhaust gas emission		m ³	11,952,000
General solid waste	Domestic waste	Ton	7.70
	Resource waste	Ton	67.30
Hazardous waste	Silicone encapsulants	Ton	40.29

Low-carbon operation

Hoymiles Inc. applies the low-carbon concept in daily operation and corporate culture development, committed to improving employees' awareness of energy conservation and environmental protection, consciously practicing green and low-carbon office methods, and striving to reduce the impact on the environment from the operational level, so as to contribute to a green, environmentally friendly, energy-saving and low-carbon living environment.



Energy saving and consumption reduction measures

- Workshops built by the Company should increase the utilization level of natural light, and it is clarified that the lighting in the building's toilets and public passages should be turned off as much as possible given the availability of daylight. Before leaving workplace, employees should turn off the lighting equipment and never leave any light on all the time except in necessary areas.
- The lighting in the factory areas adopts LED lights, with the number of light bulbs under reasonable control. The stairwells are equipped with light control, sound control or time control devices.
- All air conditioning equipment for office and production is low energy consumption.
- Set up the "Code for Air Conditioning from Spring to Summer," the "Code for Heating from Autumn to Winter" and the "Regulations for the Use of Air Conditioning Equipment," set the temperature in the office area and conference room at 26°C in summer and 20°C in winter, and adjust the air conditioning service time according to the outdoor temperature of the day.
- Advocate green travel, reduce business travel and optimize the driving routes of business vehicles.
- Address the problems found during inspection and maintenance of facilities and equipment in time, and put an end to any unnecessary gas leakage, water overflow, liquid dripping, etc.

Resource saving and recycle

- Equip toilets with water-saving sanitary ware, advocate not buying bottled drinking water, strengthen water management and reduce water consumption of the enterprise.
- Use second-hand furniture, desks and chairs and second-hand glass doors to save costs and maximize resource utilization in factories and offices after decoration.

Raise the awareness of environmental protection

- Continue to train our employees and suppliers on environmental protection, strengthen energy conservation publicity through such activities as the National Energy Conservation Week, Earth Day and Low-carbon Day, carry out training on the knowledge about the environmental management system for employees, and be concerned with suppliers' green environmental performance.

Electronic office

- Improve the video conference system, increase the frequency of video conferences, effectively reduce conference costs, and thus mitigate the carbon emissions caused by travel and conference supplies.
- Use OA, ERP and other online office systems to further promote paperless office and electronic file management, set the double-sided printing as the default model, and reduce the use of paper, ink and other consumables as well as the use of fax, copying machines and other office appliances.
- Financial reimbursement shall be made through business-to-business settlement, to reduce the waste of resources caused by the issuance and pasting of paper invoices.

Waste management

- Strengthen the management of hazardous waste and harmless waste generated in office work, and use different methods to deal with different types of waste to ensure that waste is treated in a timely and scientific manner.
- Recycle recyclable waste, strengthen the publicity of garbage sorting, and strive to achieve reduction at the source, put garbage in different bins, among other efforts.
- Hazardous and harmful wastes generated in office work, such as batteries, waste toner cartridges of printers, pesticides, etc., are placed in a special bin and handed over to qualified units for treatment.
- Non-recyclable wastes shall be disposed of by a garbage removal unit.
- Recyclable waste such as cartons and plastic bottles shall be collected and handed over to resource recycling units for recycling.

Creating a green base

Well aware of the importance of energy conservation and emission reduction, Hoymiles Inc. is committed to the vision of “Open Energy for All”, promotes industrial green transformation with consistent ideas and practical actions, actively builds a brand-new green smart manufacturing base, implements a number of energy-saving projects, and accelerates the process of green transformation.



Green smart manufacturing base

Turn the digital intelligence technology into an “invisible booster” for improving the energy utilization rate

- A large number of intelligent equipment and systems are newly introduced into the base to realize highly efficient and accurate operation, ensure stable product quality and reduce material waste.
- The test information of each production node can be collected by scanning the product ID barcode. We can automatically identify and intercept defective products, reduce the rework rate, not only effectively controlling the product quality, but also constantly upgrading the energy utilization rate.
- The digital information system, which integrates data collection, storage, query, processing and management, significantly improves production efficiency and reduces energy consumption.

“Energy transformation” in small places boosts the sustainable development of the base

- Clean energy replaces traditional energy in many links. For example, in transportation, electric forklifts and fast charging technology are adopted in the base, which not only meets production and transportation needs, but also mitigates carbon emissions.
- New manufacturing equipment is being constantly introduced and upgraded, which improves production efficiency while reducing power consumption. The energy consumption of each piece of equipment is reduced by more than 30% for two consecutive years.
- Electrical equipment with high COP energy efficiency is preferred for production lines and public auxiliary facilities.
- It has been planned to introduce rooftop photovoltaics for the new factory area in 2023, some of which will be operated by green electricity.

Scale

The smart manufacturing base holds several modern manufacturing buildings, integrating the functions of display, production, AS/RS and logistics, and providing robust support for the market with its leading quality standards and quick response.

Equipment

Intelligent equipment and systems are being constantly introduced, in efforts to create a “precise” and “focused” production system, greatly improving production efficiency and further controlling product quality.



Electric forklifts and electric stacking trucks used in the smart manufacturing base

Automatic production line

Gradually strengthen labor protection by improving working conditions, constantly phase out equipment with backward performance, improve equipment efficiency and safety and improve automatic production coverage. While effectively ensuring product precision and stability, reducing manual operation ratio and labor intensity, decreasing workers' chance to contact with mechanical equipment and chemicals, and effectively safeguarding employees' safety and health.



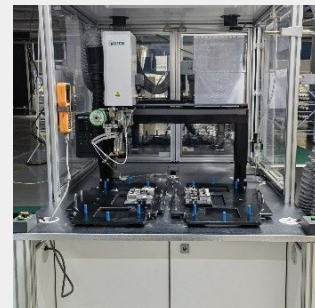
Fully automatic three-proofing coating line, to minimize employees' health problems resulting from chemical solvent volatilization



Fully automatic glue filling line, to improve glue filling stability and product quality.



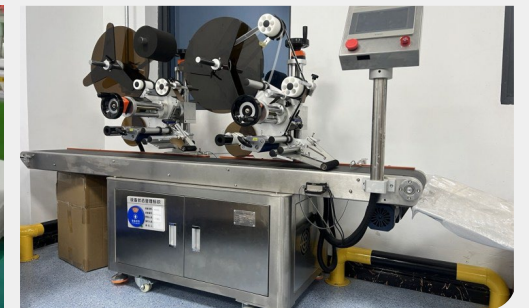
Automatic thermally conductive adhesive dispenser, to reduce the employees' health problems caused by the volatilization of chemical solvents.



Automatic welding robot, to prevent employees' health problems caused by the volatilization of tin smoke generated during welding.



Automatic screw locking robot, to reduce workers' labor intensity



Automatic labeling machine, to improve the efficiency and stability of labeling.

Management

By using information-based management, the new base has transformed from “managing labor” to “managing data” by collecting, processing and analyzing production data, thus realizing real-time updating of important data such as production progress, order information, defective ratio, input-output data, and first pass yield (FPY).

Production information management system

The production information management system independently developed and maintained by Hoymiles Inc., as an information integration and management platform for the production process, is mainly used for production data collection, data storage, data query, data processing and data management of the Company’s manufacturing system.

Production information e-board

The production information e-board independently developed and maintained by Hoymiles Inc. can display the current production data of each production line in real time, realizing visualized management and ensuring stable product quality to meet ex-factory requirements.



Electronic SOP of work instructions

The 200+ intelligent electronic SOP systems independently developed and maintained by Hoymiles Inc. refine and quantify each procedure, reflect the production situation in time, realize paperless work instructions for each position, and improve the replacement efficiency of work instructions.



Safety

Hoymiles Inc. strives to “lock in” risks in the whole process of management and control, and ensure “zero blind angle” in the safety management of the base; upgrades the automatic production line to replace traditional manual operation to minimize health and safety risks; requires that before entering the production line, employees should go through strict checks: anti-static clothes, card registration, electrostatic bracelets, etc., to ensure that the production line is in a static-free environment and prevent any production safety hazards; constantly standardizes the operation process, improves the production safety system, carries out regular training, constantly improves the standardization and reliability of safety management, and urges the base management and implementation personnel to maintain safety awareness and keep alert of the safety status at all times.

05

POOLING THE POWER OF RESPONSIBILITY

Hoymiles Inc., committed to the people-oriented approach and the concept of mutual respect, strives to provide employees with a competitive salary and welfare system, fair promotion channels, a perfect training system and an inclusive working environment to boost the healthy development of employees' careers. At the same time, the Company proactively fulfills corporate social responsibility and leverages its advantages to constantly carry out charity work, demonstrating the social commitment of Hoymiles Inc.



Enabling inclusive growth for employees

Always integrating the interests of employees with the long-term development of the Company, Hoymiles Inc. constantly improves the development and management mechanisms of talents and teams, attracts and retains talents from different backgrounds and professions, provides competitive salary and welfare and opportunities for continuous learning, builds a safe and interesting working environment, constantly protects the interests of ethnic minorities and special groups, and strives to build harmonious labor relations and share the development achievements of the enterprise with our employees.

Protecting employees' rights and interests

Hoymiles Inc. abides by the Labor Contract Law of the People's Republic of China, the Labor Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Women's Rights and Interests, and other relevant laws and regulations, and has formulated internal management systems such as the Recruitment Management System, the Salary Management System, the Welfare Management System, the Attendance Management System, the Employee Work Injury Management System, the Job Change Management System and the Internal Lecturer Management System, attaching great importance to employees' legal rights, interests and reasonable claims in terms of employment, salary, welfare, recruitment and promotion, and constantly improving the management of labor relations.

Recruitment and talent attraction

Hoymiles Inc., following the recruitment principle of "openness, fairness and justice", is committed to standardizing employment and respecting human rights, and recruits new employees on the objective basis of candidates' ability, experience and educational background without any prejudice because of their gender, age, nationality, skin color, religious beliefs and referees. Candidates' identity information is strictly verified in the recruitment process to prohibit child labor and forced labor. In 2022, all employees signed labor contracts and no child labor, forced labor or discrimination was found.



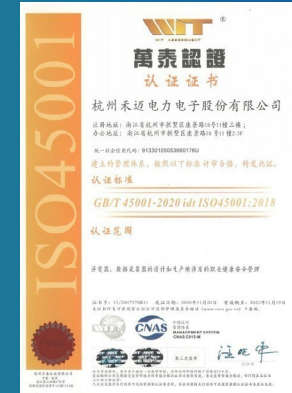
In 2022,
100% employees signed
labor contracts



NO child labor,
forced labor or
discrimination was found

Occupational health and safety

Hoymiles Inc. always puts employees' occupational health and safety at the top of all work, strengthens occupational health and safety protection, and builds a perfect EHS management framework. The legal representative of Hoymiles Inc. is the principal person in charge of EHS, and the chief safety officer of the Company's administrative center is responsible for the EHS management of the whole Company. The Company has full-time managers regarding occupational health and safety, environmental protection, ISO system and quality management. The Company has obtained ISO45001 occupational health and safety management system certification.



ISO45001 Occupational Health and Safety Management System Certification

Hoymiles Inc. attaches great importance to recruiting, cultivating and retaining talents. The Company treats employees equally, offers young people opportunities. By creating a positive and inclusive working atmosphere and enhancing employees' sense of belonging to the Company, the Company ensures that it can continue to attract and retain talents to support its long-term growth needs. By the end of 2022, the Company had 1,131 employees, of whom female employees accounted for 46.24%. The core technical team consists of professionals in related fields, of whom people with a master's degree or above accounted for 6.98%.



By the end of 2022,
the Company had
1,131 employees



Female employees
accounted for
46.24%

Safety training

Hoymiles Inc. actively strengthens the occupational health and safety training of employees before their induction and during their employment, offers training courses such as occupational health and safety, general knowledge of production safety, fire safety, traffic safety, general operation safety and first aid knowledge, urges employees to abide by the operating rules of occupational health and safety, popularizes the methods of wearing and maintaining occupational protective equipment, and creates a healthy, safe and harmonious working environment for employees.

Case 2022 fire drills

On November 9, 2022, Hoymiles Inc. organized a fire drill to improve employees' fire control and prevention awareness, help them master basic fire control knowledge and ensure safe production. The on-site firefighting group and water supply group used fire extinguishers, fire hydrants, etc. in time to put out fire. The rescue group and the logistics group arranged people on the site to evacuate to a safe area, and counted people and materials after the drill, and then made a record and filed it.


Case Hoymiles Inc.'s training in safety and first aid knowledge in 2022

On July 28, 2022, Hoymiles Inc. held a safety and first aid knowledge training session, which covered four topics, including basic first aid knowledge, emergency treatment of heatstroke, cardiopulmonary resuscitation and treatment of obstruction in the respiratory tract, to improve employees' emergency rescue ability.



Occupational health

Hoymiles Inc. strives to provide employees with a safe, healthy, clean, and comfortable working environment. In August 2022, Zhejiang Duopu Detection Technology Co., Ltd. was invited to carry out the annual detection of occupational hazards in the workplace. It turned out that lead smoke, tin dioxide and cyclohexane all reached the standard.

In addition, Hoymiles Inc. continues to improve the operating procedures related to safety and health management and emergency rescue measures for occupational hazards. Employees exposed to occupational hazards are equipped with labor protection articles as required, and gas hoods are installed at the work stations as required. At the same time, the Company actively organizes employees to carry out annual occupational health examination, provides additional physical examination for key occupational diseases, and declares occupational disease hazards, so as to reduce occupational disease risks. In 2022, the occupational health examination rate of Hoymiles Inc. was 100%, and no suspected occupational diseases occurred.



In 2022, the occupational health examination rate of Hoymiles Inc. was

100%



NO suspected occupational diseases occurred

Production safety

To prevent production safety-related accidents, improve the inspection and emergency management mechanism, control and handle accidents in a timely and effective manner, and protect the personal safety of employees and the property safety of the Company, Hoymiles Inc. has formulated the Factory Safety Management System, the Potential Safety Hazard Inspection and Management System, the On-Site Disposal Scheme, the Management System for Storage and Use of Hazardous Chemicals and the Management System for Flammable and Explosive Places, etc., strictly implementing the requirements of laws and regulations on production safety, constantly optimizing the production safety system, and preventing major safety accidents. In 2022, no general safety accident, major safety accident, major occupational disease or fire incident occurred in Hoymiles Inc.



In 2022, **NO** general safety accident, major safety accident, major occupational disease or fire incident occurred in Hoymiles Inc.

Main contents of safety management

- Ensure the implementation of the responsibility system for production safety, safety management system and basic work of safety management.
- All the safety directors and safety officers of the Company have obtained professional certification, and all the factories have passed the third-level certification of safety standardization.
- Investigate potential safety hazards on site concerning environmental protection, processes, equipment, electricity use, fire control, inspection and maintenance, vehicle transportation, occupational health, staff status and labor discipline.
- In addition to routine inspection, the Company conducts a major comprehensive safety inspection every month and implements rectification work.
- Standardize emergency handling procedures for electric shock, natural disasters, typhoons, fires, accidental injuries, etc.
- Organize employees to identify all kinds of risks, formulate targeted emergency plans for accidents, regularly carry out training and emergency drills, and constantly urge workers to abide by safe operating procedures of their positions to improve their safety awareness.
- Establish and implement the management and storage system of hazardous chemicals. Hazardous chemicals shall be managed by special personnel and stored in explosion-proof cabinets as required. At the same time, to cope with emergencies, protective tools shall be provided beside all hazard sources that may cause harm to employees.



Hazardous chemicals are stored in explosion-proof cabinets, with emergency disposal facilities nearby. The purchase request, requisition, storage and transportation of hazardous chemicals are managed by special personnel, and are checked and registered regularly.

Emergency plans

With regard to any possible major emergencies, Hoymiles Inc. has formulated emergency plans according to the Law of the People's Republic of China on Safe Production, the Regulations on Reporting, Investigation and disposal of Production Safety Accidents, the Guidelines for Preparing Emergency Plans for Production Safety Accidents of Production and Business Units, the Guidelines for Emergency Drills of Production Safety Accidents, and other laws, regulations and technical standards, in an effort to improve the emergency management mechanism of daily production, to control and handle possible accidents quickly and effectively, and protect the personal safety of employees and the safety of the Company's property.

Emergency work principle

People-oriented, safety first

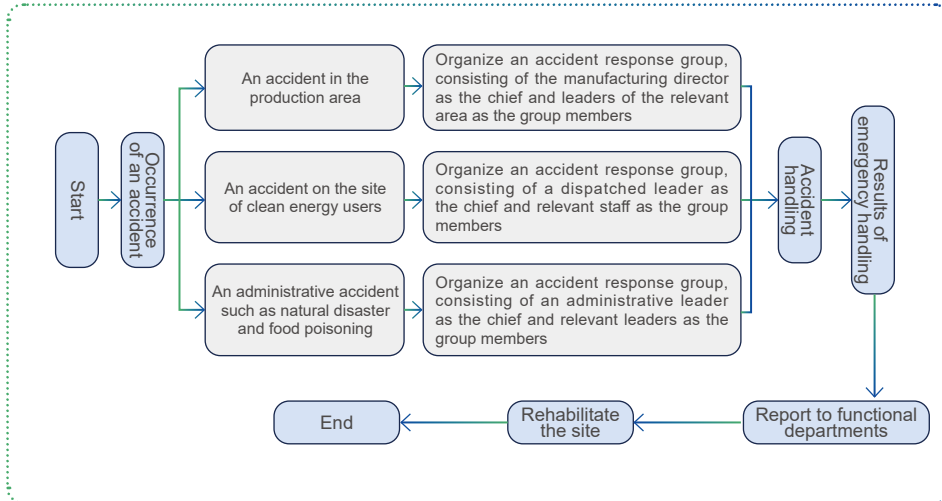
Unified leadership and graded responsibility

Prioritize prevention and combine both prevention and rescue

Identified emergency events

Natural disasters (earthquake, strong convective weather such as typhoon, rainstorm, etc.), failure of the smoke discharge system due to manually welding by electric soldering iron, falling from high altitude, food hygiene (food poisoning), shut-down of water and electricity, prevention of theft, electric shock (electric shock during withstand voltage test), fire, heatstroke, etc.

Emergency handling flow



Basic salary and benefits

Hoymiles Inc., following the principle of equal salary and benefits system, constantly improves the salary and benefits policy, and sets up unequivocal regulations on the salary composition, salary level determination, performance appraisal mechanism, overtime allowance and benefits of employees, in efforts to effectively protect the salary and benefits level of all employees.

We provide our employees with basic benefits such as social insurance (endowment insurance, medical insurance, work-related injury insurance, maternity insurance, unemployment insurance) and housing accumulation fund, and provide daily benefits including transportation subsidies, meal supplements, high temperature subsidies, holiday gifts, birthday gifts, accommodation, etc. Supplementing commercial insurance is provided for employees on business trips and expatriates. Care benefits are provided for employees when they are married, bear child or suffer from bereavement, such as additional maternity allowance. Insurance is bought for retired employees who are re-employed in the Company. In 2022, the signing rate of labor contracts reached 100%, and the social insurance coverage rate also hit 100%.



In 2022, the signing rate of labor contracts reached

100%



the social insurance coverage rate also hit

100%

Supporting talent development

Hoymiles Inc., respecting and supporting every employee's career growth and value realization, constantly improves its employee promotion system, and creates an employee incentive and evaluation mechanism. Keeping up with the pace of industry and its own development and innovation, the Company attempts to integrate training resources, optimize the training system to provide targeted, systematic and forward-looking training for employees, support employees to constantly improve their comprehensive qualifications and professional capabilities at different stages of their careers, and fully meet the dynamic needs of employees' career growth.

Promotion and incentive



Promotion system

Based on the rank sequence system, Hoymiles Inc. has formulated the Job Change Management System covering job transfer management, promotion management, demotion management and work handover to ensure the standardization of the job change process. The system makes it clear that promotion should be made based on rank, giving priority to insiders. Three promotion channels have been set up, namely management, technology, and specialty, to ensure that employees can concentrate on the long-term development of their strengths without having to worry about limitations to their development space and salary. The Company comprehensively evaluates the candidates for promotion from the aspects of job matching, performance, violation of discipline, etc., and provides career growth space for excellent performers and contributors that matches their ability and contribution.



Incentive system



Employee evaluation

Hoymiles Inc. carries out employee evaluation activities on an annual basis and issues evaluation rewards at the end of the year. In 2022, three awards were set up for employees, and 35 “excellent employees,” 45 “outstanding new employees”, and 42 “employees with long-term contributions” were selected through departmental recommendation. Employee evaluation activities enhance the enthusiasm of employees, encouraging them to review their work annually and improve work details, while providing a good opportunity for them to learn from each other and make progress together.



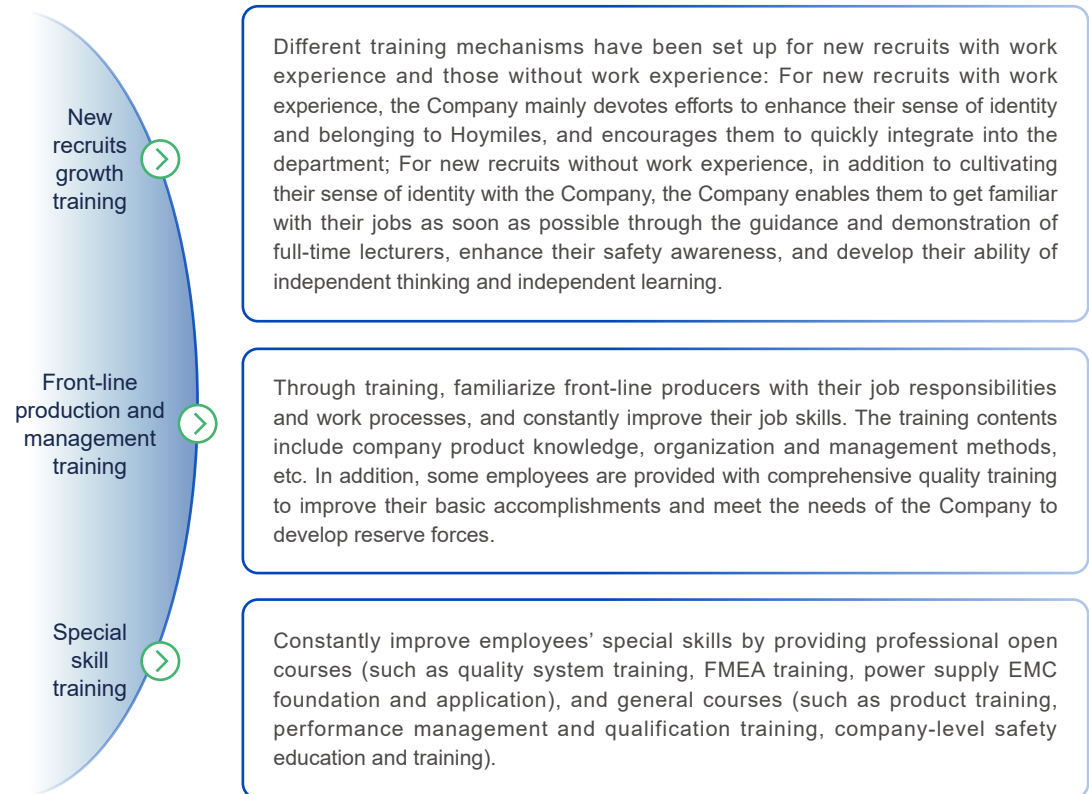
Equity incentive plan

Hoymiles Inc. has formulated an equity incentive plan according to the principle of reciprocity of incentives and constraints to further establish and improve the Company’s long-term incentive mechanism, attract and retain outstanding talents, fully mobilize the initiative of the core team, and effectively integrate the interests of shareholders, the Company’s interests and the personal interests of the core team.

On October 26, 2022, the Company held the 21st meeting of the first Board of Directors and the 19th meeting of the first Board of Supervisors, deliberated and passed the Proposal on the First Granting of Restricted Stock to Employees Included in the Restricted Stock Incentive Plan in 2022, agreeing to set October 26, 2022 as the first grant date, granting restricted stock to 113 employees who met the grant conditions.

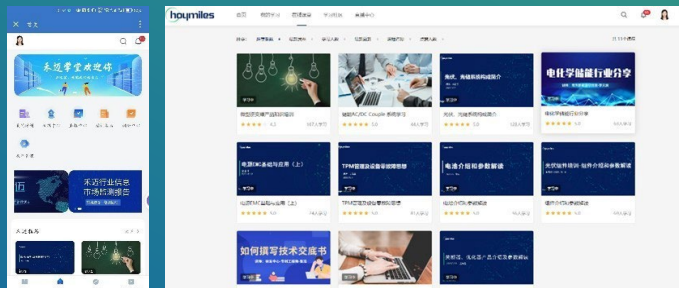
Empowerment and training

Hoymiles Inc., committed to providing employees with a broad career development space, has formulated employee training policies such as the Training Management System and the Internal Lecturer Management System, building a relatively complete internal training system including new recruits growth training, front-line production and management training and special skills training through online and offline training mechanisms, in efforts to provide a platform for employees of different levels and positions to grow rapidly.



Case Online digital platform “Hoymiles School”

In October 2022, the Company launched an online digital platform, “Hoymiles School,” which integrates the functions of purchasing external resources, developing independent courses, and delivering theme courses on a monthly basis, providing convenient online learning channels for employees, helping them to know their own learning and training status in time, effectively helping employees expand their horizons and providing strong support for their learning.



The interactive interface and some courses of Hoymiles School

Friendly workplace environment

Hoymiles Inc. strives to create a healthy and harmonious working atmosphere, actively promotes employee care, and vigorously builds a “home for employees” that they trust and like, so as to alleviate the work pressure of employees and inspire their vitality. At the same time, the Company establishes an efficient employee communication mechanism to collect feedback and suggestions from employees through various ways and approaches, so as to build an equal and inclusive workplace environment. In addition, the Company provides protection for special groups such as female employees and employees with difficulties, further enhancing corporate cohesion and constantly enhancing employees’ well-being.

Work-life balance

Hoymiles Inc. advocates work-life balance, organizes colorful cultural and sports activities such as employee sports meeting, outdoor cycling and hiking to enrich employees’ cultural life in their spare time, supports employees to train and improve their thinking ability, creativity, imagination and willpower needed for work from rest, entertainment and life, and enhances their sense of belonging and cohesive force.



Communication with employees

Hoymiles Inc. continues to establish an open, transparent two-way communication environment with mutual trust, listens to employees’ voices, and respects and fully guarantees employees’ right to know, participate, vote and supervise enterprise management.

The Company sets up a monthly new employee seminar in collaboration with the administrative department and the logistics department, and does its best to solve employees’ demands and ensure positive feedback to employees, with five sessions held in 2022; designs an annual questionnaire survey to conduct research in six dimensions: salary and performance, teamwork, organizational development, company recognition, training development and communication, and listen to employees’ demands and opinions.

Care for special groups

Hoymiles Inc. builds a working environment of “no prejudice” and “no restrictions,” and safeguards the fair employment rights of ethnic minorities, in efforts to establish a friendly and equal workplace. At the same time, we fully protect the legitimate rights and interests of female employees, give them statutory maternity leave, lactation leave, pregnancy care leave and maternity allowance in accordance with laws and regulations, create a warm and comfortable environment for breastfeeding, and hold special activities for female employees from time to time to enrich their cultural life.



Female employees participate in a special event organized by Hoymiles Inc. on the “March 8 International Women’s Day”

Paying back to society

Hoymiles Inc. strives to create social value with Hoymiles characteristics in active response to the national strategy of common prosperity, with a focus on the development needs of local society, in line with the social responsibility concept of “taking from society and paying back to it,” and by organizing charity activities to enhance social well-being, such as helping low-income groups and needy people, and supporting needy students.

To thank and give back to the care and support of the society, Hoymiles Inc. listens to the needs of the society, actively participates in charitable donations, and helps disadvantaged groups, actively performing the social responsibility with concrete acts.



Case The “Spring Breeze Action” in Gongshu District in 2022

In February 2022, Hoymiles Inc. actively donated money in the “Spring Breeze Action” charity program in Gongshu District with the theme of “love from all walks of life to help people in difficulty.” The charity funds are used to help low-income groups and people in difficulty, playing a positive role in improving people’s livelihood, strengthening social governance, and promoting the transformation, upgrading and healthy development of the charity cause in Gongshu District.

Case 2022 annual charity fundraising by New-generation Entrepreneurs Association of Gongshu District

To further deepen the cooperation between Gongshu District and Changshan County, display the new-generation entrepreneurs’ responsibility of “common prosperity” in the new era, and promote the economic and cultural exchanges between Gongshu and Changshan, representatives of Hoymiles Inc. went to Changshan County, Quzhou in December 2022 to participate in the pairing work of two districts for poverty relief, and donated money to the 2022 “Mountain-Sea Cooperation” charity cause of the Gongshu District New-generation Entrepreneurs Association. All the money will be donated by the association to children in the Changshan mountainous areas, and used to support families of students with difficulties, purchase school teaching equipment and daily necessities for students.

ESG performance

Economic performance

Indicator	Unit	2022	2021
Total assets	RMB 100 million	73.18	64.23
Operating income	RMB 100 million	15.37	7.95
Net profit attributable to shareholders of the listed company	RMB 100 million	5.33	2.02
Basic earnings per share	RMB	9.51	4.80
Weighted average return on equity	/	8.61%	42.20%
R&D investment	RMB 10,000	9,739.95	4,578.17
Ratio of R&D investment to operating income	/	6.34%	5.76%

Governance performance

Indicator	Unit	2022	2021
Number of directors on the Board of Directors	Person	9	9
Number of independent directors	Person	3	3
Number of female directors	Person	1	1
Number of supervisors on the Board of Supervisors	Person	3	3
Number of internal supervisors	Person	1	1
Number of external supervisors	Person	1	1
Number of resolutions passed at meetings of Board of Directors	Item	37	22
Number of meetings held by Board of Directors	Time	12	6
Attendance rate of directors	/	100%	100%
Number of shareholders' meetings	Time	4	4
Number of meetings held by the Board of Supervisors	Time	11	5
Information security			
Data security training	Time	2	/
Data security training	Person-time	286	/

Indicator	Unit	2022	2021
Major information leakages	Time	0	/
Intellectual property			
Patent of invention	Piece	32	19
Utility model patent	Piece	44	41
Design patent	Piece	8	6
Trademark	Piece	70	64
Software copyright	Piece	62	54

Social performance

Indicator	Unit	2022	2021
Total number of employees under labor contract system	Person	1,131	652
Number of R&D personnel	Person	213	106
Number of new male employees	Person	331	83
Number of new female employees	Person	281	109
Number of ethnic minority employees	Person	240	/
Number of disabled employees	Person	4	4
Number of employees by gender			
Number of male employees	Person	608	363
Number of female employees	Person	523	289
Proportion of female employees	/	46.24%	44.33%
Number of employees by age			
Number of employees aged 35 and below	Person	661	312
Number of employees aged 36 -55	Person	450	315
Number of employees aged 56 and above	Person	20	25

Indicator	Unit	2022	2021
Number of employees by educational background			
Number of employees with master's degree or above	Person	79	34
Number of employees with bachelor's degree	Person	287	125
Number of employees below bachelor's degree	Person	765	493
Protection of employee rights and interests			
Labor contract signing rate	/	100%	100%
Social insurance coverage rate	/	100%	100%
Employee physical examination coverage rate	/	100%	100%
Occupational health and safety			
Number of work-related deaths	Person	0	/
Proportion of work-related deaths	/	0	/
Number of working days lost due to work-related injuries	Day	100	/
Number of new occupational diseases in the year	Case	0	/
Number of accumulated occupational diseases in the enterprise	Case	0	/
Number of employee safety training	Term	2	/
Number of emergency drills	Time	1	/
Number of production safety accidents (according to national standards)	Time	0	/
Annual safety investment	RMB 10,000	216	/
Product liability			
Number of customer complaints	Case	0	0
Customer satisfaction	/	92.46%	91.52%
Number of qualified suppliers	Supplier	217	205
ESG risk review coverage	/	90%	87%
Signing rate of supplier quality assurance agreement	/	100%	100%

Indicator	Unit	2022	2021
Number of cooperative distributors/installers (both at home and abroad)	Distributor/installer	399	/
Percentage of failures in the total number of core products	/	0.173%	0.178%
Number of products to be recalled for safety and health reasons out of the total number of products sold or shipped	Piece	0	0

Environmental performance²

Indicator	Unit	2022	2021
Total office water consumption (including tap water, reclaimed water and shared water)	Ton	16,054.03	/
Total electricity consumption	kWh	3,237,359	/
Average energy consumption of a single product	kWh/set	1.71	/
Diesel oil consumption	Liter	3,753	/
Total exhaust emission	m ³	11,952,000	/
General solid waste			
Domestic waste	Ton	7.70	/
Resource waste	Ton	67.30	/
Hazardous waste			
Silicone encapsulants	Ton	40.29	/

²The statistical caliber refers to the headquarters of Hoymiles Inc.

Appendix

Appendix I: GRI Indicators

GRI Indicators	Interpretations	Section
GRI 1 Foundation 2021		
1 Foundation 2021	Reporting foundations, including publishing a GRI content index, providing a statement of use, etc.	GRI Standards for Sustainability Reporting
GRI 2 General Disclosures 2021		
The organization and its reporting practices		
2-1	Organizational details	About Hoymiles Inc.
2-2	Entities included in the organization's sustainability reporting	Reporting instructions
2-3	Reporting period, frequency and contact point	Reporting instructions
2-4	Restatements of information	Reporting instructions
2-5	External assurance	Not applicable
Activities and workers		
2-6	Activities, value chain and other business relationships	Expanding global presence, Strengthening supply chain management, Optimizing customer services
2-7	Employees	Enabling inclusive growth for employees
2-8	Workers who are not employees	Not applicable
Governance		
2-9	Governance structure and composition	Upgrading the level of governance
2-10	Nomination and selection of the highest governance body	Upgrading the level of governance
2-11	Chair of the highest governance body	See the annual report
2-12	Role of the highest governance body in overseeing the management of impacts	Upgrading the level of governance
2-13	Delegation of responsibility for managing impacts	Upgrading the level of governance
2-14	Role of the highest governance body in sustainability reporting	Not applicable
2-15	Conflicts of interest	See the annual report
2-16	Communication of critical concerns	Communication with stakeholders
2-17	Collective knowledge of the highest governance body	Upgrading the level of governance
2-18	Evaluation of the performance of the highest governance body	See the annual report

GRI Indicators	Interpretations	Section
2-19	Remuneration policies	Enabling inclusive growth for employees
2-20	Process to determine remuneration	See the annual report
2-21	Annual total compensation ratio	See the annual report
Strategy, policies and practices		
2-22	Statement on sustainable development strategy	ESG management
2-23	Policy commitments	ESG management
2-24	Embedding policy commitments	ESG management
2-25	Processes to remediate negative impacts	Upgrading the level of governance
2-26	Mechanisms for seeking advice and raising concerns	Upgrading the level of governance
2-27	Compliance with laws and regulations	Upgrading the level of governance
2-28	Membership associations	Honors
Stakeholder engagement		
2-29	Approach to stakeholder engagement	Communication with stakeholders
2-30	Collective bargaining agreements	Not applicable
GRI 3 Material Topics 2021		
3-1	Process to determine material topics	ESG issue analysis
3-2	List of material topics	ESG issue analysis
3-3	Management of material topics	ESG issue analysis
GRI 201 Economic Performance 2016		
201-1	Direct economic value generated and distributed	Message from the management
201-2	Financial implications and other risks and opportunities due to climate change	Special Topic
201-3	Defined benefit plan obligations and other retirement plans	Enabling inclusive growth for employees
201-4	Financial assistance received from government	Not disclosed
GRI 202 Market Presence 2016		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Not disclosed

GRI Indicators	Interpretations	Section
202-2	Proportion of senior management hired from the local community	Not disclosed
GRI 203 Indirect Economic Impacts 2016		
203-1	Infrastructure investments and services supported	Special Topic
203-2	Significant indirect economic impacts	Special Topic
GRI 204 Procurement Practices 2016		
204-1	Procurement Practices	Not disclosed
GRI 205 Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	Upgrading the level of governance
205-2	Communication and training about anti-corruption policies and procedures	Upgrading the level of governance
205-3	Confirmed incidents of corruption and actions taken	Upgrading the level of governance
GRI 206 Anti-competitive Behavior 2016		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Upgrading the level of governance
GRI 207 Tax 2019		
207-1	Approach to tax	See the annual report
207-2	Tax governance, control, and risk management	See the annual report
207-3	Stakeholder engagement and management of concerns related to tax	See the annual report
207-4	Country-by-country reporting	Not disclosed
GRI 301 Materials 2016		
301-1	Materials used by weight or volume	Active environmental management
301-2	Recycled input materials used	Active environmental management, Creating a green base
301-3	Reclaimed products and their packaging materials	Creating a green base; Strengthening supply chain management
GRI 302 Energy 2016		
302-1	Energy consumption within the organization	Active environmental management, Creating a green base
302-2	Energy consumption outside of the organization	Active environmental management, Creating a green base
302-3	Energy intensity	Not disclosed
302-4	Reduction of energy consumption	Active environmental management, Creating a green base
302-5	Reductions in energy requirements of products and services	Active environmental management, Creating a green base

GRI Indicators	Interpretations	Section
GRI 303 Water and Effluents 2018		
303-1	Interactions with water as a shared resource	Active environmental management
303-2	Management of water discharge-related impacts	Active environmental management
303-3	Water withdrawal	Active environmental management
303-4	Water discharge	Active environmental management
303-5	Water consumption	Active environmental management
GRI 304 Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Not applicable
304-2	Significant impacts of activities, products and services on biodiversity	Not applicable
304-3	Habitats protected or restored	Not applicable
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Not applicable
GRI 305 Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Not disclosed
305-2	Energy indirect (Scope 2) GHG emissions	Not disclosed
305-3	Other indirect (Scope 3) GHG emissions	Not disclosed
305-4	GHG emissions intensity Emissions	Not disclosed
305-5	Reduction of GHG emissions	Not disclosed
305-6	Emissions of ozone-depleting substances (ODS)	Not disclosed
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Not disclosed
GRI 306 Waste 2020		
306-1	Waste generation and significant waste-related impacts	Active environmental management
306-2	Management of significant waste-related impacts	Active environmental management
306-3	Waste generated	Active environmental management
306-4	Waste diverted from disposal	Active environmental management
306-5	Waste directed to disposal	Active environmental management
GRI 308 Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	Strengthening supply chain management
308-2	Negative environmental impacts in the supply chain and actions taken	Strengthening supply chain management

GRI Indicators	Interpretations	Section
GRI 401 Employment 2016		
401-1	New employee hires and employee turnover	Social performance
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Protecting employees' rights and interests
401-3	Parental leave	Protecting employees' rights and interests
GRI 402 Labor/Management Relations 2016		
402-1	Minimum notice periods regarding operational changes	Not disclosed
GRI 403 Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	Protecting employees' rights and interests
403-2	Hazard identification, risk assessment, and incident investigation	Protecting employees' rights and interests
403-3	Occupational health services	Protecting employees' rights and interests
403-4	Worker participation, consultation, and communication on occupational health and safety	Protecting employees' rights and interests
403-5	Worker training on occupational health and safety	Protecting employees' rights and interests
403-6	Promotion of worker health	Protecting employees' rights and interests
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Protecting employees' rights and interests
403-8	Workers covered by an occupational health and safety management system	Protecting employees' rights and interests
403-9	Work-related injuries	Protecting employees' rights and interests
403-10	Work-related ill health	Protecting employees' rights and interests
GRI 404 Training and Education 2016		
404-1	Average hours of training per year per employee	Supporting talent development
404-2	Programs for upgrading employee skills and transition assistance programs	Supporting talent development
404-3	Percentage of employees receiving regular performance and career development reviews	Not disclosed
GRI 405 Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees Governance performance	Protecting employees' rights and interests, Governance performance
405-2	Ratio of basic salary and remuneration of women to men	Not disclosed
GRI 406 Non-discrimination 2016		
406-1	Incidents of discrimination and corrective actions taken	Protecting employees' rights and interests

GRI Indicators	Interpretations	Section
GRI 407 Freedom of Association and Collective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Not applicable
GRI 409 Forced or Compulsory Labor 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Protecting employees' rights and interests
GRI 410 Security Practices 2016		
410-1	Security personnel trained in human rights policies or procedures	Protecting employees' rights and interests
GRI 411 Rights of Indigenous Peoples 2016		
411-1	Incidents of violations involving rights of indigenous peoples	Not applicable
GRI 413 Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programs	Not applicable
413-2	Operations with significant actual and potential negative impacts on local communities	Not applicable
GRI 414 Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	Strengthening supply chain management
414-2	Negative social impacts in the supply chain and actions taken	Strengthening supply chain management
GRI 415 Public Policy 2016		
415-1	Political contributions	Not applicable
GRI 416 Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	Product quality management
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Product quality management
GRI 417 Marketing and Labeling 2016		
417-1	Requirements for product and service information and labeling	Not disclosed
417-2	Incidents of non-compliance concerning product and service information and labeling	Not happened
417-3	Incidents of non-compliance concerning marketing communications	Not happened
GRI 418 Customer Privacy 2016		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Ensuring information security

Appendix II: Reader feedback table

Dear readers:

Thank you very much for reading the Hangzhou Hoymiles Power Electronics Inc. 2022 ESG Report. We attach great importance to and look forward to hearing your feedback on Hoymiles Inc.'s ESG management, practice and report. Your comments and suggestions are an important basis for us to constantly promote the enterprise's ESG management and practice. Your reply is greatly valued!

Choice questions (please tick in the appropriate box):

1. Do you think this report reflects the ESG performance of Hoymiles Inc.?

Yes Neutral No

2. Do you think the substantive issues identified herein are accurate and comprehensive?

Yes Neutral No

3. Do you think the information provided herein is complete, clear and accurate?

Yes Neutral No

4. Do you think the information provided herein is readable and easy to understand?

Yes Neutral No

Open question:

You are welcome to offer your comments and suggestions on Hangzhou Hoymiles Power Electronics Inc. 2022 ESG Report:

Your contact information

Name:

Employer:

Job title:

Tel.:

E-mail:

Fax:



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