



# **AE SOLAR GmbH.**

2023 Environmental, Social  
and Governance (ESG) Report

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"AE SOLAR GmbH 2023 Environmental, Social and Governance (ESG) Report" (hereinafter referred to as "the Report") is the first Environmental, Social and Governance (ESG) Report released by AE SOLAR GmbH (hereinafter referred to as "AESOLAR", "the Company" or "We") to present to stakeholders the economic, environmental and social sustainable development management methods and performance of AE SOLAR GmbH in 2023.

# 01. About the Report

## Geographical Scope

The scope of information disclosed in the Report covers AE SOLAR GmbH and its subsidiaries.

## Compilation Basis

Refer to the 2021 version of the Global Reporting Initiative Sustainability

Reporting Standards (GRI Standards)

## Time Frame

The Report is an annual Report. The time range covered by the Report is from January 1, 2023 to December 31, 2023. If some textual information exceeds this scope, it will be explained where it is involved.

## Data Sources

The data for 2023 comes from AESOLAR internal original ledgers, company documents, financial statements and other information. Unless otherwise specified, the amounts in the Report are presented in RMB. The Report was reviewed and approved by AESOLAR's board of directors held on May 12th, 2024. The board of directors and all directors of the Company guarantee that the contents of the Report do not contain any false records, misleading statements or major omissions. AESOLAR is responsible for the authenticity, accuracy and completeness of the Report content.

## Feedback and Contact Information

We look forward to valuable suggestions and opinions from all stakeholders.

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*Alexander Maier*  
— CEO & Founder —

In 2023, a year full of challenges and opportunities, the global photovoltaic industry, with its resilient spirit and innovative vitality, continues to lead the tide of global energy transformation, injects strong and lasting power into global sustainable development. As a leading company focusing on the intelligent manufacturing of photovoltaic modules, AESOLAR has always stood at the forefront of the times, actively implemented our sustainable development concepts and business strategies, and is determined to promote the development of the green energy industry and contribute to building a more prosperous, harmonious and sustainable social economy and ecology.

## 02. Foreword

In 2023, the photovoltaic industry showed significant technological innovation and rapid expansion of production capacity, especially in the field of solar cell & solar module technology. The transition from traditional P-type cells to N-type cell technology represented by TopCon has swept like a storm. With its higher conversion efficiency, lower attenuation rate and better temperature coefficient, N-type TOPCon cells have become the mainstream choice in the current photovoltaic market, effectively promoting the technological upgrading and efficiency improvement of the global clean energy industry. As the first company in the world to mass-produce intelligent Hot-Spot Free photovoltaic Modules, AESOLAR has always adhered to the two-wheel drive strategy of technological innovation and green manufacturing. With its excellent research and development capabilities and lean production management, our module shipments have reached a record high, we meet the growing demand for clean energy from global customers with products of excellent quality and performance.

Facing the surge in demand in the global photovoltaic market, AESOLAR continues to make efforts in the safety and efficiency of photovoltaic modules. In 2023, the global production capacity is 2GW. The AESOLAR brand has been selected as a Tier 1 photovoltaic module manufacturer by Bloomberg New Energy Finance for three consecutive years and has been continuously exploring overseas markets for a long time. Therefore, we have further strengthened our strategic cooperation with upstream suppliers and jointly built a green, stable, efficient and win-win industrial chain ecosystem by deepening supply chain relationships, effectively resisting risks caused by market fluctuations and ensuring the stable operation of the enterprise.

AESOLAR deeply realizes that promoting global energy transformation and coping with climate change is a major issue related to the future destiny of mankind. We have deeply rooted the concept of sustainable development in the Company's development strategy, and officially released the Company's sustainable development strategy in 2023, clearly proposing the goal and path to achieve carbon neutrality in the entire value chain by 2050. This strategy not only reflects our deep concern for global environmental issues, but also demonstrates our determination to take the initiative to assume social responsibility and lead the green development of the industry.

In 2023, AESOLAR BIPV photovoltaic modules comply with the trend of building energy conservation and emission reduction and comprehensively deploy BIPV application scenarios such as industrial and commercial buildings, public buildings, and civil buildings, and are committed to creating one-stop, customized, and full-scenario green building solutions. Adhering to the R&D concept of technology first and quality first, the Company deeply integrates photovoltaic power generation technology with building structures, truly realizing the deep integration of photovoltaics and buildings to jointly promote the development of green and low-carbon buildings.

We have implemented smart manufacturing projects in depth and promoted the deep integration of informatization and industrialization through the promotion of automation, visualization and digitization of production line equipment/workshops/production bases. We have created multiple green factories, intelligent digital workshops and digital factories to optimize production processes and improve efficiency, improve quality and reduce costs, accelerate low-carbon production efficiency, enhance the core competitiveness of the industry, optimize the operating model, and achieve a more efficient and green production model.

While pursuing economic benefits, AESOLAR always regards social responsibility as an important mission of corporate development, adheres to compliance operations, and balances the rights and interests of various stakeholders in an open, transparent and fair manner. We firmly believe that a good corporate citizen image is not only the cornerstone of corporate reputation, but also an important guarantee for winning customer trust, attracting outstanding talents, and building harmonious community relations. Therefore, we achieved steady growth in revenue in 2023, continued to optimize profit margins, and achieved dual improvements in economic and social benefits.

AESOLAR takes "ITS TIME TO SAVE THE WORLD!" as its mission and actively practices the concept of sustainable development. In 2023, it was successfully approved as a national-level green factory, a national-level intellectual property advantageous enterprise, and a service-oriented manufacturing demonstration enterprise. These honors not only praise for our past work, but also spur on our future work, motivating us to hold ourselves to higher standards, continue to innovate and improve, and make greater contributions to global energy transformation and sustainable development.

Driven by international trends and domestic policies, AESOLAR will also actively seize market development opportunities, focus on technological innovation and process reform, focus on efficient, low-carbon and safe new energy solutions, optimize supply chain management, and strengthen tactical coordination of various core businesses to meet the growing market demand, and help customers achieve "low-carbon" goals through product and technological innovation, promoting the whole society enter the carbon neutral era.



# 03. About AESOLAR

—— It's time to save the world.



## 3.1 Company Overview

AE SOLAR GmbH was established in 2003 by Dr. Alexander Maier with his brothers. The Company is mainly engaged in the research and development, production and sales of solar photovoltaic products as well as the investment and construction of grid-connected and off-grid photovoltaic application systems. The Company has now built an automated assembly line with a capacity of 2GW. Its main products include: intelligent Hot-Spot Free photovoltaic modules and efficient half-cut photovoltaic modules, TOPCon photovoltaic modules, etc. The Company has been committed to the research and development of photovoltaic modules for 13 years since it has been engaged in market segmentation.

In 2017, the world's first independently developed "intelligent Hot-Spot Free photovoltaic Module" was mass-produced in Hongze. TÜV SÜD, the world's leading third-party testing and certification agency, issued a certification to AESOLAR. The Company has become the first company in the world to truly realize large-scale mass production of Hot-Spot Free photovoltaic Modules and pass strict testing by third-party institutions. It is a technology pioneer in the global photovoltaic industry. AESOLAR intelligent Hot-Spot Free photovoltaic Modules currently occupy 22.24% of the domestic market and 15.62% of the international market. Since the establishment of the Company, it has successively passed the quality management system, occupational health management system, environmental management system, energy management system, TÜV SÜD certification, CQC certification, CE certification, Noah Front Runner certification, PVEL certification, and obtained corresponding certificates.

AESOLAR China factory has been recognized as a national high-tech enterprise, a national green factory, a national-level intellectual property advantage enterprise, a specialized and special new small giant enterprise in Jiangsu Province, a green factory in Jiangsu Province, an intelligent workshop in Jiangsu Province, and an internationally renowned brand regarded by the state as a key cultivation and development in Jiangsu Province. The Company established "Jiangsu Province Enterprise Technology Center", "Jiangsu Province Intelligent Hot-Spot Free photovoltaic Module Engineering Research Center", "Jiangsu Province Enterprise Graduate Workstation", selected by the Ministry of Industry and Information Technology in the photovoltaic manufacturing industry standardize conditions enterprises and other honors.

AESOLAR China has established the "Jiangsu Enterprise Technology Center" and the "Jiangsu Intelligent Hot-Spot Free photovoltaic Module Engineering Research Center", which has functional departments such as a design and R&D center, an information center, and a small and pilot workshop to carry out technical research for R&D personnel. and innovative activities to build a good working environment that is operable and performable. The Company won the Huai'an Invention Patent Award and Huai'an Intellectual Property Demonstration Enterprise in 2022.



The Company has carried out in-depth cooperation with well-known domestic universities such as Nanchang University, Wuhan University of Technology, Huaiyin Normal University, Huaiyin Institute of Technology, and Jiangsu Intellectual Property Protection Center, and has achieved phased results. The research projects include crystalline solar cells based on polished silicon wafers research and development of collaborative light management technology for cells and modules, health assessment of photovoltaic modules based on fuzzy theory and combination weights, research, application and demonstration of photoelectric conversion performance of TiO<sub>2</sub> based quantum dot sensitized solar cells, based on tin-based perovskite solar cells, indoor photovoltaic technology, etc.

As a tier 1 module manufacturing supplier and a high-quality photovoltaic system and supporting product service provider, we have always adhered to the principle of "promoting solar energy as a clean and safe energy source" and adhered to the principle of technological innovation, strived to provide customers with better and more comprehensive photovoltaic system technology solutions in household, industrial and commercial rooftop and ground power station systems and other application scenario.

# DEVELOPMENT TIMELINE



## 3.2 Corporate Culture

OUR GOAL IS  
TO PROMOTE SOLAR ENERGY  
AS A CLEAN, SAFE ENERGY SOURCE.

## 3.3 Honorary Awards and Industry Association Participation

Title of Honor	Grantor	Title of Honor	Grantor
List of National Intellectual Property Advantage Enterprises in 2023	State Intellectual Property Office	National Green Factory	China National Intellectual Property Administration
Member unit of Jiangsu Renewable Energy Industry Association	Jiangsu Renewable Energy Industry Association	Three-star cloud enterprise in Huai'an City in 2023	Huai'an Municipal Bureau of Industry and Information Technology
Scend Prize of the 2023 Jiangsu Science and Technology Innovation Association Science and Technology Innovation Award	Jiangsu Science and Technology Innovation Association	2023 Second Prize of Huai'an Enterprise Science and Technology Association's "Innovation Demonstration Project"	Huai'an Science and Technology Association Office
Service-oriented manufacturing demonstration enterprise in Jiangsu Province	Jiangsu Provincial Department of Industry and Information Technology	Member unit of Inner Mongolia Solar Energy Industry Association	Inner Mongolia Solar Energy Industry Association

# 04. Communication with Stakeholders and Substantive Issues

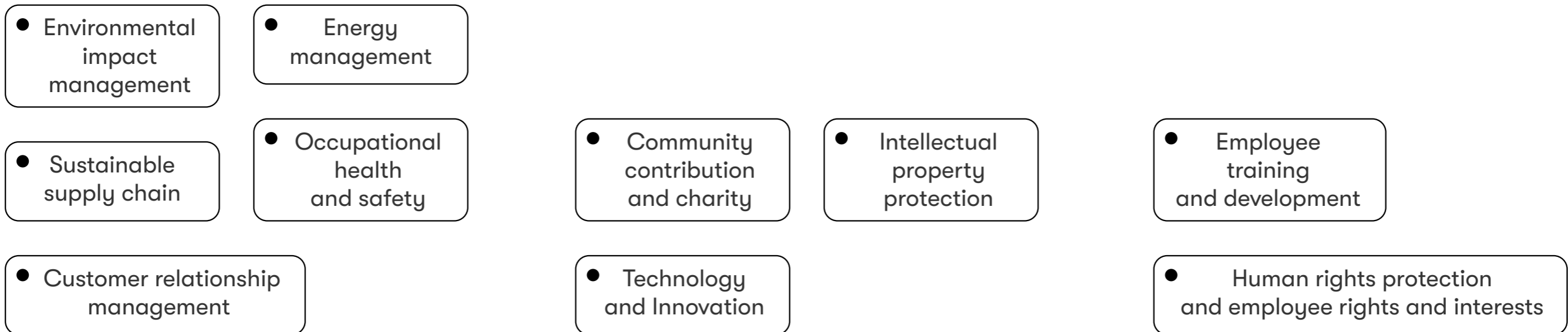
The cooperation and support of various stakeholders is an important part of AESOLAR's sustainable development practices. The Company attaches great importance to communication with stakeholders, has established a multi-channel communication mechanism for each stakeholder group, carries out regular and irregular communications, receives the demands and expectations of stakeholders more efficiently and comprehensively, responds in a timely manner, and establishes a win-win relationship of mutual trust.

## Topic Identification:

Benchmarking international initiatives and standards, investment and rating agencies, peer excellent corporate practices and company development goals, identifying highly relevant topics, and inviting various stakeholder groups and members of the corporate governance body to conduct research.

## Topic Analysis:

Through online research, questionnaires are distributed at each project location. Based on the stakeholder scores on relevant issues, a cross-analysis was conducted from the importance of the Company's financial impact and the Company's environmental, social and economic impact to derive AESOLAR's substantive issue matrix.



!!! Highly Substantive Issues

!! Medium Substantive Issues

! Low Substantive Issues

# 05. Governance

## 5.1 Intellectual Property Protection

Intellectual property protection is the foundation for ensuring innovation results, stimulating innovation power, enhancing market competitiveness, and broadening the international market. AESOLAR formulated the "Intellectual Property Management System" to protect the Company's technological innovation mechanism, encourage and mobilize the enthusiasm of the Company's employees, and serve the Company's new product development and technological innovation as well as the entire process of production and operation.

The system clearly clarifies the General Manager is responsible for patent management, and the R&D department is the leading and organizational department for patent work. The patent staff of the R&D department are responsible for patent novelty checking, research, patent knowledge training and publicity, and are responsible for organizing the preparation and declaration of patent application materials, and are responsible for the Company management and maintenance of patents; the Company's technical department is responsible for the compilation of basic information on product development and technological innovation of the department, and provides the R&D department with declarable utility model design plans or invention materials. For each innovative design or invention, the department organizes the designer to prepare an innovation description and draw a sample drawing and submit it to the R&D department in a timely manner. The R&D department will conduct a preliminary review and organize expert demonstration.

To encourage employees' contribution to intellectual property, the Company will provide certain rewards to patent designers for patent applications that have been approved. If the patent creates certain economic benefits for the enterprise, the patent designer or department will be given a certain percentage of commission based on the added value of benefits in that year. If invention patents create economic benefits, they will be rewarded or receive commissions in accordance with relevant policies. Up to now, the Company has obtained 20 invention patents, 119 utility model patents and 14 software patents. In the future, enterprises will continue to pay attention to intellectual property protection, strengthen management and protection, and lay a solid foundation for sustainable development.



**20**

INVENTION PATENTS



**119**

UTILITY MODEL PATENTS

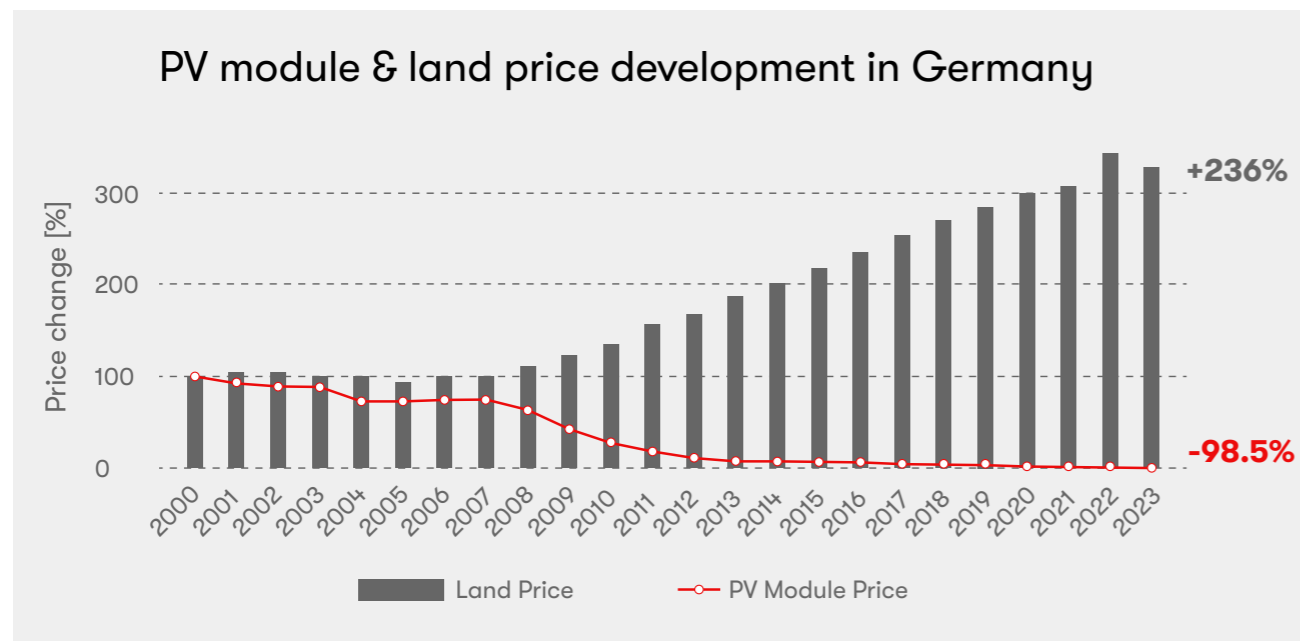


**14**

SOFTWARE PATENTS

# 5.2 Technology and Innovation

AESOLAR is committed to driving technological innovation to meet the growing demands of the photovoltaic (PV) market. As PV prices have dropped significantly over the past 24 years and land prices have surged, the dual usage of land through innovative PV applications has become increasingly vital. AESOLAR responds to these market needs by developing products that enhance performance and durability, thus reducing the levelized cost of electricity (LCOE). **Our recent efforts focus on Agri-Photovoltaics (Agri-PV), floating PV, and integrated solutions like balcony and carport modules.**



Historical land and PV price development since 2000

In collaboration with renowned research institutes such as Fraunhofer Gesellschaft, AESOLAR has developed several cutting-edge products. **One notable innovation is a PV module designed for vertical installations, suitable for applications such as balcony modules, fences, Agri-PV, and sound barriers.** This product addresses the challenges posed by the dual usage of land, optimizing energy production and land efficiency by producing energy and food simultaneously.

Our TERRA module is a prime example of our commitment to innovation. Developed specifically for Agri-PV applications, it features N-type TOPCon technology with a power range up to 580Wp. The module design eliminates self-shading from components like junction boxes and cables, ensuring maximum energy yield. This design also enhances the module's resistance to wind and snow loads without altering the bill of materials, making it a cost-effective solution. TERRA's shading tolerance is particularly beneficial in elevated installations, where inhomogeneous soiling can significantly impact energy production.



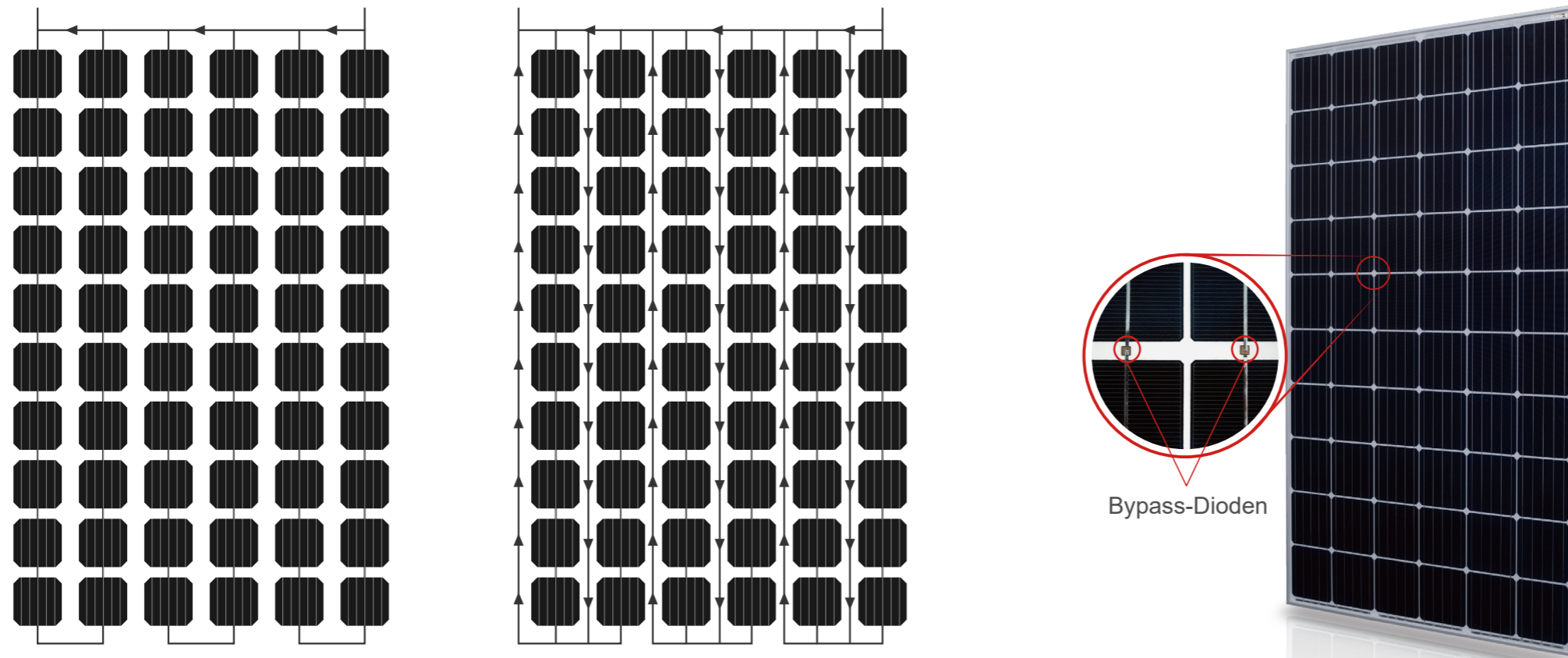
Vertically-mounted Installation



Elevated Installation



Another significant development is our shade-resistant PV module, designed to address the challenges of partial shading in solar rooftop installations. **These modules integrate bypass diodes to minimize power loss due to shading, thus reducing the LCOE.** Indoor tests conducted at Fraunhofer CSP in Germany demonstrated **up to 80% more energy production** compared to standard PV modules under shading conditions. Outdoor tests at the Anhalt Photovoltaic Performance and Lifetime Laboratory further validated these results, showing a significant gain in energy generation.



Comparison of shading-resistant PV modules with standard PV modules

AESOLAR's innovations not only enhance energy yield but also ensure the reliability and durability of our products. **For example, the TERRA module's design reduces cell breakage probability by up to 75% under mechanical stress from wind compared to standard modules.** This improvement is achieved without changing the bill of materials, making it a cost-effective and reliable solution for various PV applications.

**IN SUMMARY**, AESOLAR continues to push the boundaries of technological innovation in the PV industry. By focusing on product performance, durability, and cost-effectiveness, we are well-positioned to meet the evolving needs of the market and contribute to sustainable energy solutions. Our TERRA module and shade-resistant PV modules are just two examples of how we leverage advanced technology to deliver superior products that drive the future of renewable energy.

# 06. Environment

## 6.1 Environmental Impact Management



AESOLAR focuses on green production, continuously carries out energy conservation and environmental protection work, and demonstrates social responsibility in providing efficient and energy-saving products. It has established and implemented the ISO14001 environmental management system and passed third-party certification. The relatively complete management system provides a solid management guarantee for the construction of green factories and the design and development of green products. AESOLAR complies with relevant international laws, regulations, policies and standards. In the past three years, there have been no major safety, environmental protection, quality and other accidents.

Environmental management system certification (left)

## Table Current Status of Company Environmental Management

Environment Category	Environmental Management
Air Pollution	According to the "Comprehensive Emission Standard of Air Pollutants" (GB 16297-1996), AESOLAR implements the second-level standard. The Company currently has no organized emissions, and the emission concentration of unorganized particulate matter at the factory boundary meets the international standard requirements; in addition, The Company's total pollutant emissions also meet the requirements for pollutant discharge permit approval.
Water Pollution	The water quality of AESOLAR's total up to first-level standards in Table 4 of the "Comprehensive Wastewater Discharge Standard" (GB8978-1996).
Solid Waste	Signed a contract with a recycling company to dispose of production scraps, waste pallets and other general industrial solid waste. Entrusted a qualified third party to sign a contract to dispose of waste mineral oil, and strictly implemented the "Quintuple Document" for hazardous waste disposal.
Noise	The noise at the plant boundary meets the requirements of the "Environmental Noise Emission Standard for Industrial Enterprises" (GB12348-2008) for the functional area of the third-class external acoustic environments of the plant boundary, which does not exceed 65db(A) during the day and 55db(A) at night.
Greenhouse Gases	Carbon emission accounting was conducted in accordance with the requirements of the "Guidelines for Accounting and Reporting of Greenhouse Gas Emissions by Enterprises in Other Industrial Industries (Trial)" and a third party was entrusted to conduct greenhouse gas emission verification. The verification results were announced through the website and included in the energy management implementation plan. Several measures have been proposed to reduce greenhouse gas emissions.

Green manufacturing is an important means to solve national resource and environmental problems, an important task to achieve industrial transformation and upgrading, and an effective way for the industry to achieve green development. It is also an inevitable choice for enterprises to take the initiative to assume social responsibilities. AESOLAR focuses on the construction of green factories and was officially approved by the Ministry of Industry and Information Technology in 2023. It aims to set a benchmark in the industry, guide and standardize the implementation of green manufacturing in factories and make commitments to the environmental requirements of stakeholders.

## Stakeholder Environmental Requirements Commitment

### 1. Purpose

Environmental protection is an issue that companies must consider when producing and providing services. Together with other economic organizations, it is our common responsibility to save resources and energy, protect the ecology, and protect the environment we rely on for survival. To control the Company's environmental activities, evaluate the degree of its impact on the environment, take effective control measures, and control environmental risks within the scope permitted by relevant national and local laws, these requirements are specially formulated to inform relevant parties.

### 2. Scope

This requirement applies to all relevant parties of the Company (mainly including suppliers, transporters, construction parties, customers, employees, etc.).

### 3. The Company's Environmental Commitments

Based on pollution prevention, the Company strives to pursue a path of sustainable development so that our environment can be continuously improved, and we can fulfill our corporate responsibilities assigned by society. To this end we make the following commitments:

- 
- 01** Adhere to the concept of cleaner production, focus on fully meeting ultra-low emission requirements and reducing total emissions. With the informatization of ecological environment management and strict assessment as the starting point, we will adopt an overall prevention environmental strategy and promote the upgrading of environmental protection in an all-round way.
  - 02** New, renovated and expanded projects strictly abide by relevant national laws, regulations, and other requirements, insist on the approval of new, renovated and expanded projects according to procedures, and follow the "three simultaneities" of environmental protection that environmental protection facilities and production facilities are designed, constructed and put into operation at the same time. Allocate first-class environmental protection prevention and control facilities to construction projects.
  - 03** Strictly standardize production and operations in accordance with the ISO14001 environmental management system to improve the efficiency of environmental management. In accordance with the "Environmental Management System Requirements and Usage Guide" (GB/T24001-2016) and the Company's integrated management manual, we continue to maintain certification qualifications. We carefully find out the reasons for system audit problems and non-conformance, quickly promote rectification, draw inferences about systemic problems, and implement rectification measures to better integrate the environmental management system into daily production and operations, to further improve the management level.
- 
- 04** Strictly implement the relevant regulations and requirements for self-monitoring of pollutant discharge units, publicly publish the results of self-monitoring of pollution sources through the website and accept the supervision of superior environmental protection departments.
  - 05** Earnestly fulfill our responsibilities and obligations in environmental information disclosure and public participation, actively respond to public and media concerns about the Company's environmental protection and transform public supervision and demands into new impetus to further improve the level of environmental protection.

AESOLAR issued the "Notice on the Establishment of the Green Manufacturing System Construction Leading Group" and announced the establishment of the "Green Manufacturing System Construction Leading Group" to be responsible for the system construction, implementation, assessment and reward work related to green factories, and to establish a target responsibility system company to be responsible for centralized management, unified coordination and daily work of the Company's green factory work. At the same time, the General Manager made a commitment to ensure that his leadership role in in advancing the factory's green initiatives is fully utilized.

**Table 2020-2025 Green Factory Development Indicators**

Green factory indicators	2021	2022 - 2024	2025
<b>Environmental emissions</b>	Initiating cleaner production audits	Reach the top 15% of the industry	Reach the top 10% of the industry
<b>Energy consumption</b>	Reach the top 20% of the industry	The level of energy consumption has been further reduced	Reach the top 10% of the industry
<b>Management</b>	Initiate the green management system	The operation of the management system is gradually improved	The system is running soundly

At the strategic level, AESOLAR has formulated a medium- and long-term plan for green factory construction and clarified the work goals for 2020-2025, aiming to fully implement the concept of green development, continue to carry out clean production, increase the supply of green products, promote the development of key projects, and build green procurement and supply system, strengthen green production management, and seize the green development highland.

In terms of capacity building, AESOLAR regularly organizes employee training, which covers green manufacturing system-related content such as green factory construction, energy conservation and emission reduction, safety production, and environmental factor identification and evaluation. After deciding to build a green factory, relevant departments were organized to conduct training on basic knowledge such as green factory self-evaluation and third-party evaluation, and the training results were evaluated to effectively convey the concepts and knowledge of green manufacturing.

## 6.2 Energy Management

AESOLAR has always been committed to promoting energy conservation and emission reduction. The Company actively explores effective ways to improve energy efficiency, continuously deepens energy efficiency optimization measures, and deeply explores and implements energy-saving projects to maximize the benefits of energy use. We are committed to using scientific methods and a pragmatic attitude to continuously improve energy efficiency, promote sustainable development, and contribute to building a green ecological environment.

According to the requirements of the GB/T23331:2020 idt ISO50001:2018 "Energy Management System Requirements and Usage Guidelines" standard, we compiled the "Energy Management Manual" and implemented it internally, aiming to pass the establishment of the energy management system organization, the energy policy and its goals and indicators, risks and opportunities should be taken into full consideration when the Company achieves the expected results of energy performance to clarify the process sequence and interaction of the energy management system and comply with relevant national policies, laws and regulations and the actual situation of the Company. Among them, the Chairman is responsible for ensuring that energy management system requirements are integrated into the organization's business processes, ensuring the establishment of an energy management team, and promoting the continuous improvement of energy performance and energy management systems.

At the same time, we have compiled the "Energy Saving and Consumption Reduction Management Regulations", "Energy Management System", "Energy Consumption Quota Management System", "Air Conditioning Usage Management System", "Energy Measuring Instrument Management System", etc. to achieve refined energy management. In 2023, the Company worked with various countries to replace energy-saving equipment such as current bussing machines and energy-saving lamps to meet energy-saving expectations. In the future, the Company will continue to focus on energy conservation and emission reduction and seek more new directions for sustainable development.



# 07. Society

## 7.1 Human Rights Protection and Employee Rights and Interests

Protecting employees' rights and interests is a legal necessity and the cornerstone of harmonious labor-management relations, which is of positive significance to the long-term development of enterprises. AESOLAR is fully aware of this principle, attaches great importance to labor rights, adheres to fair, just, and open employment standards, and strives to build a market-competitive salary and welfare system. At the same time, we actively expand democratic communication channels and strive to create an equal, diverse, and harmonious workplace environment.

## 7.2 Employee Training and Development

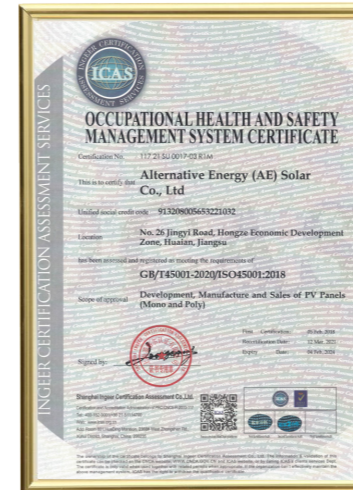
We are aware of the importance of employee training for the Company's long-term development, and therefore place employee development at the core of the Company's strategy. Employee training is not only the key to improve employees' personal abilities, but also a valuable opportunity to promote their career growth and broaden their horizons. We tailor personalized training goals and plans for employees at different levels to ensure that the training content is closely connected with the actual needs of employees.

Each department well plans annual training programs based on employee career plans and company strategies and evaluates training effects through examinations or experience submissions. Such a training mechanism not only helps employees improve their skills, but also provides strong talent support for the Company's development, achieving a win-win situation between personal growth and company goals. AESOLAR formulates an annual training plan every year. In 2023, the Company focused on energy management and carried out special training focusing on energy management system publicity and implementation, energy management and review, internal auditing and related document study. The Company ensured training effectiveness by clarifying the purpose of training sessions and assessment methods.



# 7.3 Occupational Health and Safety

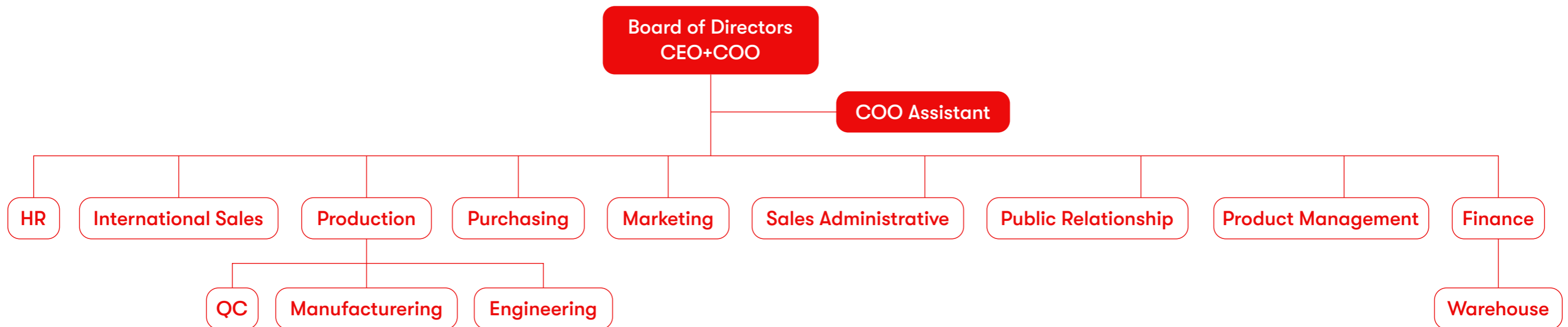
AESOLAR considers occupational health and safety in factory management its top priority and is committed to creating a healthy and safe working environment for employees. This is not only our mission, but also our responsibility. In accordance with the "Work Safety Law of the People's Republic of China", the "Law of the People's Republic of China on the Prevention and Control of Occupational Diseases" and other relevant laws and regulations, we have formulated the normative documents such as the "Quality, Environment, Occupational Health and Safety Management System" and "Quality, Environment and Occupational Health and Safety Management Manual". To escort the Company's occupational health and safety. Adhering to the occupational health and safety policy of "people-oriented, prevention first, technological innovation, management excellence", and setting relevant goals.



- Prevented personal fatalities.
- Prevented major equipment, fires and traffic accidents.
- The annual injury rate is controlled within 5‰.
- Reduced occupational hazards and ensure environmental management of production sites and living areas meet standards.
- 0 fire accidents occurred.
- 0 electric shock accidents occurred.

Occupational Health and Safety Management System Certification Certificate (left)

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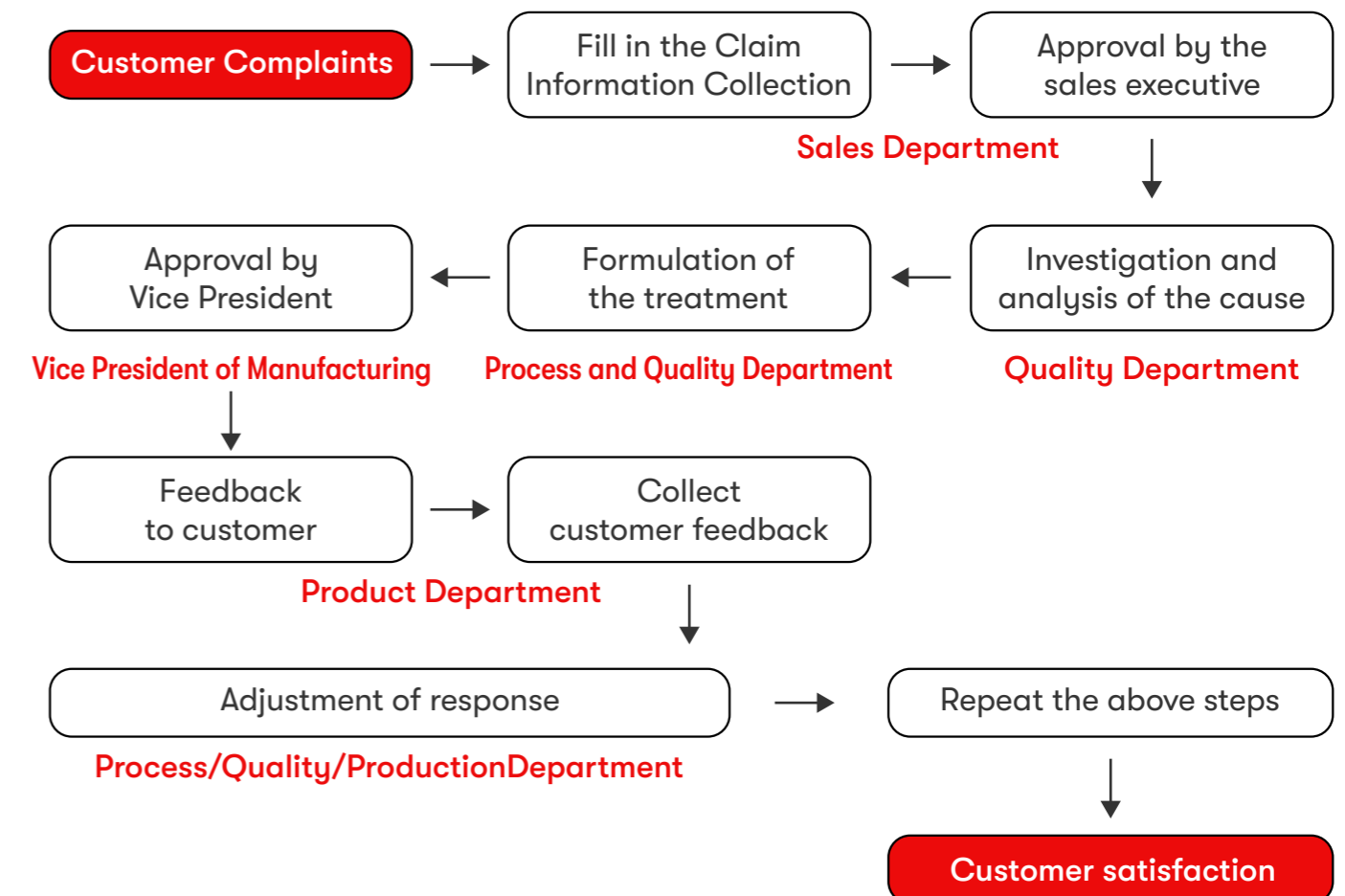
In addition, we organize fire drills regularly every year to enhance employees' safety awareness and ability to respond to fires, reduce fire risks, ensure production safety, reveal and improve existing problems in fire safety management, and strengthen coordination and communication within the enterprise.



## 7.4 Customer Relationship Management

AESOLAR regards customers as vital, not only as the core driving force of business development and an important cornerstone of market competitiveness, but also as the key to promoting innovation and improving service quality. AESOLAR is aware of the value of customer relationships, always puts customer needs first, and is committed to maintaining close communication and cooperation with customers in order to jointly create a better future. In response to customer complaints, we have compiled a "Customer Complaint Handling Procedure" to ensure that all types of customer complaints can be resolved in a timely, reasonable and effective manner. By formulating a complaint handling process, we can provide better services to customers and improve customer satisfaction.

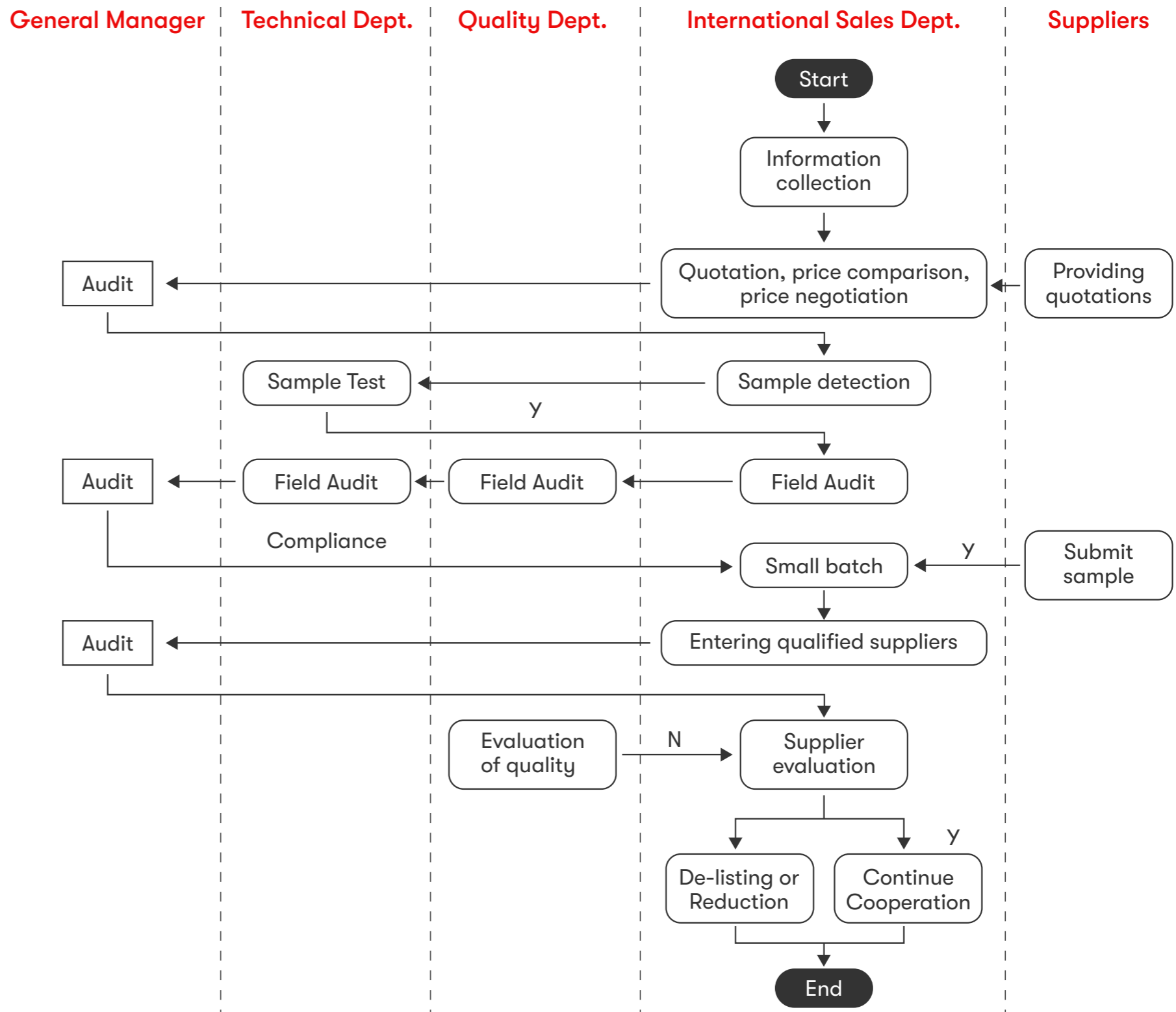
Customer complaint handling flowchart



# 7.5 Sustainable Supply Chain

Excellent supply chain management has the characteristics of efficient collaboration, accurate prediction, flexibility and continuous innovation. By optimizing resource allocation, reducing costs, and improving operational efficiency, to effectively support the Company's market expansion and brand building. At the same time, it can enhance the Company's ability to resist risks, ensure the stability and reliability of the supply chain, and thereby promote the Company's sustainable development and the formation of competitive advantages.

AESOLAR formulates procurement management, supplier review, and accounts payable application processes, and clarifies the responsibilities of General Manager, Deputy General Managers and related departments at all levels, thereby achieving a management channel for the entire business process. During the supplier review process, the Company will participate in on-site inspections through the Commerce Department, Quality Department and Technology Department to ensure that qualified suppliers pass small batch procurement trials and meet quality, service and other requirements.



Supplier review management process

Through the "Supplier Capability Questionnaire" and "Supplier Evaluation Questionnaire", we evaluate suppliers every year and establish the "Supplier Annual Assessment Form" to ensure supplier quality, price, delivery and service quality. By formulating the "Green Supply Chain Management System", the Company implements the Company's three green principles in the procurement process and signs a "Green Supplier Commitment Letter" with suppliers.

Purchasing Green Products	Purchasing Green Raw Materials	Purchasing Green Services
<p>Green products at least meet the following conditions:</p> <ul style="list-style-type: none"> <li>• Establish the concept of the whole life cycle in the product design process, fully consider environmental protection, reduce resource and energy consumption, and pay attention to sustainable development;</li> <li>• The product uses more environmentally friendly raw materials in the production process, adopts clean production technology, has high resource and energy utilization efficiency, and pollutant emissions are better than the corresponding emission standards;</li> <li>• The product has low energy consumption during use, will not cause harm to users, and pollutant emissions meet environmental protection requirements;</li> <li>• The product can be recycled after disposal, is easy to disassemble, refurbish, and can be safely disposed.</li> </ul>	<p>Raw materials should be given priority to materials that <b>meet environmental standards and energy-saving requirements, have low energy consumption, low pollution, non-toxicity, high resource utilization, recyclability and other good properties.</b></p> <p>Enterprises, while meeting relevant environmental standards, product quality and safety requirements, give priority to purchasing and utilizing renewable resources such as <b>scrap steel, waste non-ferrous metals, waste plastics, wastepaper, waste electric and electronic products, waste tires, waste glass, waste textiles, etc. as raw materials.</b></p>	<p>The degree of overall damage to the environment is very light, the emission of pollutants is small, no toxic and harmful or difficult to deal with pollutants, and the classified collection and reasonable disposal of solid waste are realized;</p> <p>The service content meets the requirements of energy saving and consumption reduction, and uses less resources and energy in the service process, and the overall consumption of natural resources is low: the service content is beneficial to human health.</p>

## 7.6 Community Contribution and Charity

We actively participate in supplier training and are committed to improving product quality and optimizing production processes. In the future, AESOLAR will continue to promote supply chain management to achieve a win-win situation of economic and environmental benefits. At the same time, we will also strengthen communication and collaboration with our partners to jointly promote the sustainable development of the supply chain and contribute to building a better future.

The Company actively carries out various charitable donation activities. As the largest photovoltaic enterprise in Huai'an, the Company adheres to the concept of "What is taken from society must be returned to society". While building the culture of AESOLAR and enhancing the strength of the Company, it also actively participates in social welfare undertakings of photovoltaic poverty alleviation, making full use of its own advantages, through photovoltaic poverty alleviation, it installed solar photovoltaic power generation devices for poor households in areas with good lighting conditions, and undertook domestic and foreign photovoltaic poverty alleviation projects in Thailand and Germany, Jiangsu Province, Ethiopia, etc., which not only meet the electricity needs of poor households, excess electricity can be connected to the grid to generate electricity in exchange for income. It can also promote the industrial application of clean energy and continue to promote the healthy development of the regional economy.



Supplier training participation

In October 2020, the Company reached a preliminary intention with the government of Zimbabwe in Africa to build 100 photovoltaic power supply poverty alleviation projects in 100 villages lacking power. The project designs and builds off-grid photovoltaic power stations based on the population of villages lacking power and the basic electricity needs for production and living of residents, changing the situation of no electricity in areas without power grid coverage in Africa and lighting up the lives of the African people.



As part of our commitment to corporate social responsibility, AESOLAR partnered with the Women's Association of Attitude and Social Commitment (AMAC) in September 2023. AMAC, which has worked for 11 years in Rio de Janeiro's favelas to fight domestic violence, received a donation of solar modules from AESOLAR to power their headquarters. By enabling sustainable energy, AESOLAR hopes to help reduce operating costs and provide long-term support for this essential initiative. We believe solar energy goes beyond technology—it's about creating a better, more sustainable lifestyle for all.



In 2024, AESOLAR donated solar modules and educational supplies to Red Skirt School, a tuition-free school located in Bangkok's Khlong Toei slum. This initiative was part of our ongoing commitment to corporate social responsibility and promoting sustainable development in underserved communities. The solar modules provide the school with a reliable and clean energy source, supporting its mission to offer free education to local children. By enabling access to renewable energy and essential learning tools, AESOLAR is helping to create a brighter future for the students and the community, while furthering our goal of global green energy development.



Community participation aims to closely meet the needs of the people and provide practical and effective help. This move has a positive impact on the Company's development. By actively participating in social welfare undertakings, AESOLAR not only cultivates employees' sense of social responsibility and team spirit, but also enhances the cohesion and centripetal force of the overall team, laying a solid foundation for the Company's long-term development.

# 08. Appendix

—— It's time to save the world.



# 8.1 Environmental Performance

Indicator	Unit	2021	2022	2023
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## Energy Use

Gasoline	L	480	600	600
Natural Gas	m <sup>3</sup>	0	23,222	30,193
Solar Energy	kWh	3	3	3
Electricity Consumption	kWh	1,228,540	1,584,996	2,087,551

Note: Energy usage data includes data from offices in Germany and Brazil.

## Water Resource Indicators

Total Water Withdrawal	Ton	10,227	14,578	22,798
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Note: Water resource data includes data from offices in Germany and Brazil.

Indicator	Unit	2021	2022	2023
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## Waste Indicators

Waste Generation	Ton	22.84	35.55	76.08
Amount of Non-hazardous Waste Generated	Ton	20.34	32.77	73.58
Amount of Non-hazardous Waste Recycled	Ton	20.34	32.77	73.58
Hazardous Waste Generation	Ton	2.50	2.78	2.50
Disposal of Hazardous Waste	Ton	2.50	2.78	2.50

## 8.2 Social Performance

### Diversity of Employees and Governing Bodies

Indicator	Unit	2021	2022	2023
Total Number of Employees	Person	136	164	152
<b>Employee Diversity</b>				
<b>By Gender</b>				
Male	Person	75	92	87
Female	Person	61	72	65
<b>By Age</b>				
<30 Years Old	Person	25	25	26
30-50 Years Old	Person	97	118	108
>50 Years Old	Person	14	21	18
<b>By Ethnicity</b>				
Han Chinese	Person	123	142	132
Ethnic Minorities and foreigners	Person	7	16	20
<b>By region</b>				
Mainland China	Person	123	142	126
Outside Mainland China (including Hong Kong, Macao and Taiwan)	Person	13	22	26
<b>By Employment Type</b>				
Full-time	Person	133	160	149
Part-time	Person	3	4	3

Indicator	Unit	2021	2022	2023
<b>Diversity of Governing Bodies</b>				
Senior Management	Person	7	7	7
Of Which, Female Executives	Person	2	2	2
Middle Management	Person	12	21	23
Of Which, Female Middle Management	Person	3	4	4
General Management	Person	57	64	63
Of Which, Female General Managers	Person	23	31	25
General Staff	Person	67	86	74

Note: Employee and governance data includes data from offices in Germany and Brazil.

## Employee Turnover

Indicator	Unit	2021	2022	2023
<b>Employee Hiring</b>				
Total New Employees	Person	59	152	123
Employee Hiring Rate	%	100%	100%	100%
<b>By Gender</b>				
Male	Person	34	113	91
Female	Person	25	39	32
<b>By Age</b>				
<30 Years Old	Person	21	51	48
30-50 Years Old	Person	33	88	75
>50 Years Old	Person	5	13	0
<b>By Ethnicity</b>				
Han Chinese	Person	59	152	123
Ethnic Minority	Person	0	0	0
<b>By region</b>				
Mainland China	Person	65	133	139
Outside Mainland China (including Hong Kong, Macao and Taiwan)	Person	52.84%	93.66%	110.31%

## Training and Education

Indicator	Unit	2021	2022	2023
<b>Average Training Hours</b>				
<b>Top Management</b>				
Male	Hour	30	34	30
Female	Hour	30	34	30
<b>Middle Management</b>				
Male	Hour	28	28	27
Female	Hour	27	27	26
<b>General Management</b>				
Male	Hour	25	27	27
Female	Hour	25	27	27
<b>General Employees</b>				
Male	Hour	24	25	24
Female	Hour	24	25	24

## Training and Education

Indicator	Unit	2021	2022	2023
<b>Proportion Of Employees Receiving Regular Performance Appraisals</b>				
<b>Top Management</b>				
Male	%	100%	100%	100%
Female	%	100%	100%	100%
<b>Middle Management</b>				
Male	%	100%	100%	100%
Female	%	100%	100%	100%
<b>General Management</b>				
Male	%	100%	100%	100%
Female	%	100%	100%	100%
<b>General Employees</b>				
Male	%	100%	100%	100%
Female	%	100%	100%	100%

## Collective Bargaining Agreements

Indicator	Unit	2021	2022	2023
Percentage of Employees With Collective Agreements	%	0	0	0
Proportion of Personnel With Female Employee Protection Agreements	%	0	0	0

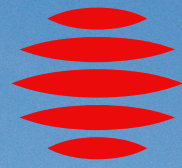
## Occupational Health and Safety

Indicator	Unit	2021	2022	2023
<b>Occupational Injuries</b>				
<b>Work-related Injuries Resulting In Death</b>				
Number of Employees Killed at Work	Person	0	0	0
Employee Fatality Rate	%	0	0	0
<b>Recorded Injuries</b>				
Number of Employee Injuries	Person	1	2	2
Employee Injury Rate	%	0.81	1.41	1.57
<b>Occupational Diseases</b>				
<b>Work-related Injuries Resulting In Death</b>				
Number of Employees Killed by Occupational Diseases	Person	0	0	0
Number of Cases of Occupational Disease-related Health Problems	Unit	0	0	0

## 8.3 Governance Performance

### Status Of Science, Technology And Innovation Indicators

Indicator	Unit	2021	2022	2023
R&D Investment	Million RMB	3,114	3,158	3,758
R&D Investment as A Percentage of Sales Revenue	%	3.30	3.50	3.40
R&D/Technical Staff	Person	10	26	59



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