



ASTRONERGY



2023

**Chint New Energy Technology Co., Ltd. (Astronergy)
Environmental, Social and Governance (ESG) Report**

About This Report

The 2023 Environmental, Social and Governance (ESG) Report ("this Report") principally offers sustainability information about Chint New Energy Technology Co., Ltd. ("Astronergy", "the Company" or "We"), aiming at presenting our stakeholders with Astronergy's management practices and performance in relation to economic, environmental and social sustainability in 2023

Geographic scope ¹

The scope of information disclosed in this Report covers Chint New Energy Technology Co., Ltd. and its subsidiaries:

Company name	Address
Chint New Energy Technology Co., Ltd.	No.1 Jisheng Road, Jianshan New District, Haining City, Zhejiang Province
Chint Solar (Haining) Co., Ltd.	No.2 Jisheng Road, Jianshan New District, Haining City, Zhejiang Province
Chint New Energy Technology (Yancheng) Co., Ltd.	No.1 Tonghui Road, Shanghai-Suzhou Industrial Linkage Cluster, Dafeng District, Yancheng City, Jiangsu Province
Chint New Energy Technology (Jiuquan) Co., Ltd.	No.15 Jingwu Road, Jiuquan Economic and Technological Development Zone, Suzhou District, Jiuquan City, Gansu Province
Hangzhou Zhengtai Import and Export Co., Ltd	Room 723, Building 2, No. 1335 Bin'an Road, Puyan Street, Binjiang District, Hangzhou, Zhejiang Province
Hangzhou Branch of Chint New Energy Technology Co., Ltd.	Room 724, Building 2, No. 1335 Bin'an Road, Puyan Street, Binjiang District, Hangzhou, Zhejiang Province
Songyuan Chint New Eergy Photovoltaic Technology Co., Ltd.	Yadahong Industrial Zone, Ningjiang District, Songyuan City, Jilin Province
M.L.T. SOLAR ENERGY PRODUCTS CO.,Ltd.	88/1 Moo 9 Ko Khanun. Phanom Sarakham, Chachoengsao, Thailand

¹Note: The operation data of Chint Solar (Haining) Co., Ltd. has been recorded in that of Astronergy Technology Co., Ltd., while the plants under construction are not incorporated into this Report; Relevant data of Chint Solar Technology (Jiuquan) Co., Ltd. has been recorded in Chint New Energy Technology (Jiuquan) Co., Ltd.; while plants of Yiwu, Yueqing, Fengyang, Ningxia, Fuyang and Yancheng phase II haven't been put into operation for one year, thus excluded from this Report.

Timeframe

This annual report encompasses the timeframe of January 1, 2023 to December 31, 2023, while certain textual information beyond this period will be provided as necessary.

Data source

The data for 2023 in this Report originated from internal original ledgers, corporate documents and financial statements of Astronergy. Unless otherwise stated, the currencies in this Report are all expressed in CNY.

This report was issued in April 2024 after confirmation by the Management.

Preparation basis

- o Prepared in accordance with the requirements of 2021 edition of GRI Standards on the sustainability report
- o Reference to International Financial Reporting Sustainability Disclosure Standards (IFRS S1, IFRS S2)
- o UN SDGs 2030
- o UNGC 10 Principles

External assurance

The Report is audited by Hangzhou TÜV Nord Quality Certification Service Co., Ltd. (an institution legally registered and established by TÜV NORD Group in China), a third party, who provides an independent verification statement.

Report release

In case of a discrepancy between the English and the Chinese one, the Chinese version shall prevail. This Report, in Chinese and English, is available at: <https://www.astronergy.com.cn/>

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CONTENTS

About This Report / 01

Chairman's Message / 05

Chief Sustainability Officer's Message / 07

About Astronergy / 09

Corporate Overview	09
History	10
Mission, Vision And Values	11
Awards And Honors	11
Industry Associations	13
Our 2023	15

Sustainability Management

Sustainability Strategy	17
Governance Infrastructure	18
Stakeholders Engagement	19
Materiality Analysis	21

23 Sound Management, Adherence To Corporate Governance

Corporate Governance	25
Risk Management	27
Business Ethics	27
Information Security	29

31 Environmental Protection For A Green Future

Response To Climate Change	33
Environmental Management System	36
Energy Management	38
Water Management	39
Waste Management	41
Biodiversity Conservation	42

43 Employee Care For A Harmonious Society

Protection Of Labor And Human Rights	45
Talent Strategy, Training And Development	51
Occupational Health And Safety	54
Community Contribution & Charity And Public Welfare	58

61 Joining Hands For A Trustworthy Relationship

Product Quality And Safety	63
Full Product Lifecycle Management	65
Sci-tech Innovation	66
Customer Relationship Management	69
Sustainable Supply Chain	70

Independent Verification Statement / 73

Appendix / 75

Key Performance Indicator	75
Indices	81



Chairman's Message

In the year 2023, which is full of challenges and opportunities, the global photovoltaic industry continues to lead the incessant wave of global energy transformation with its unparalleled resilience and innovative vitality, driving robustly and enduringly the global sustainable development. As a leading company focusing on the intelligent manufacturing of PV modules, Astronergy has always positioned itself at the forefront of the times, actively practiced our concept of sustainable development and business strategy, and unswervingly promoted the development of the green energy industry, contributing to the construction of a more prosperous, harmonious, and sustainable socio-economic ecology.

In 2023, the photovoltaic industry gained obvious momentum in technological innovation and rapid capacity expansion, especially in the field of cell technology, advancing the technological transformation at an irresistible speed from the traditional p-type cell technology to n-type cell technology represented by TOPCon. With higher conversion efficiency, lower attenuation rate and better temperature coefficient, n-type TOPCon cells have become the mainstream choice in the current PV market, strongly promoting the technological upgrading and efficiency enhancement of the global clean energy industry. Astronergy, as one of the earliest private enterprises in China engaging in PV and also one of the first companies in the industry to initiate large-scale mass production of n-type TOPCon modules, has always been keeping to its dual-wheel drive strategy of technological innovation and green manufacturing. With its excellent R&D strength and lean production management, it made historical high record of module output, meeting the growing demand for clean energy from customers around the world.

In response to the surging global market demand for PV, Astronergy has continued its efforts in building high-efficiency production capacity. We successfully laid out globally and operated ten intelligent manufacturing bases in 2023, boasting a total module production capacity of 55GW, of which n-type TOPCon production capacity accounted for more than 80%. We are well aware that the synergy and stability of the industrial chain is the key for enterprises to cope with market fluctuations and remain competitive in the long run. Therefore, we have further strengthened our strategic cooperation with the upstream suppliers, and by deepening our supply chain relationship, we have jointly built a green, stable, efficient and win-win industrial chain ecosystem to effectively ward off the risks brought by market fluctuations and ensure our sound operation.

While pursuing economic benefits, Astronergy always undertakes social responsibility as its important development mission, adhering to compliant operation, and balancing the rights and interests of all stakeholders in an open, transparent and fair manner. We firmly believe that a good corporate citizenship image is not only the cornerstone of a company's reputation, but also an important guarantee to gain trust from customers, attract talented employees, and build harmonious community relations. As a result, we recorded stable growth in operating revenue, continuous optimization of profit margins, and achieved both economic and social benefits as well in 2023.

Astronergy is deeply aware that promoting global energy transformation and addressing climate change is a major issue that concerns the future destiny of mankind. We have deeply rooted the concept of sustainable development in our corporate development strategy and officially released our corporate sustainability strategy in 2023, which points out clearly the goal and path to carbon neutrality throughout 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 take the lead of the industry in green development.

In order to better fulfill this strategic goal, Astronergy has taken advantage of the construction of zero-carbon factory to reduce carbon emissions from production and operation, and has successfully built the first "zero-carbon factory"; it has promoted the low-carbon transformation of the supply chain through carbon footprint management, helped its supply chain partners to make joint effort to improve their environmental protection awareness and management level to promote green development of the entire industrial chain. At the same time, Astronergy announced its commitment to join the Science-Based targets initiative (SBTI), the

United Nations Global Compact's Forward Faster initiative, and international organizations such as Solar Stewardship Initiative (SSI) and China Corporate Climate Action (CCCA). Through close cooperation with these international organizations, we look forward to regulating our own carbon reduction efforts with higher standards and engaging actively in the global carbon governance process to make contribution to the construction of a low-carbon, green and sustainable future with the wisdom and strength of Chinese enterprises.

Astronergy is actively practicing the concept of sustainable development, with "focusing on solar energy, contributing to zero carbon, and enjoying a new green life" as its mission. In 2023, Astronergy was presented a number of prestigious awards, such as the national "Green Factory" from the MIIT, "China's ESG Innovative Enterprises" from Forbes, "Environment of the Year" from "Bloomberg Green ESG50", "DEI Employer Award" and other significant awards, and its "Zero Carbon Factory" was successfully

listed in COP 28 "Corporate Climate Action Case Book 2023". These honors are not only recognition of our past achievement, but also a spur for our future endeavor, as they motivate us to hold ourselves to a higher standard, continue to innovate and improve for a greater contribution to the global energy transformation and sustainable development.

Looking back on the past year, challenged by the complex and volatile global environment, Astronergy successfully achieved steady performance growth and in-depth creation of social value through its forward-looking strategic layout, solid technology research and development, efficient production capacity construction, stable supply chain management, and a strong sense of social responsibility. Looking ahead, we will continue to uphold the concepts of innovation-driven and green development, embrace the great trend of global energy transformation with a more open attitude, move towards the ambitious goal of carbon neutrality with a more determined pace, and fulfill our solemn commitment to sustainable development with more pragmatic actions, so as to make our own contribution to the construction of a better and greener global home.



Chief Sustainability Officer's Message

Over the past year, Astronergy upheld its firm commitment to a sustainable future, deeply integrated the sustainable development concept into its business operation, took the lead in green development with innovation, shaped the image as a corporate citizen with responsibility, and safeguarded the effective implementation of its sustainable strategy with excellent governance.

Astronergy officially released in 2023 its sustainable development strategy for 2050, setting the ambitious goal for carbon neutrality throughout the entire value chain. We are well aware that the achievement of this goal requires support from systematic and scientific path planning and solid actions. Therefore, we take advantage of carbon footprint management to promote clean production and full life cycle carbon value management in an all-round way. We highly uphold the concept of green design, implant low-carbon genes ever since the product design stage, and reduce carbon emissions during the use stage by optimizing the material selection, improving energy efficiency, and extending service life. Take Astronergy's newly developed ASTRO N7s product as an example, we adopt the innovative ZBB-TF technology for the overall OBB presentation and integrate the industry's mainstream rectangular high-power technology development. Compared with the traditional interconnection process, the ZBB interconnection has a lower temperature and requires no fluxes, emits no VOC during the interconnection process, thus reducing the unit of raw materials and energy consumption and the carbon footprint of the production process. We also proactively roll out green manufacturing projects, introduce advanced production equipment and technology to improve production efficiency, reduce energy consumption and reduce waste. Through zero-carbon factory construction, we constantly reduce carbon emissions from our production and operations. Astronergy Yancheng Base obtained the zero-carbon factory certification in 2023 and it reduced carbon dioxide emissions by a total of 42,221.37 tons during its construction period of the "Zero-Carbon Factory", showing a significant environmental benefit.

For a PV module manufacturer, the supply chain is an important part for the carbon neutrality goal, with more carbon emissions sources located at the upstream supply chain end. Astronergy takes the construction of the green supply chain as the starting point, and evaluates the green management of suppliers through supplier self-evaluation, Astronergy evaluation, training and counseling, and on-site auditing. 9 of Astronergy's excellent green suppliers have been awarded the honor of "Green Product" and national "Green Factory" by MIIT, and 6 of them have been awarded the honor of national "Green Supply Chain" by MIIT. Astronergy was honored as a national "Green Factory" by the MIIT In 2023. In addition, we have strengthened green transportation in the logistics chain, reducing the carbon footprint of the cargo transportation by, among others, optimizing the transportation modes, increasing the loading rate, and promoting new energy transportation means. We emphasize and actively promote green recovery and recycling at the end of the product life cycle. By establishing a recycling system for used components, we maximize the reuse of resources, mitigate the impact of waste on the environment, and form a closed-loop management from production to recycling. These initiatives not only help reduce the company's direct and indirect carbon emissions, but also set an example of a circular economy for the industry.

We firmly believe that we cannot achieve long-term success without a diverse, fair and inclusive work environment. To this end, we are committed to building a diversified talent system that breaks down the boundaries of gender, age, race, and cultural background to attract, train, and retain all types of outstanding talents and give full play to their potential. We actively give trainings on diversity and inclusion to ensure that everyone is given the role to play with respect and understanding. In 2023, Astronergy's DEI efforts were recognized by professional organizations and won the "2023 DEI Employer Award," a strong affirmation of our continued efforts to promote the practice of a diverse, fair and inclusive culture. In addition, we actively fulfill our social responsibilities by participating in community volunteer and public welfare activities, giving back to the community through various forms of educational support, environmental protection, and community co-construction, and establishing a close and harmonious symbiotic relationship with the local community.

Facing the challenges of global climate change and the urgent need for sustainable development, Astronergy will continue to adhere to its mission to drive green transformation with innovation, fulfill social commitments with responsibility, and guarantee the efficient implementation of sustainable strategies with excellent governance. We will continue to deepen our carbon footprint management and promote the carbon neutrality process throughout the value chain; further enrich and optimize our diversified

talent structure to create a fairer and more inclusive corporate culture; strengthen ESG risk management and opportunity identification, and continuously improve our corporate governance. We look forward to working hand in hand with all stakeholders to cope with the challenges of the times, create a cleaner, fairer and more prosperous energy future, and contribute to the building of a better world where human beings and nature coexist in harmony.



About Astronergy

Corporate Overview

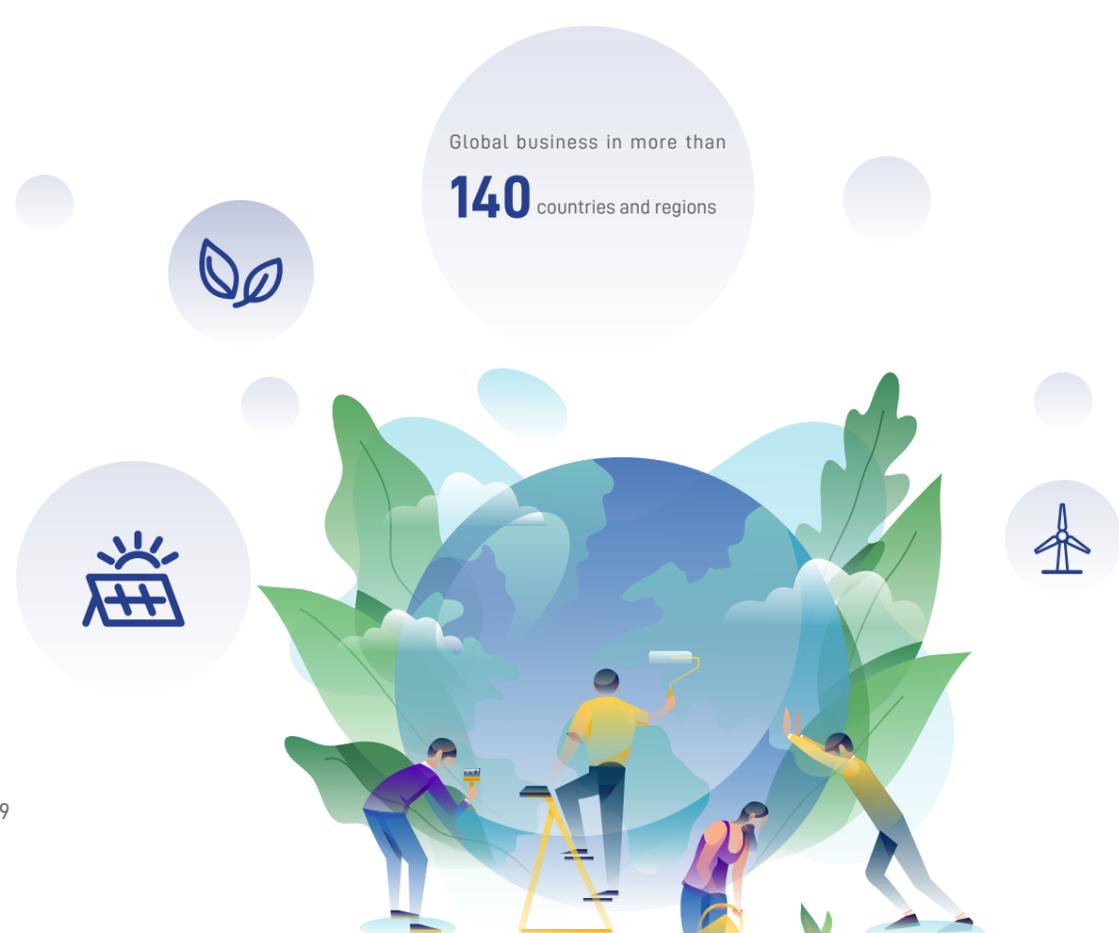
Founded in 2006, Chint New Energy Technology Co., Ltd., an intelligent manufacturing enterprise engaged in solar cells and solar modules under Chint Group, is among the pioneering private enterprises in China to venture into the PV sector, and also an early adopter of mass production of n-type TOPCon modules within the industry.

Astronergy is committed to becoming the world's most competitive supplier of PV/solar modules guided by the mission of "to create a sustainable and net-zero world with solar power". Engaged in the R&D, production and sales of high-efficiency crystalline silicon solar cells and modules, the Company continues to launch the ASTRO series of high-efficiency module products with a specific focus on large-size, monofacial-and bifacial series, intending to cater to various applications such as utility-scale power stations, industrial and commercial distributed power plants, household power plants and other multi-scene application scenarios.

Astronergy operates in more than 140 countries and regions around the world. Specially, it has established intelligent manufacturing bases in Haining (Zhejiang Province), Yancheng (Jiangsu Province), Jiuquan (Gansu Province), Songyuan (Jilin Province), Fengyang (Anhui Province), Yiwu (Zhejiang Province), Yanchi (Ningxia Province) in China, and Thailand, and has set up subsidiaries and sales centers in Germany, Spain, the Netherlands, Poland, USA, Canada, Brazil, Australia, Singapore, Japan, Thailand and other countries and regions. Corporate products are embraced in Europe, North America, Latin America, Australia, Asia-Pacific and other international mainstream markets.

As the main contributor of the first PV module product standard in Zhejiang Province, Astronergy has been awarded Top Performer seven times by PVEL, an authoritative PV/solar module performance test facility, and has been listed several times as a Tier 1 PV Module Maker by Bloomberg New Energy Finance, a leading international research organization.

Global business in more than
140 countries and regions



History

2015~2017

In 2015, establishment of Chint New Energy Technoloy (Haining) Co., Ltd. (Astronergy's former name), with its annual sales volume of PV/solar modules exceeding 1GW

In 2016, Hangzhou smart plant put into production in Zhejiang Province, known as the first smart factory in the industry

Haining transparent plant put into production in Zhejiang Province; Thailand plant put into production

Awarded Sino-German Intelligent Manufacturing Cooperation Trial Demonstration Project by the MIIT

In 2017, contribution to the compilation of Made in Zhejiang PV/solar module standard

Ranked Global No.1 by Photon Consulting

2006

Establishment of Chint Solar, Chint Group Accessing PV Industry

2008

Initiated research on silicon-based thin-film technology

The capacity of crystalline silicon module reached 100MW

2009~2011

In 2009, supply of the first batch of national golden sun demonstration projects

In 2010, supply of Rovergo, Europe's largest ground-mounted PV power station

2012~2014

Production Line of Chint New Energy Technology (Jiuquan) Co., Ltd. in Gansu Province Completed in 2012

In 2014, acquisition of Conergy Frankfurt PV/solar module plant in Germany

2018~2021

In 2018, the ASTRO module portfolio with global sales exceeding 3GW officially launched

In 2019, ASTRO 4 series module portfolio launched

In 2020, ASTRO 5 series module portfolio launched and listed on the Intelligent PV Trial Demonstration Enterprises List by the MIIT

In 2021, ASTRO 6 series and ASTRO 5s series module portfolio launched

Yancheng plant put into production in Jiangsu Province, invested in silicon wafer companies and laid out the upstream of the industry

2022

Astronergy operated independently and took sole responsibility for crystalline silicon manufacturing and module sales of the Chint Group

ASTRO N series module portfolio launched, positioning the Company as a leader in the mass production of n-Type TOPCon PV/solar modules

Songyuan plant put into production in Jilin Province

2023

ASTRO N7 series module portfolio launched

Fengyang, Yiwu, Yanchi, Yueqing plants respectively put into production in Anhui, Zhejiang, Ningxia and Zhejiang Provinces

Zero-carbon plant (Yancheng Base) certified

Release of the sustainability strategy

Mission, Vision And Values

Astronergy is committed to providing global customers with high-quality, highly reliable and stable module products in the long run with the principle of "customer-centered, responsibility, collaboration, efficiency and innovation" to enhance global awareness of the value of PV. "Creating long-lasting, efficient and green energy" is the product value that Astronergy has been upheld for a long time. Astronergy has been honored as a "Top Performer" in PVEL's stringent reliability tests seven times and repeatedly ranked as a "Tier 1 PV Module Maker" by Bloomberg New Energy Finance, a leading international research firm. With a comprehensive understanding of technology development trends and market demand changes, Astronergy lays out the R&D and application of n-type cells in advance, becoming one of the first enterprises in mass production of n-type TOPCon modules. Astronergy's manufacturing factories boast advanced domestic intelligent manufacturing innovation and development, demonstrating promising corporate development potential. Committed to corporate social responsibility as an integral part of its strategy and sustainability, Astronergy has implemented social responsibility projects in environmental protection, sustainability, PV poverty alleviation and social welfare to create positive social values. In 2022, Astronergy announced its social responsibility policy, aiming to make continuous efforts in becoming the most socially responsible and trustworthy PV manufacturer in China. To achieve long-term success, a company must comply with global laws and regulations and operate with integrity and consistency. In July 2022, Astronergy released its Supplier Code of Conduct to foster compliance among its business partners.

Awards And Honors

During the reporting period, we have received quite a number of awards from major industry media, organizations and local governments for excellent product quality and outstanding brand effect. These were acknowledgments of Astronergy's extinguished contribution to R&D, quality and after-sales service in the long run. Looking ahead, we will remain committed to improving our brand power for wider recognition. We have joined the United Nations Global Compact's Forward Faster initiative and the Science-Based Targets Initiative (SBTi), actively participating in various international initiatives. We announce our commitment to join the Science-Based targets initiative (SBTi), the UNGC's Forward Faster initiative, Solar Stewardship Initiative (SSI) and China Corporate Climate Action (CCCA) and international organizations and actively correspond to various international initiatives.

Award type	Award name	Award-winning organization	Awarded by
Government offices	National Green Factory in 2023	Chint New Energy Technology Co., Ltd.	Ministry of Industry and Information Technology Department (MIIT)
	Sci-Tech Innovation Excellent Enterprise of Zhejiang Province	Chint New Energy Technology Co., Ltd.	Sci-Tech Innovation Enterprises Association of Zhejiang Province/Sci-Tech New Merchants Promotion Association of Zhejiang Province/Sci-Tech & Finance Times
	First Prize of Solar PV Track of the 1st Energy Electronics Industry Innovation Contest	Chint New Energy Technology Co., Ltd.	Industrial Development Promotion Center of the MIIT
Public media	ESG Innovative Enterprises of Forbes China 2023	Chint New Energy Technology Co., Ltd.	Forbes China
	ESG 50: Bloomberg Green ESG - Environment 2023	Chint New Energy Technology Co., Ltd.	Bloomberg Green, Bloomberg Business Week (Chinese Edition)
	Listed in Corporate Climate Action Casebook 2023	Chint New Energy Technology Co., Ltd.	C Team, Publicity and Education Center of Ministry of Ecology and Environment

Award type	Award name	Award-winning organization	Awarded by
Public media	2023 DEI Employer® Awards	Chint New Energy Technology Co., Ltd.	Employer Branding Institute
	GlocalIN Top 50 - Globalized Companies in China: The Representative of Technology	Chint New Energy Technology Co., Ltd.	DeepTech, MIT Technology Review, LinkedIn
	Photovoltaic Energy Cup: The Most Influential PV/Solar Module Enterprise	Chint New Energy Technology Co., Ltd.	Solarbe Global
	Jin Xu Award: Influential PV/Solar Module Brands	Chint New Energy Technology Co., Ltd.	Jinglue New Energy
	Quality Household/Industrial/Commercial Module Brand of China 2022	Chint New Energy Technology Co., Ltd.	Century New Energy Network/China Household PV Conference Organizing Committee
	Top 10 Influential Component Brands	Chint New Energy Technology Co., Ltd.	PV Box/Sixth China Distributed PV Conference Organizing Committee
	Fifth PVTD - Golden Module Award	Chint New Energy Technology Co., Ltd.	PVTD Organizing Committee/MOFANG PV
	Fifth PVTD - Technical Excellence Award	Chint New Energy Technology Co., Ltd.	PVTD Organizing Committee/MOFANG PV
	Fifth PVTD - PV Technology Leader	Chint New Energy Technology Co., Ltd.	PVTD Organizing Committee/MOFANG PV
	2023 PVBL - ESG Construction Leadership Award	Chint New Energy Technology Co., Ltd.	Century New Energy Network/PVBL PV Brand Labs
	Premium Household/Commercial/Industrial Module Brand of 2022	Chint New Energy Technology Co., Ltd.	Century New Energy Network/China Household PV Conference Organizing Committee
	N-Type PV/solar Module Industry Leader of N-Type PV Technology and Industry Development Forum 2023	Chint New Energy Technology Co., Ltd.	China PV Top-runner Innovation Forum
	Top 8 Global Shipment (Volume) of PV/Solar Modules in 2022	Chint New Energy Technology Co., Ltd.	China PV Top-runner Innovation Forum
	OFweek 2023 - Ultra High Efficiency PV/Solar Module Award of Solar PV Industry	Chint New Energy Technology Co., Ltd.	OFweek - Solar PV
	12th BEIJIXING Cup - Influential Characteristic PV Application Project/Case Enterprises of 2023	Chint New Energy Technology Co., Ltd.	Polaris Solar PV Network
	12th BEIJIXING Cup - Influential PV/Solar Module Brand of 2023	Chint New Energy Technology Co., Ltd.	Polaris Solar PV Network
	Quality Supplier for PV/Solar Module 2023	Chint New Energy Technology Co., Ltd.	SMM
	Distributed PV Manufacturing Excellence Award	Chint New Energy Technology Co., Ltd.	7th Distributed Renewable Energy Carnival Workshop Organizing Committee
	New List of the Most Influential IoT Innovation 2023	Chint New Energy Technology Co., Ltd.	Wealth
	Chief Brand Officer of China PV in 2020	Chint New Energy Technology Co., Ltd.	China International PV Industry Conference Organizing Committee
Innovators of Carbon Peak & Carbon Neutrality Actioners 2023	Chint New Energy Technology Co., Ltd.	Guangdong Southern Weekly	

Award type	Award name	Award-winning organization	Awarded by
Industry authority	SNEC Top Ten Highlights - TW Diamond Award	Chint New Energy Technology Co., Ltd.	16th International Photovoltaic Power Generation and Smart Energy Conference & Exhibition (SNEC2023) Organizing Committee
	GREENPV - PV Contributor Award 2023	Chint New Energy Technology Co., Ltd.	PV Committee of China Green Supply Chain Alliance
	Technological Achievement (for Enterprise)	Chint New Energy Technology Co., Ltd.	Asian Photovoltaic Industry Association
	Industrial Contribution (for Enterprise)	Chint New Energy Technology Co., Ltd.	Asian Photovoltaic Industry Association
	Quality Company of PV/Solar Module 2023	Chint New Energy Technology Co., Ltd.	Solar PV & Energy Storage World Expo/ Grandeur Exhibition Group
	Excellent PV Enterprise of 2023	Chint New Energy Technology Co., Ltd.	Solar PV & Energy Storage World Expo/ Grandeur Exhibition Group
	2023 Top Brand PV Modules Germany & South Africa	Chint New Energy Technology Co., Ltd.	EUPD

Industry Associations

Astronergy is an intelligent manufacturing company specializing in PV/solar cells and modules. As the pioneer of n-type TOPCon PV/solar modules, Astronergy takes the innate responsibility of promoting new energy transformation. Therefore, we are actively involved in various trade associations and endeavor to meet the requirements of competent authorities regarding related industries.

Association name	Membership Tier
United Nations Global Compact (UNGC)	Participants
Cooperative Alliance of SEMI SCC (Semiconductor Climate Consortium of Semiconductor Equipment and Materials International) & ECO PV (PV Committee of China Green Supply Chain Alliance)	Core member
SolarPower Europe (SPE)	Premium
German Solar Association (BSW)	Member

Association name	Membership Tier
Spanish Photovoltaic Association (UNEF)	Member
Italia Solare	Business member
Solar Energy Industries Association (SEIA)	Kilowatt
Asociacion Colombiana de Energia Solar (ACOSOL)	Member
Brazilian PV Solar Energy Association (ABSOLAR)	Member
Brazil's National Institute of Clean Energy (INEL)	Diamond
Middle East PV Industry Association (MESIA)	Corporate
Africa Solar Industry Association (AFSIA)	Partner Member
South African Photovoltaic Industry Association (SAPVIA)	Gold
The Union of the Electricity Industry (Eurelectric)	Business Associate Membership
Malaysian Photovoltaic Industry Association (MPIA)	Honorary Membership
Dii Desert Energy	Honorary Membership
Solar Stewardship Initiative (SSI)	Manufacturer Member
Irish Solar Energy Association (ISEA)	Premium Member
Bangladesh Solar and Renewable Energy Association (BSREA)	Member
Japan Photovoltaic Energy Association (JPEA)	Member
China Photovoltaic Industry Association (CPIA)	Member
China ECO PV Alliance	Vice President unit
PV Recycling Industry Development Cooperation Center of China ECO PV Alliance	Vice President unit
Jiangsu Province Renewable Energy Industry Association	Governing unit
China Resources Recycling Association	Governing unit
Jiangsu Photovoltaic Industry Association	Member
Hebei Photovoltaic New Energy Industry Association	Member
Jiaying Photovoltaic Industry Association	Executive Vice President unit

Our 2023

Sound Management, Adherence To Corporate Governance Key Performance

100% of management members' remuneration linked with ESG

Female directors accounting for **22.22%**

Independent directors accounting for **33.33%**

CSR training covering **100%**

3 operating sites obtained ISO 27001 certification

0 information security incidents occurred



Environmental Protection For A Green Future Key Performance

Chint New Energy Technology(Yancheng) was granted a **Zero-Carbon Factory Certificate**

0 environmental violations occurred

100% of ISO 50001:2018 system certification

31 cases of energy saving and emission reduction, capable of saving **2708.47** tons of standard coal

15,768,400 kWh of electricity and **69,000** cubic meters of water throughout the year

Energy intensity: Haining Base-Ningbo Port carbon emissions reduction by **571.84** (tCO₂e)

Zero landfill waste

Energy intensity: **3.91** tons of standard coal/MW, year-on-year decrease of **34.18%**

Water consumption intensity: **41.56** tons/MW, year-on-year decrease of **25.43%**

Carbon emissions intensity (Scope 1+2): **28.73** (tCO₂e/MW), year-on-year decrease of **7.12%**

Recovery of non-hazardous waste: **50.7%**, year-on-year increase of **14.65%**



Key Performance Employee Care For A Harmonious Society

100% Security staff received human rights training

0 incidents of discrimination, harassment, forced labor or child labor

Employee satisfaction: **83.78** points

Average length of training: **31.25** hours

Turnover of technical talents: **6.85%**

Proportion of female employees: **32%**

Proportion of female management: **21%**

Proportion of female technicians: **30%**

Ethnic minority employees: **20.61%**

675 EHS safety training sessions with a cumulative total of **18,666** participants

86 emergency exercises with a total of approximately **3,790** participants

Total expenditure on public welfare : CNY **15,336,900**

17 ecological power plant construction projects

158 employees completing continuing education with assistance

Key Performance Joining Hands For A Trustworthy Relationship

100% of ISO 9001:2015 system certification

Achieving the standard pilot enterprise certification of intellectual property management system

A total of **49** patents were newly granted

0 complaints of privacy violation were lodged

54.5% of core suppliers subject to due diligence audits and assessments of social and environmental standards

15 products under life cycle assessment

100% of core suppliers - obtained ISO 45001 Certification

81.8% of core suppliers obtained ISO 14001 certification

9 suppliers were qualified as green factories

92.9 points customer satisfaction



Sustainability Management

Sustainability Strategy

Based on the 17 SDGs of the United Nations, Astronergy formulated its sustainability strategy with a focus on environment, society and governance, specifying strategic goals on major issues such as climate change, natural resources management, labor and human rights, occupational health and safety, business ethics, supply chain management and biodiversity protection, etc. in 2023. Details of relevant strategic objectives and progress in 2023 can be found in the corresponding chapters.



Environment

Green product

Embracing "green and sustainable development" as its long-term strategic plan, Astronergy has integrated green concepts throughout the entire lifecycle of product development, procurement, production, sales, delivery and recycling while constantly pursuing energy-saving and low-carbon practices across all manufacturing chains.

Astronergy adopts large-size silicon wafers for all of its modules, and promotes the employment of thinner wafers, fluorine-free backsheets, lead-free soldering tapes, and dealcoholized silica gel for mutual economic and ecological benefits. Meanwhile, Astronergy initiates green, energy-saving, low-carbon intelligent energy supply and utilization projects internally for the construction of green plants.

Social

People-oriented Healthy Development

Adhering to a people-oriented principle, Astronergy remains committed to building a harmonious, inclusive and improved society. We fully protect employees' rights and interests by creating a safe working environment and providing them with broad career development opportunities. Meanwhile, we are engaged in public welfare activities to promote the development of local communities and serve society with concrete actions.

Governance

Corporate governance is the core of the modern corporate system and a permanent topic. It is the pivot to ensure stable business operation and scientific decision-making, and a key mechanism for breaking information barriers across stakeholders. An advanced governance structure guarantees sustainable corporate operations, continuously enhancing overall corporate power and demonstrating outstanding market competitiveness.

To enhance the ESG awareness of all employees and integrate the sustainability strategy into its operations, during the reporting period, the Company published 7 articles on the internal Chint Flying News platform and conducted 3 ESG-related trainings, including ESG Theory and Corporate Practice, 2023 Top Runner Program and Green Energy+ Special Training for middle and senior managers. The backbone of each business department was enrolled in Astronergy ESG Training for 2023 with qualification certificates.

Governance Infrastructure

With a long-term focus on sustainable development, Astronergy has enhanced its efforts in environmental, social responsibility and corporate governance to further address the risks and opportunities brought about by changes in climate, environment and market policies. Strategy and Sustainability Committee has been established under the Board Of Directors of Astronergy, with a designated director serving as the Chief Sustainability Officer (CSO), responsible for leading and coordinating the Company's sustainability strategy, policies and practices while mitigating ESG risks. In 2023, a Sustainability Department was established as an independent management organization, with three subordinating special working groups on environmental, social and governance, so as to coordinate, plan, implement and supervise various ESG-related activities and projects.

ESG governance

Governance	Board of Directors		
	Strategy and Sustainability Committee		
Management	Sustainability Department		
Execution	ESG Working Group		
	Environmental Working Group	Social Working Group	Governance Working Group
	Response To Climate Change Water Management Energy and greenhouse gas management Product lifecycle management Waste and pollution governance	Protection Of Labor And Human Rights Diversity, equality and inclusion Talent Strategy, Training And Development Occupational health and safety Community Contribution & Charity And Public Welfare	Risk Management Business Ethics Information Security Sustainable Supply Chain Sci-tech Innovation

Responsibilities of the governance

The Strategy and Sustainability Committee has been established under the Board of Directors of Astronergy, with a designated director serving as the Chief Sustainability Officer (CSO), responsible for leading and coordinating the Company's sustainability strategy, policies and practices while mitigating ESG risks.

Responsibilities of the management

A Sustainability Department was established as an independent management organization, with three subordinating special working groups on environmental governance, social responsibility and corporate governance to coordinate, plan, implement and supervise ESG-related activities.

Responsibilities of the Execution

Conduct ESG stakeholder research and communication programs, prepare ESG reports, develop and implement ESG strategic goals and key work plans, and regularly report to the management team on key work and progress regarding ESG

Stakeholders Engagement

The cooperation and support of all stakeholders constitute the bedstone for Astronergy's sustainability practices. With emphasis on in-depth communications with all parties, the Company has established diversified communication channels for an efficient and comprehensive understanding of the needs and expectations of stakeholders with agile response to establish mutually beneficial and trusting relationship, laying a solid foundation for its sustainable development.

Stakeholders	Concerns	Main communication channels
 Shareholders and investors	Corporate Governance Risk Management Sci-tech Innovation Product Quality and Safety	Phone interview Field visits Investor Relations Department Investment and financing interface Business exhibition platform
 Government and regulators	Circular Economy Development Business Ethics Green Low-carbon Products Support for Community Building	Face-to-face visits Regular visits Daily communication
 Customers	Sci-tech Innovation Product Quality and Safety Full Product Lifecycle Management Customer Relationship Management	Phone interview Customer visits Email correspondence Dedicated contact Business sales overlap
 Employees	Labor and Human Rights Protection Talent Strategy, Training and Development Occupational health and safety Product Quality and Safety	Directors exchange Internal official account Satisfaction questionnaire Corporate OA platform Department report
 Partners (including but not limited to suppliers and contractors)	Risk Management Business Ethics Sci-tech Innovation Labor and Human Rights Protection	Regular return visits Satisfaction survey Email correspondence Exhibition communication Business exhibition platform

Stakeholders	Concerns	Main communication channels
 General public and social media	Information Security Sci-tech Innovation Sustainable Supply Chain Product Quality and Safety Full Product Lifecycle Management	Satisfaction questionnaire Official account Telephone Business exhibition platform Interview
 Surrounding community (including residents)	Business Ethics Sustainable Supply Chain Environmental Management System Community Contribution & Charity and Public Welfare	Questionnaire Official account Phone interview Daily communication
 Research institution	Business Ethics Product Quality and Safety Product Whole Lifecycle Management Response to climate change	Scientific research cooperation School-enterprise cooperation Sales platform Technical exchange Trade exhibition
 Industry Associations	Business Ethics Response to climate change Full Product Lifecycle Management Product Quality and Safety	Phone interview Regular return visits Business exhibition platform Department contact Offline communication
 Companies in the same industry	Business Ethics Response to climate change Full Product Lifecycle Management Product Quality and Safety	Phone interview Regular return visits Satisfaction survey Social software Communication between sector heads

Materiality Analysis

Astronergy has identified 21 highly relevant material topics by benchmarking against international initiatives and standards, investment and rating agencies, peers' outstanding corporate practices and its own sustainability strategy and goals. Insisting on the "double materiality" principle, whereby stakeholders were invited to attend online research, Astronergy has evaluated the topics from both financial materiality (the importance of topics on corporate finance) and impact materiality (the importance of corporate impact on the environment, society and the economy) to prioritize topics accordingly and create a Materiality Analysis Matrix that serves as key evidence corporate ESG work, with corresponding contents in each chapter of this Report.

Selection Results and Change Details of Materiality for Astronergy

Scope	Material topics for 2022	Material topics for 2023	Description of changes
Environment	/	Environmental Management System	Newly added topics
	Response to climate change	Response to climate change	Unchanged
	Energy Management	Energy Management	Unchanged
	Water Resources Utilization Management	Water Management	Description of changes
	Waste Management	Waste Management	Unchanged
	Biodiversity	Biodiversity Conservation	Description of changes
Social	Human rights Diversity and Equal Opportunities Freedom of Association and Collective Bargaining	Protection of Labor and Human Rights	Topics consolidation
	Talent Strategy, Training and Development	Talent Strategy, Training and Development	Unchanged
	Occupational Health and Safety	Occupational Health and Safety	Unchanged
	Product Quality Control	Product Quality and Safety	Description of changes
	Circular Economy Development Material Circulation Green Low-carbon Products	Full Product Lifecycle Management	Topics consolidation
	Protection of Customer Rights and Interests	Customer Relationship Management	Description of changes
	/	Privacy Protection	Newly added topics
	Leading the Industry Support for Community Building Voluntary Services Promotion of Local Employment	Community Contribution & Charity and Public Welfare	Topics consolidation
Governance	/	Corporate Governance	Newly added topics
	/	Risk Management	Newly added topics
	/	Tax-related Strategy	Newly added topics
	Business Ethics, Anti-Corruption	Business Ethics	Topics consolidation

Scope	Material topics for 2022	Material topics for 2023	Description of changes
Governance	Information Security	Information Security	Unchanged
	Digitalization	/	Deleted topics
	Controversial Procurement Green Supply Chain	Sustainable Supply Chain	Topics consolidation
	/	Sci-tech Innovation	Newly added topics



High materiality	Medium materiality	Low materiality
<ul style="list-style-type: none"> [17] Product quality and safety [18] Full product lifecycle management [7] Sci-tech innovation [19] Customer relationship management [9] Response to climate change [4] Business ethics [6] Sustainable supply chain [15] Talent strategy, training and development 	<ul style="list-style-type: none"> [14] Labor and human rights protection [1] Corporate governance [16] Occupational health and safety [5] Information security [20] Privacy protection [8] Environmental management system [10] Energy management [11] Water resources management [12] Waste management [2] Risk management 	<ul style="list-style-type: none"> [13] Biodiversity protection [21] Community contribution & charity and public welfare [3] Tax-related strategy

Sound Management

Adherence To Corporate Governance

Corporate Governance	25
Risk Management	27
Business Ethics	27
Information Security	29

PART 1



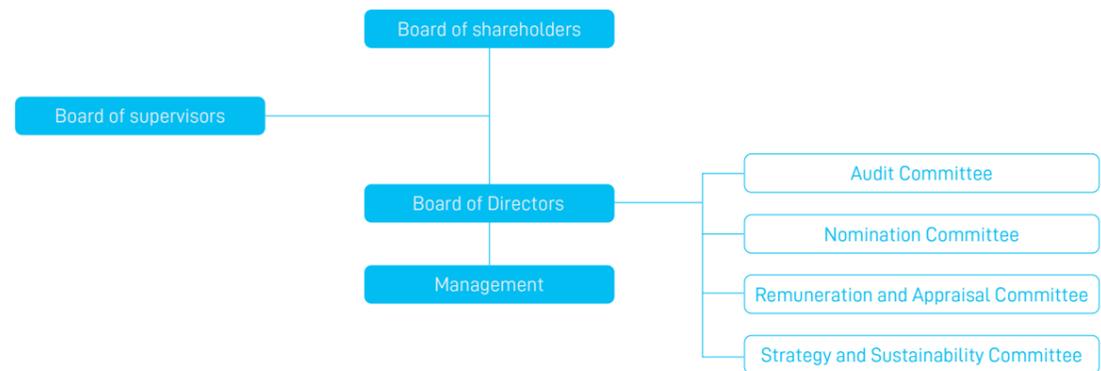
Corporate Governance

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)	Achievement in 2023
100% management members' remuneration linked to ESG Performance	100% of management members' remuneration are linked with ESG performance

In strict accordance with the Company Law of the People's Republic of China and other relevant laws and regulations, Astronergy constantly improves its governance system based on the reality. In October 2023, the Company completed the transformation of its shareholding system. It has developed a total of 17 systems, including the Articles of Association of Chint New Energy Technology Co., Ltd., Rules of Procedure of the Shareholders' Meetings, Procedural Rules for the Board of Directors, Procedural Rules for the Supervisory Meetings, and Work System for Independent Directors. In addition, the Company has established the governance structure of board of shareholders, Board of Directors and board of supervisors, and set up four specialized committees under the board of directors, i.e. Audit Committee, Nomination Committee, Remuneration and Appraisal Committee, and Strategy and Sustainability Committee in order to ensure scientific decision-making and improved corporate governance. From the shareholding reform to the end of the reporting period, the Company had conducted 2 board meetings with 100% attendance of all directors.

Company governance structure



By the end of the reporting period

the total number of board members was **9**, with **2** female directors, accounting for **22.22%**.

Of the board members, **3** were executive directors, **3** were non-executive directors and **3** were independent directors (**33.33%**).

Audit Committee: **3** members Remuneration and Appraisal Committee: **3** members

Nomination Committee: **3** members Strategy and Sustainability Committee: **3** members

Tax-related strategy

Astronergy's tax policy is consistent with corporate strategy and in compliance with business activities and value creation, contributing to social and economic development as well as corporate sustainability.

Pay tax according to the law

We comply with relevant tax laws, corporate management systems and operational norms of the countries or regions in which we operate to promptly pay tax with full amount in accordance with the law, strongly support national and local finances, promote community development and fulfill our social responsibility.

Fair taxation

We support the fairness and consistency of the tax system in the international community, follow the arm's length principle, never erode the tax base or shift profits, and establish fair, open and transparent communication channels with the tax authorities of the countries or regions in which we operate.

Compliance with evidence

We fulfill the code of business ethics, comply with the law, operate in good faith, support the improvement of tax transparency and employ true and complete tax-related information as support to meet regulatory requirements of tax authorities.

Tax policy

Controllable risks

We manage and control tax risks by improving effective internal control system and workflow, and make professional judgment based on adequate communication with tax authorities.

Governance infrastructure

A dedicated department has been established for tax management to engage in corporate strategic planning, investment and other major business activities, maintaining communication with the board of directors, the Supervisory Committee and other corporate governance teams as well as the management team and take timely countermeasures.

Management mechanism

In accordance with Special VAT Invoice Management Rules, Tax Risk Management Manual and other regulations and procedures, a close linkage working mechanism has been established between tax monitoring and business operations, ensuring tax management is integrated throughout the entire process (pre, during and post) of business operations.

Risk Management

Effective risk management is the key to corporate operations. Astronergy has developed the Risk Management Procedures, Hazard Identification and Risk Control Management System, Environmental Factor Identification and Evaluation System, Control Procedures for Social Responsibility Risk Assessment, Code of Business Conduct, Integrity and Compliance, Astronergy's Business Partner Code of Conduct and other ESG-related risk management documents to define the responsibilities of relevant department in risk management. Each department is required to identify, evaluate, manage and control ESG-related risks, and plan effective countermeasures, ensuring compliance with relevant laws and regulations while keeping risks under control. By the end of the reporting period, the Company had identified ESG-related risks and opportunities and developed corresponding mitigation measures. Risk management will be further improved.

case To address and mitigate social responsibility risks, the company conducts annual CSR training for all employees in every department.

Business Ethics

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)	Achievement in 2023
· Annually - Conduct business ethics audits of all manufacturing bases	· Since 2023, Astronergy has been progressively implementing a compliance management system to ensure compliance in its business and operations. Compliance risk assessment for Astronergy was completed in October 2023, and the risk assessment report and compliance risk control program were issued in November 2023; In addition, the ISO 37001 anti-bribery management system certification was launched in December 2023.

Emphasis on business ethics, Astronergy remains committed to creating a fair and efficient workplace. In this regard, the Company has issued integrity and compliance programs, including a Code of Business Conduct, Integrity and Compliance, and Astronergy's Business Partner Code of Conduct, setting forth standards of conduct for employees and business partners, respectively, to ensure all relevant personnel meet compliance and integrity requirements of business ethics.

Scope of the Code of Business Conduct, Integrity and Compliance

<p>Prohibition of improper behavior</p> <ul style="list-style-type: none"> Corruption Fraudulence Complicity Coercion Obstruction 	<p>Integrity and compliance</p> <ul style="list-style-type: none"> Corruption Donations and sponsorships Gifts and hospitality Conflict of interest Information management Sustainable interests for local communities 	
<p>Fair dealing</p> <ul style="list-style-type: none"> Anti-money laundering & anti-tax evasion Trade compliance & export controls Anti-trust & anti-unfair competition 	<p>Working environment</p> <ul style="list-style-type: none"> Mutual respect & diversity in the workplace Personal & privacy information Health, Safety & Environment 	<p>Asset</p> <ul style="list-style-type: none"> Insider trading Intellectual property rights Protection of electronic resources and cybersecurity

Astronergy has developed a Whistleblowing System to ensure the confidentiality of whistleblowers' identity, prohibit retaliation against any whistleblower and promptly review potential retaliation behaviors.

Whistleblowing channels

Hotline for compliance reporting: 0086-21-67777777-880080

Reporting e-mail address: compliance@chint.com

Reporting box: The Company has set up a reporting box labeled "Compliance", and the Compliance Department regularly collects the reporting documents in the box.

Other channels: Employees can opt for reporting channels at their own discretion



Anti-corruption & anti-bribery

The Company adopts a zero-tolerance policy towards all forms of corruption and prohibits all kinds of corruption. To create a clean and honest working environment, the Company has formulated the Anti-Corruption System as a guide to regulate employee behavior. Managers above supervisory level and key position holders shall sign off the Integrity Practice Commitment Letter. Meanwhile, for partners, the Company has developed the Anti-Commercial Bribery System, requiring all suppliers, distributors, agents and other units to sign off corresponding Integrity Commitment Letters.

Donations and sponsorships

The Company has established the Donation and Sponsorship System, detailing rules and procedures related to donations and sponsorships to mitigate relevant corruption risks. For political donations, the Company prohibits political contributions within China; For political donations at operating locations outside of China, the Company shall ensure that such contributions comply with local laws, regulations and prescribed disclosure and communication requirements. During the reporting period, we arranged no political donation activities at the corporate level.

Anti-money laundering (AML)

In compliance with all AML-related laws and regulations in the jurisdictions where it operates, Established Code of Business Conduct, Integrity and Compliance, the Company requires its employees to ensure their business transactions on behalf of the Company do not involve the acquisition, employment or possession of monetary proceeds or property derived from the proceeds of crime.

Anti-trust & Anti-unfair Competition

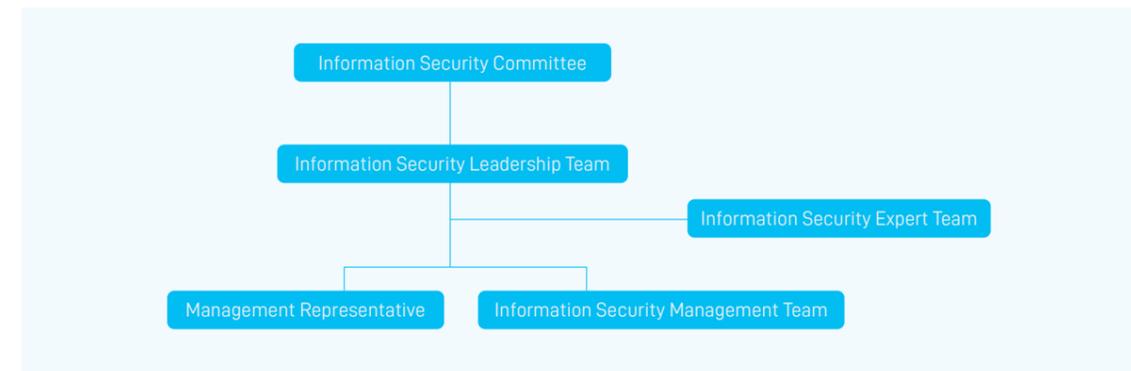
The Company is committed to practicing fair business practices in compliance with the anti-trust & anti-unfair competition laws of the jurisdictions where it operates. Established Code of Business Conduct, Integrity and Compliance. All employees are required to comply with corporate rules and to refrain from entering into competition-related oral or written contracts, discussions or agreements, either publicly or privately, with actual or potential competitors, and to avoid conspiracies or other misconduct.

Information Security

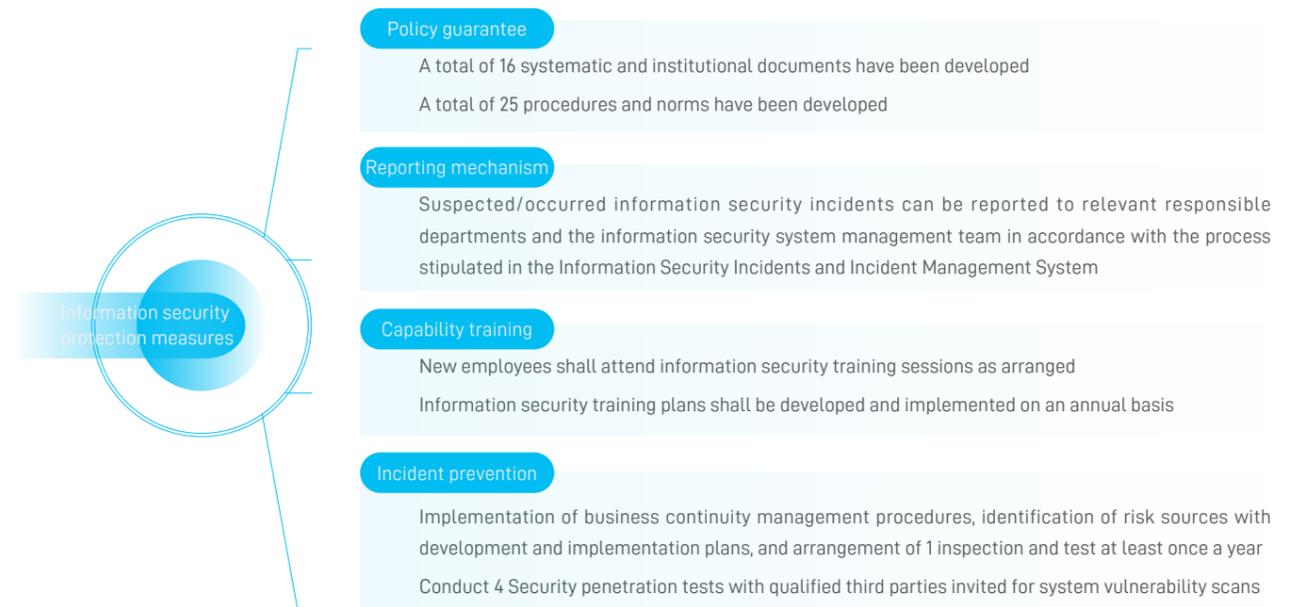
Digital transformation promotes agility and efficiency across management, production, and services, but it also brings about risks, whereby information security is of utmost significance. Recognizing the importance of information security protection, the Company has established organization of information security, formulated information security policy, and constructed ISMS with constant improvement. By the end of the reporting period, Chint New Energy Technology Co., Ltd., Chint Solar Technology (Yancheng) Co., Ltd. and Chint Solar (Haining) Co., Ltd. had obtained the certificate of ISO 27001 system authentication, with no relevant information security incident occurring during the reporting period.



ISO 27001 certificate



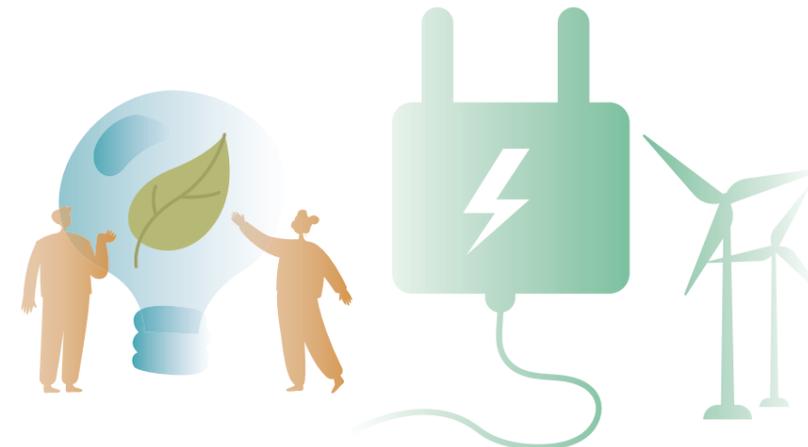
Organization of Information Security



Environmental Protection

For A Green Future

Response to climate change	33
Environmental Management System	36
Energy Management	38
Water Management	39
Waste Management	41
Biodiversity Conservation	42



Response To Climate Change

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)

- **30%** reduction on unit product carbon emission intensity (taking 2022 as the base year)
- with **8** factories achieving zero carbon emission
- **50%** reduction (Scope 1&2) on carbon emissions (taking 2022 as the base year)

Medium and long-term targets (By 2035)

- By 2035, operate in carbon neutrality
- By 2050, carbon neutrality across entire value chain

Achievement in 2023

- Carbon emission intensity per unit of production was reduced by **5.71%** in 2023 (taking 2022 as the base year)
- **1** factory (Astronergy Yancheng Base Phase I) achieved zero carbon emission



Emphasis on addressing climate change, Astronergy actively takes carbon reduction actions in real practice. In 2023, the Company established a Climate Change Management Team to ensure implementation of relevant programs. We have communicated the importance of carbon reduction across our plants through meetings, trainings, etc. to guide and support our employees to take effective measures in addressing climate change. Through zero-carbon factory construction, we constantly reduce carbon emissions from our production and operations. Astronergy Yancheng Base Phase I obtained Zero-Carbon Factory Certificate in 2023; During its construction, CO2 emissions were reduced by 42,221.37 tons, with renewable energy accounting for 69.61% of the total energy consumption, resulting in significant environmental benefits. In addition, a total of **571.84** tons of carbon emissions was reduced from Haining Base to Ningbo Port in 2023 through an optimized transportation scheme, including the adoption of additional water transportation and the reduction of container truck usage.

Case

We constantly reduce carbon emissions from our production and operations. Astronergy Yancheng Base Phase I obtained Zero-Carbon Factory Certificate in 2023; During its construction, CO2 emissions were reduced by 42,221.37 tons, with renewable energy accounting for 69.61% of the total energy consumption, resulting in significant environmental benefits.



Zero Carbon factory



We identify potential climate risks and opportunities in operations and productions based on the TCFD's risk analysis framework, and evaluate the risks and opportunities for identification by frequency and severity, with a commitment to incorporating them into our overall operational risk management.

Identification of climate-related risks

Transformation Risk

Policy and law

Details

We closely track existing and emerging laws, regulations and policies regarding the climate, in particular assessing their impact on our climate-related strategic objectives.

With the successive release of ambitious carbon neutrality targets and the implementation of more stringent climate-related policies at home and abroad, such as the Carbon Peaking Action Program by 2030 and the Guidelines for the Construction of the Standard System of Carbon Neutrality and Carbon Peaking, more stringent requirements have been imposed on enterprises for green and low-carbon development, especially laws and regulations relating to carbon markets, product carbon footprint, carbon tariffs, and renewable energy. Among them, the carbon market price mark-up, the implementation of carbon tariff regulations in various countries, and the government's potential intensification of supervision on energy-intensive industries, all may result in increase in enterprises' purchase and operation costs. In addition, the EU has issued the Corporate Sustainability Reporting Directive (CSRD), requiring eligible entities to disclose reports on non-financial matters involving the environment, society, etc., and the Corporate Sustainability Due Diligence Directive (CSDDD) and other relevant laws. These laws may affect the Company's market access in Europe and present a certain compliance risk.

Response

Astronergy meticulously practices the carbon footprint management system and systematically plans the review of the emerging green standards at home and abroad, assesses the environmental impacts of products and their value chains through product life cycle assessment (LCA). It evaluates or compares the environmental impacts of products and the related costs in a more objective way, from the procurement of raw and auxiliary materials to production, use, and ultimate disposal and recycling at the end of its useful life, providing a path for improvement of green products. We regularly monitor the legal risks associated with climate change, closely track the legal and regulatory requirements at home and abroad, and plan in advance to meet compliance requirements.

Technology

Details

The rapid iteration of photovoltaic technology, such as new cell technology, high-efficiency module design, intelligent manufacturing, may cause Astronergy's existing production lines obsolescent, make its R&D investment risk increase, competitive market advantage weakened.

Response

Expand R&D investment, focus on the R&D and industrialization of next-generation PV technologies, carry out in-depth technical cooperation with universities, research institutes, and industry chain partners to ensure technological advancement; develop technology roadmaps, assess the market potential, technical maturity, and investment returns of different technology routes, and make risk-dispersed investment decisions; accelerate the conversion of experimental results into mass-production, and strengthen the layout and protection of intellectual property rights.

Market

Details
The policy orientation and market outlook related to renewable energy development is one of the important basic elements in assessment of climate-related market risks. There are potential risks in reduced renewable energy subsidies in local markets, increased difficulty in supply chain traceability requirements, increased costs of low-carbon raw materials (e.g. biodegradable packaging, green shipping, etc.), and customer demands for carbon reduction in products.

Response
We cooperate with the various stakeholders including local governments and large energy companies to actively promote renewable energy development projects. We have been building a supply chain traceability system, improve the carbon footprint management system of products, and continuously improve the core competitiveness of products.

Reputation

Details
Astronergy's reactions on climate change issues may affect stakeholders' demand for the company's products, and customers are more likely to prefer products from companies that take positive action on climate change and perform well.

Response
Astronergy announces its commitment to join the Science-based Targets Initiative (SBTi), the UNGC Forward Faster initiative, as well as the Solar Stewardship Initiative (SSI), the China Corporate Climate Action (CCCA) and other international organizations, in order to hold itself to a higher standard of carbon reduction, and announces the realization of carbon neutrality throughout the value chain by 2050. In addition, Astronergy places full emphasis on the value of social opinions and goodwill, and has obtained a number of ESG awards issued by the media.

Physical risk

Acute physical risks

Details
Astronergy's production bases located in coastal areas may be subject to extreme weather events such as typhoons, rainstorms, and flooding, which may result in production disruption, equipment damage, and personnel safety risks.

Response
Astronergy establishes an emergency plan against typhoons and flooding, and allocates emergency supplies for potential extreme weather risks.

Chronic physical risks

Details
Rising sea levels may force Astronergy to relocate facilities at its coastal bases in the long run; and high temperatures in the summer and snowstorms in the winter may affect the transportation efficiency of raw materials and increase energy consumption, which in turn may affect production costs and stability.

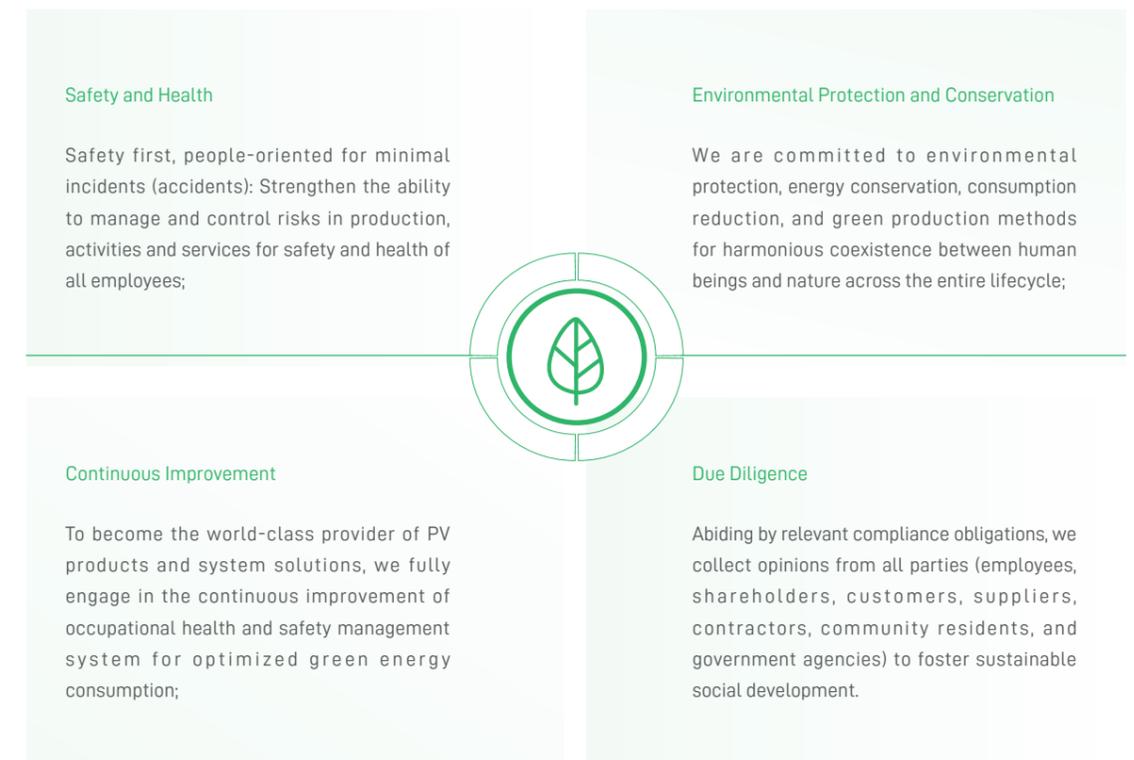
Response
When building or expanding production sites, we take into full consideration long-term climate change scenarios, choose geographic locations with lower climate risks, or make adaptative renovation at existing sites; diversify raw material sources, optimize inventory management, and adopt flexible logistics solutions to reduce the impact of extreme weather on the supply chain.

We have established a climate change risk management system, and the Board of Directors has appointed a dedicated ESG responsible person for monitoring risks in this regard, including regular monitoring of climate change risks for comprehensive and long-term responses from the Company. As the execution department, EHS is responsible for establishing a corporate emergency response plan, arranging regular training plans, organizing and implementing special weather inspections, organizing dedicated emergency drills, etc., so as to mitigate the negative impacts from extreme weather events.

Looking ahead, we will develop climate change-related policies linked to the performance of executives (board members); further break down the eight climate risks to integrate them into the overall management; and guide corporate business strategy via scenario analysis for greater climate change-related development opportunities.

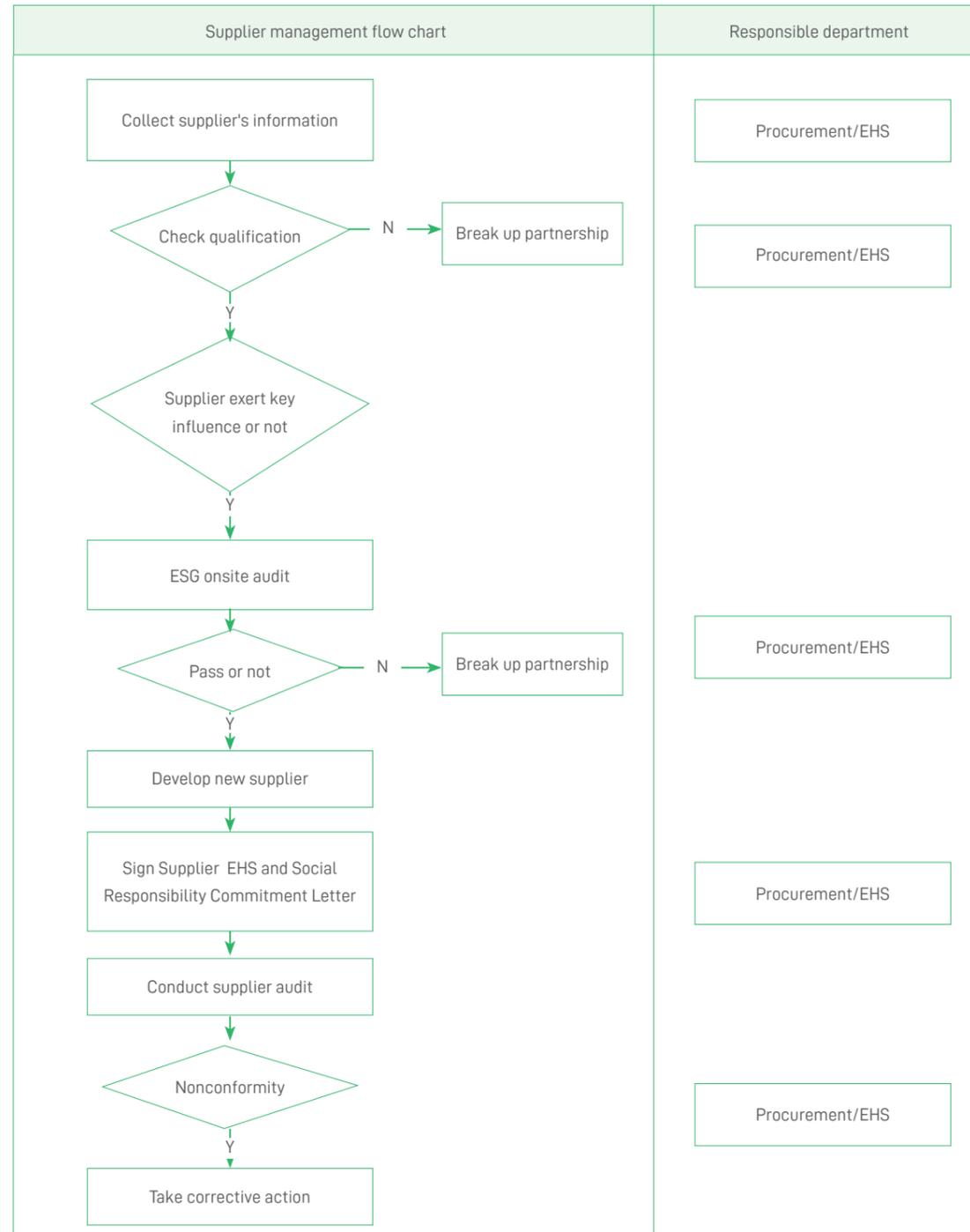
Environmental Management System

Adhering to the pollution control principle of "Environmental Protection and Conservation", Astronergy is committed to environmental protection and energy conservation throughout the product life cycle by advocating the green production model where human beings and nature coexist harmoniously. Astronergy regulates the sewage system based on the existing EHS management system and internal environmental management system for harmonious coexistence between production and resources & environment. By the end of the reporting period, the production bases in Haining, Yancheng, Jiuquan and Thailand had all obtained ISO 14001:2015 environmental management system certification. No environmental violations occurred within the report period. We have defined our EHS policy as "Safety and Health, Environmental Protection and Conservation, Continuous Improvement, and Due Diligence" with a clear and in-depth meaning to guide the future direction of EHS management.



During the reporting period, we revised the EHS Management System for Related Parties to improve EHS management tools for individuals and groups in the workplace who are related to or affected by occupational health, safety and environmental performance. The system clarifies corresponding responsibilities of each department within the Company and sets out management processes for suppliers, government departments, contractors, lessees, visitors and other related parties in terms of their respective influence.

EHS management flowchart for suppliers



Energy Management

Astronergy's Targets In Sustainability Strategy

<p>Short-term targets (By 2028)</p> <ul style="list-style-type: none"> 50% of operation electricity is renewable energy 	<p>Achievement in 2023</p> <ul style="list-style-type: none"> Renewable energy in Jiuquan base accounted for 48%
<p>Medium-term targets (By 2035)</p> <ul style="list-style-type: none"> 100% operation electricity is renewable energy 	

Focusing on energy conservation and emission reduction, Astronergy actively improves energy efficiency by constantly optimizing energy efficiency and exploring and implementing energy-saving projects for optimized energy consumption. An Energy Conservation Working Group has been established based on such internal management documents as Energy Management Standards, Energy Measurement Management Target Setting, and Implementation of Energy Measurement and Management System in order to promote and implement national policies, laws and regulations on energy, and take the lead in formulating energy conservation guidelines, energy conservation blueprint, and energy conservation targets. By the end of the reporting period, all plants of the Company had been certified by ISO 50001:2018 system certification.

During the reporting period

<p>31 energy conservation and emission reduction cases</p>	<p>cost reduction 22120.8 thousand CNY</p>	<p>annual saving of 2708.47 tons of standard coal</p>
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case
Air Compressor Heat Recovery Retrofit Project of Haining Solar Phase III

The project was to reduce the power consumption of the original ultrapure water electric heating hot water machine by ensuring waste heat recovery transformation of Chint Solar (Haining) Phase III 5 centrifugal air compressors of the third phase of solar energy and the transformation of the end-end heat application system of the production workshop, so that the recovered and transformed compression heat is adopted for the ultrapure water preheating of texturing, alkali throwing, RCA and boat room sections in the PV cell workshop. The renovation project can save 20,000 kWh of electricity per day when completed.



Air-compressor waste heat recovery device

case
Pure water station gutter drainage addition of Haining Solar Phase III inline gravity flow piping renovation

The drainage of the pure water station's underground ditch is mainly ultrafiltration backwash drainage. Normally, after being discharged into the ditch, it is lifted to the wastewater station through an end lift pump for discharge. Through the renovation of the gravity flow discharge pipeline, the power consumption of the end lift pump can be saved. 14,600 kWh of electricity can be saved on an annual basis after the renovation is completed.



Installation of ultrafiltration drain

Water Management

Astronergy's Targets In Sustainability Strategy

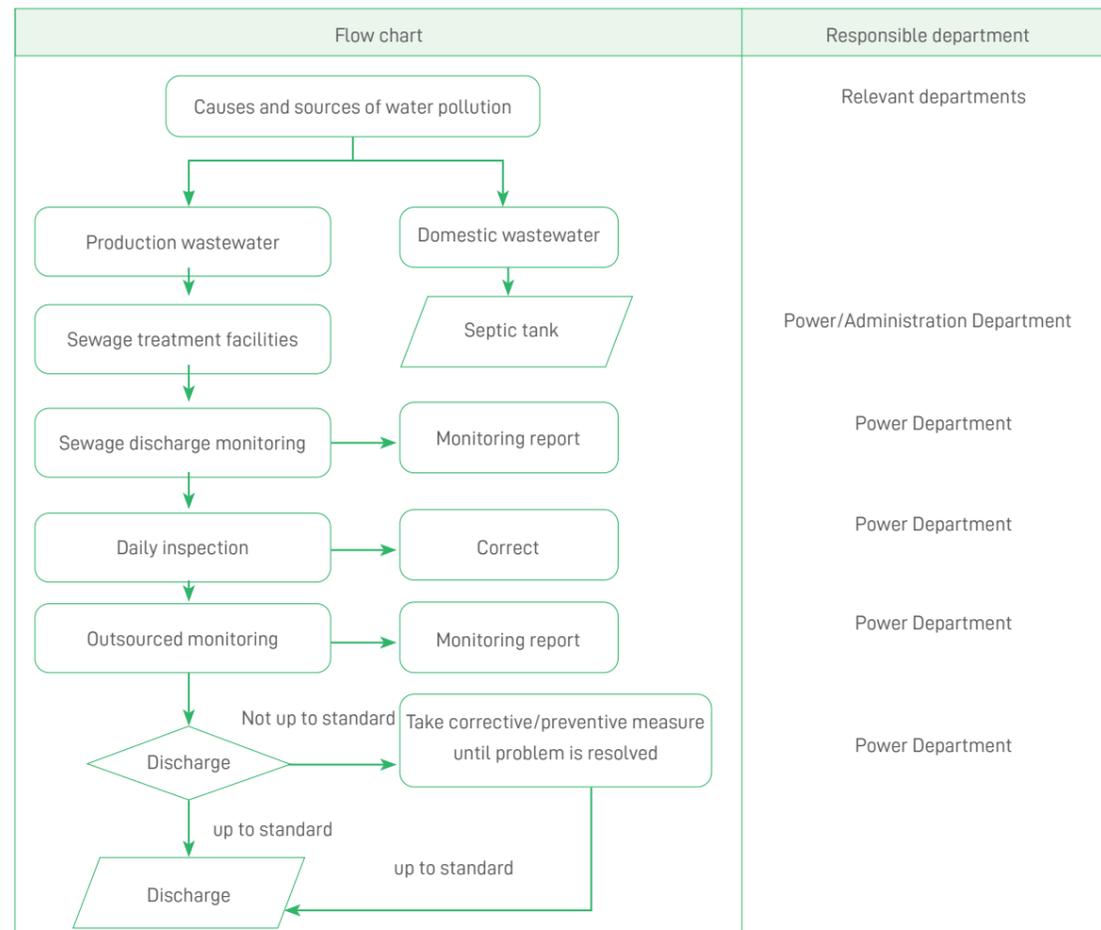
Medium and long-term targets (till 2035)

· **50%** reduction on unit product water consumption intensity (taking 2022 as the base year)

Achievement in 2023

· Expected reduction in water consumption intensity per unit of product: **25.43%**

Focusing on water resource management during production and operations, Astronergy has been remained committed to improving the efficiency of water resource utilization for reduced negative impact of corporate operations on local water resources. During the reporting period, the Management System for Prevention and Control of Water Pollution was revised to clarify management responsibilities of all relevant departments. The regulations stipulate that the EHS Department shall update the list of water pollution sources at least once a year, and the list of pollutant discharges includes waste-producing areas, names of pollutants, main pollution plants, pollution control facilities and discharges direction. Meanwhile, water pollution control and water pollution monitoring are in place according to relevant state regulations and requirements of the environmental protection authorities.



case

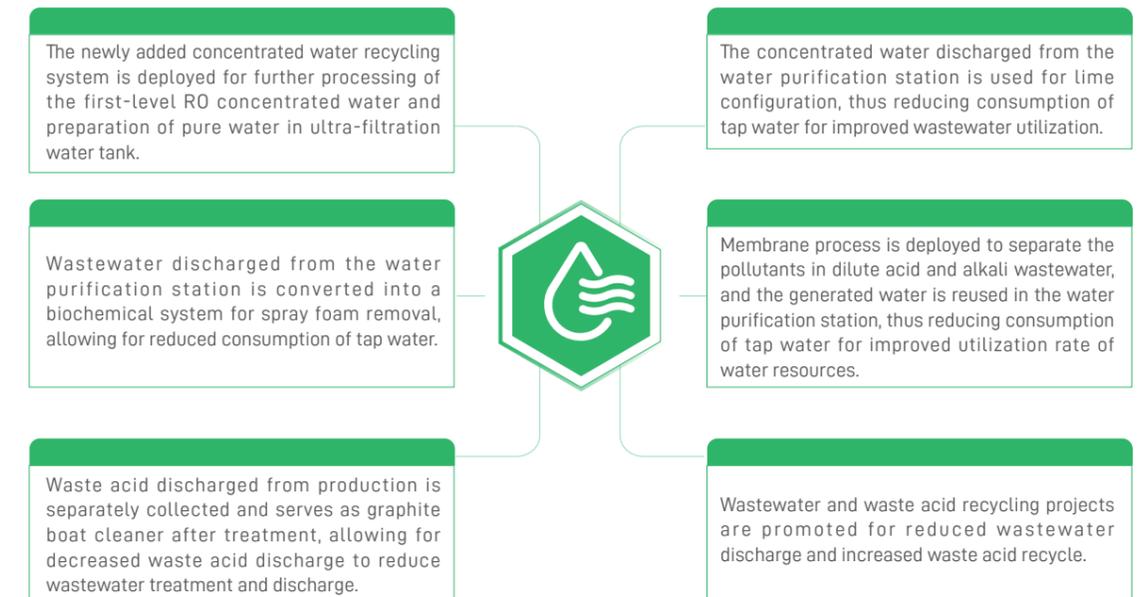
The fresh air conditioning unit generates a substantial amount of condensate during cooling. By connecting the original condensate discharge pipeline to the cooling tower and utilizing the original lifting pump to lift it to the sedimentation tank of the cooling tower before entering, the renovation can save 69,000 tons of tap water annually.



Reconnected to cooling tower make-up water tank

Ensure proper functioning of water supply system by conducting regular pipeline testing and assessing water supply loads. During the reporting period, over 31 energy conservation and consumption reduction projects were implemented, including waste heat recovery, adjustment of processes to reduce the use of consumables, etc., involving electricity and water saving, reduction in the use of air-conditioning filters, sewage chemicals and other consumables. Cumulatively, 15,768,400 kWh of electricity and about 69,000 cubic meters of water were saved with roughly 1,212,900 CNY in reduced consumables usage throughout the year.

Highlights of water conservation initiatives



In 2024, Astronergy will implement a power technology reform review system to review water conservation and emission reduction projects, and roll out green and sustainability projects of value across all bases. Meanwhile, technical assessments will be performed on potential and industry-wide energy-saving projects (e.g. ammonia reuse, hydrofluoric acid reuse, and water reuse), and relevant bases will be selected for pilot and further roll-out.

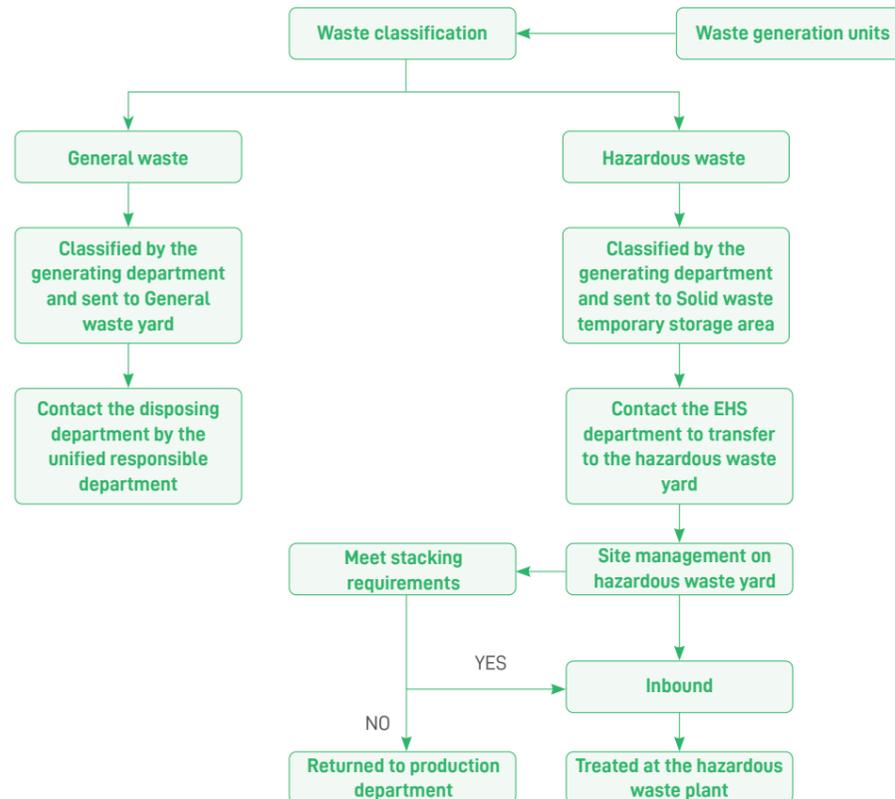
Waste Management

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)	Achievement in 2023
0% landfill waste	No waste for landfill

The Waste Management System, as a management requirement and method for classification, declaration, collection, transportation, storage, disposal, etc. of waste generated during corporate production and operations, was revised during the reporting period. This revision ensured a comprehensive review of common categories of general waste and hazardous waste, temporary storage locations, and disposal parties, while defining the responsibilities of each department under waste management.

Amongst all, the EHS department is held accountable for revising this procedure in accordance with changes in relevant national laws and regulations and ensuring its effective implementation; declaring the hazardous waste management plan for online declaration of hazardous waste transfer and hazardous waste disposal & management; training on waste management, on-site supervision of waste dumps and label management; and providing technical support and consultation on the implementation of and guidance on regulatory compliance with national laws and regulations as well as on corporate policies and standards, etc.



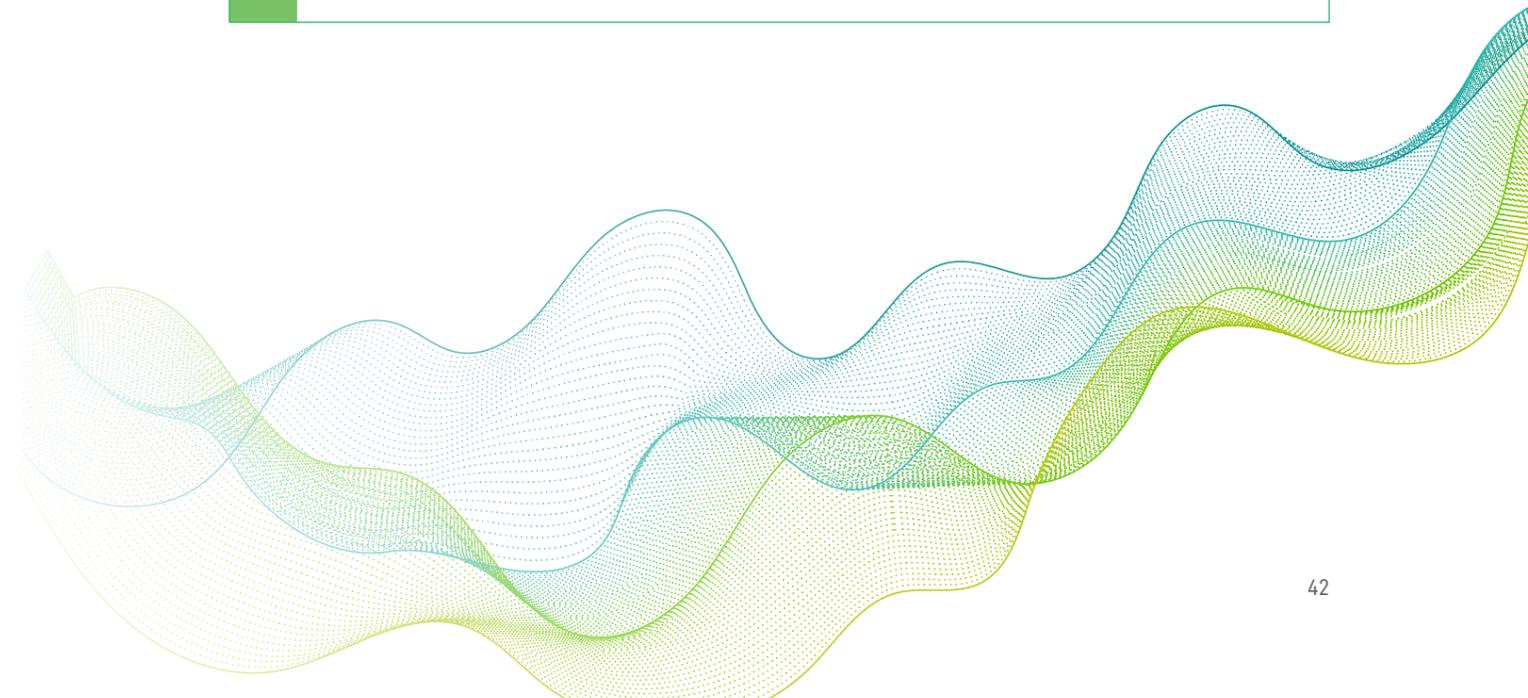
Biodiversity Conservation

The Company and all its operation sites are not located in or adjacent to environmental sensitive areas, the environmental impact during production and operations is under control, and the impact on biodiversity is negligible.

case

assisting in implementing the PV self-cycling replenishment system of electric vehicles

In 2023, the Electric Vehicle Energy Self-Cycling System for Qilian Mountain National Park, jointly sponsored by NIO, One Planet, and Astronergy, was inaugurated. This set of energy self-cycling system composed of PV power stations, V2G two-way charging piles and electric vehicles will ensure clean and low-carbon ecological patrol and energy consumption in Qilian Mountains National Park and conservation areas, promoting green and low-carbon development of national parks.



Employee Care

For A Harmonious Society

Protection Of Labor And Human Rights	45
Talent Strategy, Training And Development	51
Occupational Health And Safety	54
Community Contribution & Charity And Public Welfare	58



Protection Of Labor And Human Rights

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)

- **85** or higher - Employee satisfaction score
- **15%** or lower - Technical talent turnover rate per year

Achievement in 2023

- Employee satisfaction score at **83.78**
- Technical talent turnover rate at **6.85%**

Medium and long-term targets (till 2035)

By 2035,

- **40%** - Female employee proportion
- **30%** - Female senior management staff proportion
- **30%** - Female technician proportion

- Proportion of female employees at **32%**
- Proportion of female managers at **21%**
- Proportion of female technicians at **30%**



Full protection of employees' rights and interests is not only required by law, but also the cornerstone of building healthy employment relationships, having a positive impact on long-term development of the Company. Focusing on labor rights and interests, Astronergy protects human rights of employees while adhering to the employment principles of fairness, justice and openness, with a commitment to building a competitive compensation and benefit system. Meanwhile, we have arranged various communication channels for a workplace demonstrating equality, diversity and harmony.

Equal employment & human rights protection

We respect and safeguard human rights. In compliance with the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China and other domestic and foreign labor-related laws and regulations across all corporate operation locations, we adhere to the principles of fairness, justice and equal competition, and do not allow discrimination on the basis of race, social status, nationality, ethnicity, age, religion, union membership, marital status, etc. Production bases or sales companies at home and at sea all recognize and uphold internationally acknowledged human rights. We will notify employees at least 30 days in advance of major operational changes that might cause a significant impact, and relevant trade unions will be provided with prior justification for such changes. We provide all security personnel with training on human rights to ensure they are well-informed about human rights and avoid potential risks of excessive use of force. During the reporting period, all security personnel attended human rights-related training.

We have formulated the Social Responsibility Policy of Chint New Energy Technology Co., Ltd., Anti-Discrimination, Anti-Harassment and Anti-Forced Labor Management Procedures, and Regulations on Prohibition of Child Labor in accordance

with actual operation situations to avoid abuse of all human rights, such as discrimination, harassment, forced labor and child labor in employee recruitment and daily work. During the reporting period, no employment incidents of discrimination, harassment, forced labor or child labor occurred.

We respect employees' freedom of association and negotiation rights by establishing a labor union, formulated the Employee Freedom of Association Policy and the Freedom of Association and Collective Negotiation, and never interfering with their rights of freedom of association and collective negotiation when off duty. All corporate bases have signed written agreements through collective negotiation on such matters as labor compensation, working hours, rest and vacation, and wage negotiation.

We care about employees' families by organizing summer camps and study activities for their children to ensure safe and happy summer holidays. During the reporting period, the return and retention rates for female employees after parental leave was 93.97% and 91.38% respectively, while both the retention and return rates for male employees after parental leave were 100%.

case

Union of Little Kids, Powered by PV | Summer Parent-Child Study Activities at Astronergy Bases

On September 2, summer parent-child study activities at Astronergy bases were successfully completed. Nearly 100 employee families got access to the smart factory to explore the mysteries of PV/solar modules. The kids visited the production line and learned about PV to picture its future, awarded the certificate of Future PV Creators. Astronergy not only encourages youngsters to get inspiration from the clean energy sector for addressing climate change, but also provides a platform for employee families to engage in activities that strengthen parent-child relationships.



case

Summer Camp for Little Migratory Birds

From July 17th to 21st, "Little Migratory Birds" played games with their parents to embrace Astronergy's first Summer Camp for Little Migratory Birds. This week-long summer camp was freely open to all employees, with a total of 28 participating kids, covering summer homework tutoring, art, sports, handicrafts, etc. to ensure a safe and happy summer holiday for all.



Diversity, Equity and Inclusion

We respect diverse backgrounds and experiences of employees by encouraging employees of different genders, ages, races, and cultural backgrounds to join the Company, and establishing policies on recruitment, promotion, compensation and benefits to ensure Diversity, Equity and Inclusion (DEI) across the organization. During the reporting period, Astronergy's regular employees came from 38 countries, covering 42 nationalities with different cultural background, and the Company was awarded DEI Employer® Awards for 2023 by the Employer Branding Institute, an authoritative organization in the field of global employer branding research, recognizing DEI efforts of the Company.



Gender diversity

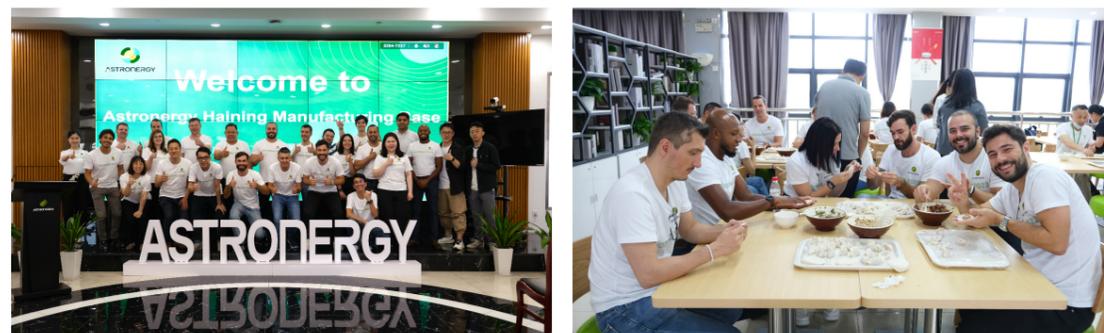
We respect and attach great importance to the role of female employees as always. We strive to protect the rights and interests of female employees, and implement the Law of the People's Republic of China on the Protection of Women's Rights and Interests and other relevant laws and regulations, to ensure proper protection of working mothers' legitimate rights and interests. In addition, we have set up mother-baby rooms and offered breastfeeding leave to support working mothers. Moreover, the Company has set up a Women's Union and Women Workers' Committee to organize training for women workers in business and other aspects for improved business ability, while catering to women workers' needs in both work and personal life to bring the best welfare for our female employees.



Activities on International Women's Day (March 8)

Cultural integration

We advocate cultural integration through ongoing Homing Activities, inviting overseas colleagues to China for systematic and professional training, in-depth communication with local colleagues across various departments, and immersive experiences of Chinese customs and traditions, thus promoting close communication between domestic and overseas employees.



Employment of the disabled employees

We support the employment of the disabled and instill a mindset of inclusiveness for disabled employees. During the reporting period, 29 disabled employees were employed.

Democratic communication

We listen to every employee's voice and encourage them to reasonably express their demands and suggestions. We constantly improve relevant management systems, establish a Staff Council System and hold at least one staff representative assembly every year to guarantee employees' democratic rights; We arrange quarterly staff interviews and collect employee feedback through various channels for improved communication. Employees are encouraged to feedback through channels such as the General Manager's mailbox, the Chint Flying News online Complaint & Help Desk, and local Complaint & Help hotlines. We investigate employees' satisfaction through interviews and online questionnaires to understand their thoughts and demands regarding the Company. In 2023, employee satisfaction scored at 83.78, maintaining an upward trend for three consecutive years.



Diversified communication channels

Pays and benefits

We have formulated a Compensation and Benefit Management System and constantly improve the compensation and benefit packages of employees every year according to internal and external changes, providing competitive salaries for employees and granting bonuses based on performance appraisal results to encourage their initiatives. We regulate employment management, reward every hard-working employee, and provide welfare benefits to alleviate employees from any potential concerns. We care about our employees by organizing sports events, festivals, and team-building events during leisure time to ensure work-life balance.



Long Service Award



Diversified employee activities

Insurance coverage

The Company covers social insurance and employer's liability insurance for all contractual employees

Haining employees are entitled to insurance of major diseases fully covered by the Company

Recognition & reward

We organize evaluation of outstanding employees and grant bonuses every year

Individual prizes are available for employees who have proposed reasonable suggestions, published papers, obtained patents, etc.

Various subsidies

We provide welfare subsidies in terms of meals, communication, accommodation and transportation, high-temperature support, etc.

Subsidies are paid to employees based on service age, position, working hours, job skills, etc.

Holiday benefits

Additional leaves are available such as seniority leave, senior parent companion leave, and breastfeeding leave

Festival benefits

Talent Strategy, Training And Development

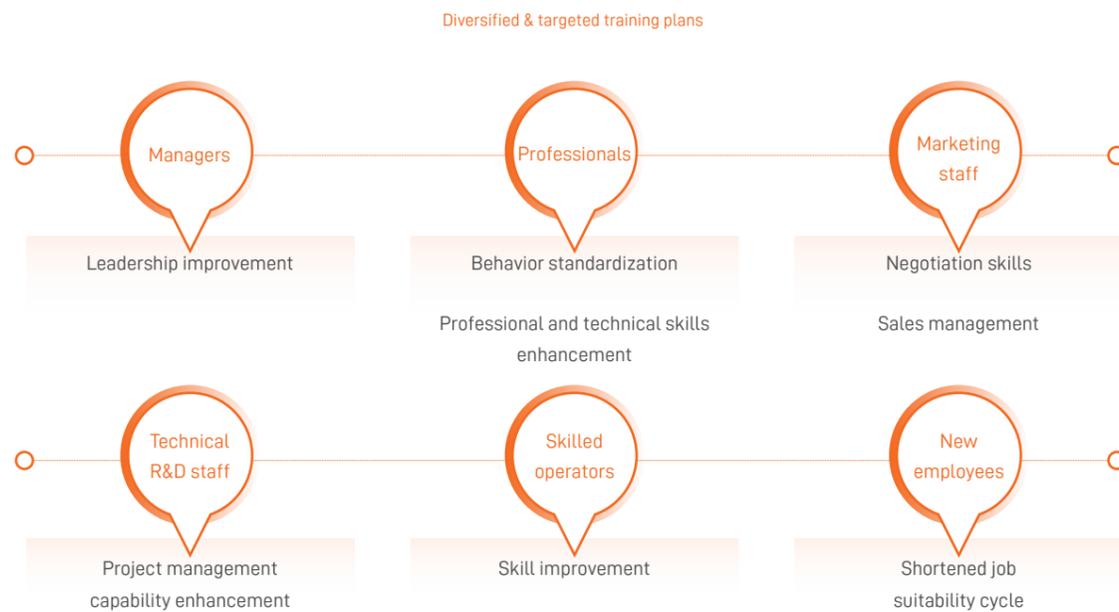
Astronergy's Targets In Sustainability Strategy

Medium and long-term targets (till 2035)	Achievement in 2023
· 1,000 employees get supports for continuing education and improving academic qualifications (taking 2022 as the base year)	· A cumulative total of 158 employees received support by the end of the reporting period

Astronergy is committed to employee training, aiming to help employees improve their professional abilities and continue to instill vitality into the Company for sustainable development. We have built a broad career development platform for our employees, providing them with an unimpeded dual-sequence career development path through carefully planned and diversified training programs to ensure individual growth.

Employee training

Focusing on the cultivation and development of talents and in view of our business and job characteristics, we have developed differentiated training programs and organized various training programs for employees to meet their professional needs and career development aspirations for their improved overall capacity. In addition, skill competitions are arranged to improve their business skills via real-time practice. We also support employees' continuing education. By the end of the reporting period, a cumulative total of 158 employees had advanced their academic achievements with our support.



Type	Education objective	Project name
Leadership cultivation	Leadership advancement for middle and senior managers	Carbon Explorers NEW Employees
	Competency development of reserve managers	New-Star Special Training Camp
Further professional training	Vertical development of professional competencies and qualifications	HERO Program
	Professional training	Knowledge-Prone Class Barrier Removers
On-site operation	On-site management for frontline employees	Operational skills upgrade
		Shift Leader in Action + Skilled Workers
Entry-level compulsory program	Career transfer, cultural integration, and basic skills	PV Youngsters + Four-Party-Enabled

Leadership programs provided by external parties, in-house professional programs, and multiple learning channels

Talent team construction

case Employees' Library at Jiuquan Base

The Employees' Library facilitated by the trade union at Chint New Energy Technology (Jiuquan) Co., Ltd. is equipped with nearly 2,000 books and subscribes to 10+ kinds of magazines and newspapers covering a wide range of fields for casual reading. Employees' Library, as the platform for employees to learn and grow, was recognized as the demonstration site for Employees' Library in Jiuquan City in 2023.



Skills competitions

Employee development

We have developed the Job Qualification Management and Cadre Management System to clarify the evaluation requirements of each job grade, providing a transparent, clear and definite dual-channel for career development and ensuring fair promotion opportunities for all. The results of each promotion will be fed back to employees, enabling them to make timely adjustments to their career planning; If the employee disagrees with the result, he/she can make a complaint in time. We value employees' diversified development needs and encourage multi-dimensional development. Employees can apply for a change in their career growth according to their own development plan to transition to a more suitable position. We have developed Job Rotation Management for management positions and management trainees, enhancing their comprehensive understanding of business acumen and strengthening their ability in analyzing and judging global issues to cultivate multi-functional and all-round employees and management backbones.

Dual-channel career development

Management channel	Professional channel			
Management series	Professional series	Marketing series	Technical R&D series	Skills and operation series
General Manager			Expert level	
Director			Senior level	
Manager			Premium	
Executive			Intermediate	
-			Primary	
-			Assistant-level	

Based on Performance Management, we regularly evaluate the performance of our employees in line with the principle of "fairness, justice and openness" to assess the personal ability of employees and communicate with them frequently for mutual contribution to the process. After obtaining assessment results, we will formulate individual development plans to assist employees in planning their careers and provide a solid basis for training course planning.

Occupational Health & Safety

Astronergy prioritizes the health and safety of its employees in plant management, aiming to create a healthy and safe working environment for them. The Company sets health and safety targets on an annual basis, with all Occupational health-related performance targets accomplished in 2023 and there are no serious injuries, more serious accidents, or occupational disease cases.

No.	Target value for 2023	Achievement in 2023	Target value for 2024
1	Accident rate of minor injuries $\leq 2.3\text{‰}$	Accident rate of minor injuries $\leq 1.23\text{‰}$	Accident rate of minor injuries $\leq 1.8\text{‰}$
2	4 EHS culture events every year	100%	100%

Occupational health & safety management

In accordance with the Law of the People's Republic of China on Work Safety, 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 EHS Management Manual, EHS Management Committee System, EHS Accident Investigation Management System, Occupational Health Management System and other regulatory documents, applicable to the Company and all its subsidiaries. We have developed the EHS policy of "Safety and Health, Environmental Protection and Conservation, Continuous Improvement, and Due Diligence", and established an occupational health and safety management system that covers all employees and conforms to the international standard of ISO 45001. We have set up an EHS committee, appointing employees at the director level or above as the person in charge, established a refined EHS management network, set up an EHS executive committee and an EHS management network team, and appointed safety officers in each department to take responsibilities of EHS work, striving to improve the safe production environment. We are equally concerned about the health of related parties, and have developed the EHS Management System for Related Parties to ensure the safety of contractors, suppliers, and residents of local communities. In terms of the health of female employees and underage workers, we have developed the Labor Protection Management System for Female Employees and Underage Workers to ensure comprehensive protection. By the end of the reporting period, all production bases of Astronergy had obtained authentication certificates of ISO 45001:2018 Occupational Health and Safety Management System.

Hazard identification, assessment and incident investigation

To identify hazards and mitigate safety risks in a more comprehensive and effective way, we have consolidated the List of Key Hazards in accordance with the Hazard Identification and Risk Control Management System, ensuring annual evaluation and updating. We rate identified hazards into various grades and implement appropriate control measures according to risk nature for reduced potential production safety risks. We will also re-identify and update the list of hazards when significant changes take place in corporate operational activities or related laws and regulations. Employees are encouraged to report occupational health risks and safety hazards identified during the Safety Whistleblower program. We also value employees' rights to work in a safe and healthy environment by creating workplaces that prioritize safety.

To promptly address occupational health and safety accidents, we have formulated and implemented emergency plans such as the Special Emergency Plan for Occupational Disease Hazards and Accidents, and established an emergency command structure to ensure the availability of on-site first aid supplies and equipment, striving to respond to such accidents in a calm and organized manner; Following such accidents, we will establish an accident investigation team based on the internally formulated Accident Investigation Management System to identify its root cause, take preventive measures to avoid similar accidents, and supervise the implementation of corrective actions.

Occupational health and safety protection

For positions prone to occupational health and safety risks, we provide labor protective equipment for relevant employees, install safety testing systems, ventilation systems and other safety devices, inspect and maintain equipment on regular basis to mitigate potential risks and hazards, and instruct and require employees to utilize safety equipment and operate equipment in accordance with operational specifications. We organize regular medical examinations and provide employees with occupational health checks before, during and after taking the job to ensure their health throughout the working cycle. Meanwhile, we provide employees with workplace injury insurance and group accident insurance to ensure medical and health protection is available just in case. In addition, we care about employees' physical and mental health. In 2023, we built the Staff Home at Astronergy's Haining Campus, providing a dedicated space for individuals to improve their physical fitness and unwind after a hectic day. Furthermore, we have arranged a group exercise punch card activity to encourage employees to engage in regular physical activity while offering mental health seminars to guide our employees in managing their emotional stress.



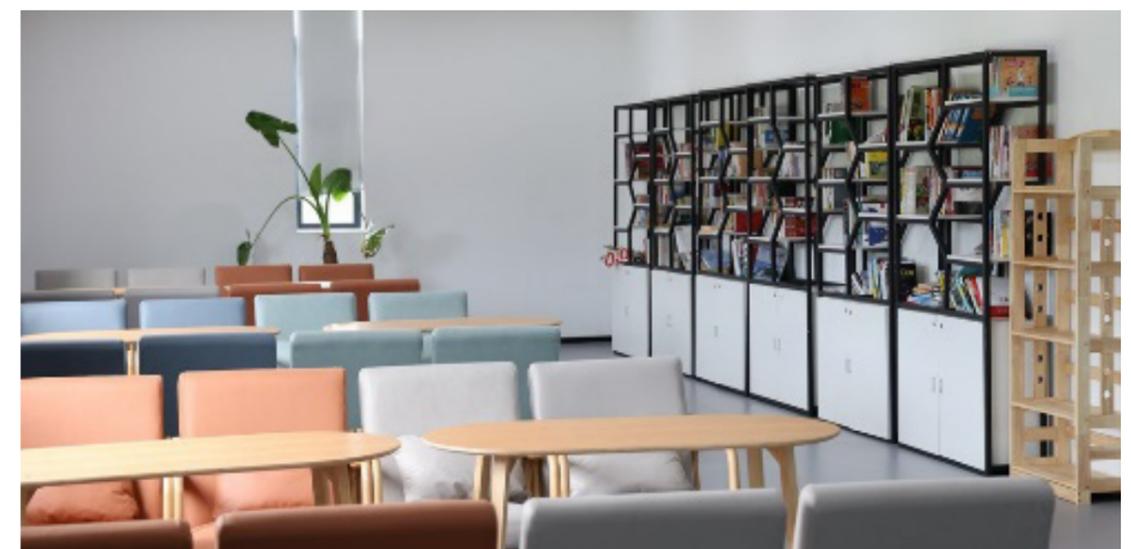
Staff Home



Mental health seminar



Sports field



Reading room

Occupational health and safety education

Safety education serves as an important protection for employees' health and safety. We have developed the EHS Training Management System, established and enhanced the EHS training system, provided training materials, and organized training activities to improve employees' safety skills and awareness. We are equally concerned about the health and safety of external parties and conduct irregular EHS training sessions for contractors' personnel. For enhanced safety awareness of employees and improved self-rescue capabilities in emergencies, we have drafted EHS emergency drill plans according to the characteristics of production activities, simulating accidents such as fire and explosion accidents and leakage of hazardous chemicals during production while inviting relevant departments to participate in these emergency drill activities. During the reporting period, we conducted a total of 675 EHS safety training sessions with a cumulative total of 18,666 participants, and 86 emergency drill activities with a cumulative total of approximately 3,790 participants.



Community Contribution & Charity And Public Welfare

Astronergy's Targets In Sustainability Strategy

Medium and long-term targets (by 2035)

A cumulative total of **100** ecological power stations - Desert PV, agricultural PV, tidal PV and fishery PV complementary projects get supports (taking 2022 as the base year)

Achievement in 2023

Accumulatively **17** project cases were carried out



Engage actively in public welfare initiatives and fulfill social responsibilities to enhance the Company's positive public image. Astronergy undertakes social responsibility by putting its expertise into full play to participate in community and charity activities and create greater social value based on commercial value. During the reporting period, the Company spent a total of CNY 15,336,900 on public welfare activities.

Community involvement

Astronergy is actively involved in community welfare activities and all employees are encouraged to get engaged in community volunteer activities.

Engagement in community activities in 2023:

- In June 2023, corporate volunteers were enrolled in the fifth Chao Yuan Academy and the Summer Camp for Little Migratory Birds of 2023 in Huangwan Town.
- In June 2023, anti-fraud education sessions were delivered with local communities to elaborate on how to disentangle from telecommunication network-related fraud.
- In September 2023, a fun run activity with the theme of "Welcome the Asian Games for a Prosperous Future" attracted volunteers from the Wutong Yayuan Talent Residence of the Jinniu Community.
- In September 2023, the Company arranged activities in local communities to set up a platform for interaction between the community and corporate workers, stimulating the enthusiasm of community residents to participate in community building, and opening up the "night mode" of cultural services in industrial communities .
- In October 2023, a Public Opinion Seminar was held in Jinniu Community with the theme of Night Around the Stove, whereby corporate volunteers provided feedback to the community staff on the common, urgent, difficult and concerning issues faced by residents and the pressing problems within the precincts that require immediate resolution .
- In October 2023, an anti-fraud education session was arranged with the Jinniu community for an in-depth explanation as such .
- In November 2023, a special mental health counseling seminar was held with the Jinniu community and Jiaying ANDING Hospital (The Fourth People's Hospital of Haining)

case

Green Low-Carbon Journey with Kids | Astronergy Delivered a Scientific Lecture in XINGZHI Elementary School

On September 14, Astronergy organized a public welfare activity with the theme of Green Low-Carbon Journey with Kids in Haining XINGZHI Elementary School. Through a scientific lecture, the pupils were exposed to solar energy-related knowledge and the background of the global energy transformation. Astronergy engineers stimulated local pupils' learning enthusiasm with vivid explanations and enhanced their desire to explore further with interactive games. The aim was to spread environmental awareness and get engaged in local community building for harmonious development. Looking ahead, Astronergy will remain committed to fulfilling its social responsibilities and contributing to the global energy transformation.



case

Double Ninth Festival Powered by Astronergy | Visit to Elderly Homes

On the Double Ninth Festival, Astronergy brought along gifts of longevity chrysanthemums, Chongyang Cakes, and handmade cornelian incense packs for the elderly in the Service Center for the Elderly of Huangwan Town, and delivered clothes dryers when the weather was cooling down with warm seasonal greetings. Those with approaching birthdays were pampered with a birthday party and best birthday wishes. Year-end hampers were also delivered to each senior citizen for their pleasure.



Charity and public welfare

case

Volunteer service of cotton picking

In 2023, Astronergy was paired with the Qianjiang Village Party Building Union for volunteer activities. On October 25, the Party Branch, Youth League General Branch and Qianjiang Village Party Building Union, organized cotton picking activities, whereby over 20 employees volunteered to help cotton farmers pick cotton and the proceeds from the quilt sale activities held in January 2024 were donated to poverty-stricken residents of Qianjiang village.



Charity sales of oranges for farmers



Donation of care packages for disabled youths

Joining Hands

For A Trustworthy Relationship

Product Quality And Safety	63
Full Product Lifecycle Management	65
Sci-tech Innovation	66
Customer Relationship Management	69
Sustainable Supply Chain	70



Product Quality And Safety

As a leading manufacturer in the PV sector, Astronergy constantly builds and strengthens its corporate quality culture for excellence and stability of its products. We regard quality management as the lifeline for corporate survival and development by comprehensively integrating it into strategic development planning, aiming to win market recognition with our pursuit of ultimate quality. At the end of the reporting period, all the production bases obtained ISO 9001:2015 quality management system certification; The Haining Base and Yancheng Base simultaneously obtained the quality system management standard IEC 62941:2019 for PV/solar module manufacturing. The quality management department strictly controls product quality, and has developed quality management systems such as Quality Manual, QCC Activity Management, Management of Module Manufacturing Process Quality, Non-conforming Product Management, etc. As a global provider of smart energy system solutions, the Company has obtained product quality certificates according to various market access requirements around the world, escorting quality services along the way.



IEC Certificate - Master Certificate of European Standards



IEC Certificate - Master Certificate of National Standards



UL Certificate - Master Certificate of American Standards

The Company set annual targets for its five new energy and technology sectors in 2023.

Indicator projects	Target value	Achievement value
Number of complaints about major quality and safety risks (times)	0	0
Number of major quality and safety accidents	0	0
Cumulative closed loop rate of major quality risk events	100%	100%
Number of quality-improving programs released	≥32	88
Product supervision and sampling inspection pass rate	100%	100%

highlighted performance certificate



Astronergy has been awarded "Top Brand PV Modules" by EUPD Research for the German and South African markets in 2023.



PV Evolution Labs (PVEL), the world's leading independent third-party testing laboratory, released the "2023 PV Module Reliability Scorecard," with Astronergy being recognized as the "2023 Top Performer" for the seventh time.



Astronergy was awarded the PIT certificate for offshore PV/solar modules by UL Solutions.



Astronergy was awarded Ariel Re's first Gold Trust Mark for exceptional PV product quality.



Astronergy was honored with the RETC's 2023 Overall Highest Achiever Award.



Astronergy received All Quality Matters (AQM) awards on great outdoor power yield performance, PV cells' great conversion and building-integrated PV (BIPV) module performance.



Astronergy was awarded the world's first ZBB-TOPCon mass-producible module product certificate from TÜV Rheinland.



Astronergy was honored as "VERY GOOD" for the excellent power generation performance of its ASTRO N module after PV Magazine's rigorous testing process.



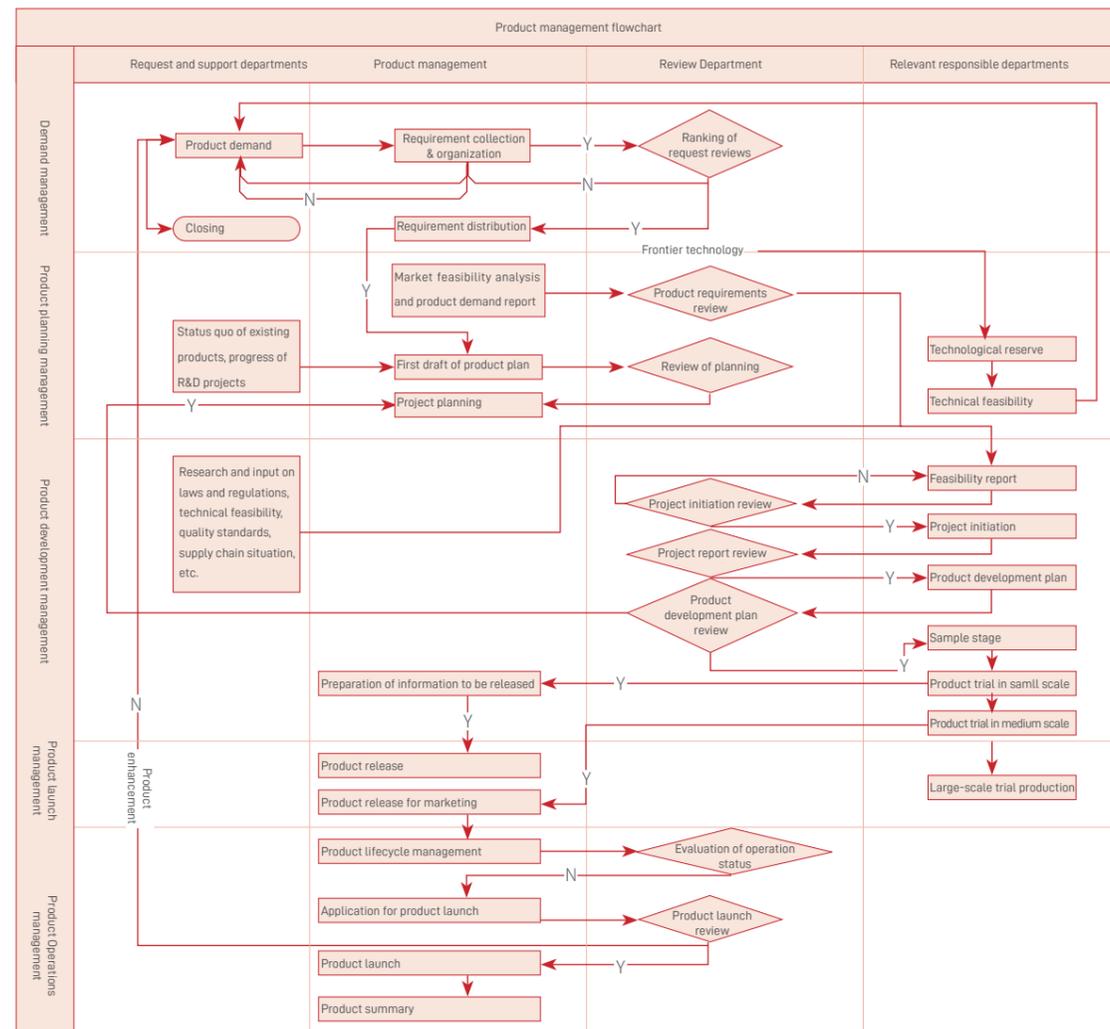
Astronergy was awarded the world's first IEC 61215:2021/ IEC 61730:2023 PV/solar module certificate from TÜV Rheinland.

Full Product Lifecycle Management

Astronergy's Targets In Sustainability Strategy

Medium and long-term targets (by 2035)	Achievement in 2023
· Life cycle assessment on all new products	· A product lifecycle assessment for 15 main products was conducted, including ASTRO 5, ASTRO 5s, ASTRO N5, and ASTRO N5s series

Product management across the entire life cycle holds immense importance for Astronergy, which not only enhances corporate innovation ability, optimizes production efficiency, and reduces costs, but also improves customer satisfaction, unfolds greater market opportunities and establishes stronger competitive advantages. In 2023, the Company developed and published Product Management, stipulating management requirements across the entire life cycle and approaches for demand management, product planning and management, product development management, product launch management and product operation management. Promote sustainable development through effective management strategies across the entire life cycle.



case

In 2023, the company was awarded the Product Carbon Footprint Certificate by UL Solutions for its ASTRO series modules, the UL EPD (Environmental Product Declaration) Certificate for PV/Solar Modules, and obtained the EPD Italy Certificate through the Mutual Recognition Program between UL and Italy, which is another authoritative green product certificate that Astronergy has received following the French Carbon Footprint Certificate for its ASTRO series products. Astronergy provides customers with high-efficiency and green modules, contributing to a harmonious symbiosis and a green and sustainable ecological environment.

ENVIRONMENTAL PRODUCT DECLARATION
HSM72M-HC, CHSM72M(DG)/F-BH, HSM54M-HC, CHSM54M(BL)-HC

ENVIRONMENTAL PRODUCT DECLARATION
PRODUCT NAME: PLANTS
CHINT NEW ENERGY TECHNOLOGY CO., LTD.

certisolis
Evaluates Carbon Footprint
ISO 14067:2018, EN ISO 14067:2018

中国绿色建材产品认证证书
中国绿色建材产品认证证书
CHINA GREEN BUILDING MATERIALS PRODUCT CERTIFICATION

CARBON FOOTPRINT OF PRODUCTS (CFP) STATEMENT OF VERIFICATION
CHINT NEW ENERGY TECHNOLOGY CO., LTD.

For the time period November 2021 to April 2023 in accordance with ISO 14067:2018, CHINT New Energy Technology Co., Ltd. (CHINT) has been verified for the supply of CFP for HSM72M-HC, CHSM72M(DG)/F-BH, HSM54M-HC, and CHSM54M(BL)-HC.

Carbon Footprint
UL VALIDATED
PRODUCT CARBON FOOTPRINT TO ISO 14067 PROJECTED INFORMATION UL.COM/GHG
bsi

Sci-tech Innovation

Adhering to the concept of "one generation of mass production, one generation of reserve, one generation of R&D", Astronergy takes TOPCon as the mainstream production technology for strategic development; Meanwhile, the Company ensures the development and reserve of xBC and xBC-Pro products, and long-term R&D reserve of Chalcocite/Si stacked layer technology. To enhance the stability and efficiency of materials and devices, we will take the dual-channel of patent layout and industry standardization, expand the technical talent team, and increase R&D funding to polish our technological edge of product iteration.

Engaged in R&D of innovative cost-reduction technologies, while ensuring product quality, the company aims to reduce production costs and energy consumption through technological optimization, including wafer thickness optimization, cell silver paste consumption improvement, module encapsulation material innovation, optimization of module welding wire

specifications, etc., to significantly reduce material consumption and production energy consumption and ensure continuous decline of PV power generation costs; Meanwhile, focusing on green and low-carbon new materials for technical R&D, we have been a pioneer in the industry to develop and apply new green materials such as steel frames and composite material frames, promoting the sustainable development of the photovoltaic industry chain. The Company minimizes the consumption of natural resources during the product life cycle to reduce the impact on the ecological environment and ensure PV products demonstrate the characteristics of "energy-saving, emission-reducing, safe, convenient and recyclable" by developing the Management of New Product Design, Development and Introduction of Green Building Material PV/Solar Modules, and Green Product Identification, Evaluation and Control Procedures, etc. relying heavily on the concepts of green design and green products.

ASTRO N7s portfolio



Based on the first new platform technology of Zero Bus-Bar with Tiling Film (ZBB-TF), and integrating the mainstream rectangular high-power technical R&D. Products are highly adaptable to household roof-distributed PV scenarios, while compared to similar products on the market, it leads by more than 10W in power and features a more aesthetically pleasing appearance. Compared to traditional interconnection processes, the ZBB interconnection operates at a lower temperature and does not require the use of flux, resulting in no VOC emissions during the interconnection process and better reducing manufacturing energy consumption. Moreover, the application of ZBB+TF technology can significantly reduce the consumption of silver paste for the cells and is compatible with thinner silicon wafer cells. This not only reduces the cost per unit of photovoltaic electricity, but also makes the product manufacturing process more environmentally friendly and low-carbon, making photovoltaic power generation greener and more low-carbon.

BIPV portfolio



For sectors combining PV and construction, Astronergy remains committed to rolling out technological innovation and product R&D, and has launched a BIPV portfolio integrating PV power generation with construction in a harmonious way. While expanding the application scenarios of PV power generation, the Company actively transforms buildings from traditional high-energy-consuming types to green and low-carbon nature, paving the technical way for carbon neutrality construction.

With the rapid development of new technologies and accelerated industrial layout, Astronergy set up an intellectual property department and a dedicated team in March 2023 to work closely with the Group's intellectual property department to fast-track intellectual property patent excavation and control, and ensure patent layout and intellectual property analysis and control. The Company has developed internal documents such as Intellectual Property Management Manual, Confidentiality Management, Patent and Copyright Management, Technological Papers Management, etc., introduced Corporate Intellectual Property Management Standard at the beginning of 2023, and obtained the certification of pilot enterprise of standardized intellectual property management system in November of the same year. All of the above initiatives will play a key role in improving Intellectual Property management and management performance as well as in the creation, utilization, protection and management of IP.



Certificate of Intellectual Property Management System Certification

case

N-Type TOPCon Cell was selected as one of the Typical Cases of Green Technology Innovation of 2023

The self-developed TOPCon cell as well as the high-power TOPCon bifacial module technology of Astronergy was materialized through the design of the cell module structure, encapsulation materials, etc., to reduce costs and improve PV conversion efficiency for enhanced solar cell module products. Looking ahead, Astronergy will remain committed to performing in-depth transformation and application of green technology industrial achievements based on this green technology innovation case, promoting the construction of TOPCon cell demonstration projects with high quality.



In 2023, we actively fostered project partnerships with other enterprises and various universities. In 2023, Astronergy applied for the Leading Soldier, Leading Goose R&D Programs of 2024, with authoritative research institutes and related industrial companies; The Key Technology of High-Efficiency New Flexible Calcium-Titanium Ore Thin-Film PV/solar Cells Project has been successfully established as a major special project of the Leading Goose Program. A total of 49 patents were newly granted during the reporting period, including 37 utility model patents, 5 authorized inventions and 7 appearance designs.

During the reporting period

Total patents newly granted during the reporting period

49

Including utility model patents

37

Authorized inventions

5

Appearance designs

7 ITEMS



Customer Relationship Management

Customers are of vital importance to Astronergy, not only as the core driving force for corporate business development and an important source of market competitiveness, but also as the key to promoting innovation and improving service quality. Recognizing the significance of its customers, Astronergy has always prioritized customer needs while focusing on communication and cooperation with customers. In 2023, we disassembled 6 specific tasks from customer service and product quality based on the actual delivery nature, and implemented specific project actions respectively. By the end of the reporting period, all targets had been met and the entire process was being tracked to identify room for future improvement. Astronergy strives to provide premium services for mutual development with customers.

Indicator classification	Indicator disassembly	Project actions	Achievement output	Items for future improvement
Achievement of domestic delivery targets	Module damage rate: PPM ≤ 50	Resident patrol delivered to audit construction violations and reduce damage rates.	45	Provide solutions for the workplace design category in terms of on-site construction violations.
	Nonconformity improvement rate: 95%	Ensure dedicated attendance to nonconformity cases to avoid recurrence.	96%	Improvement on the nonconforming installation shall be on a constant basis to avoid subsequent load-based customer complaints.
	Customer satisfaction score: ≥ 90 points	Enrich the content of the delivery process and the response mechanism to enhance customer satisfaction.	93 points	Improve professional knowhow to enhance on-site customer Q&A satisfaction.
After-sales service indicator	Customer complaint closure rate: 100%	Improve Customer Complaint Response Mechanism ("One-Three-Five" principle)	100%	Optimize the front-end manufacturing process through the company's IPD process linkage.
	Customer complaint improvement rate ≥ 95%	Linked with technical R&D to lead systemic problem solution	98%	Lead and drive exceptional improvement results for zero recurrence rate.
	After-sales satisfaction score: ≥ 90 points	Rapid response, proactive solution, and project call-back mechanism	94 points	Optimize the customer complaint response mechanism for fast customer claim closure.

Case

Special enhancement program for customer delivery services

In 2023, the after-sales service team enhanced corporate product brand competitiveness by focusing on "improving customer satisfaction and raising service bars" and rolling out "planning delivery service promotional videos with quality roadshow activities". By the end of the reporting period, the after-sales service team in GCA received a total of 11 letters of appreciation from key customers of central and state-owned enterprises, building up corporate confidence in future marketing potential.



Drone infrared thermography inspection services

In terms of business operations, the Company strictly observes the Personal Data Secrecy and Protection System for proper collection and use of personal data and information; Confidentiality clauses are incorporated into all contract signing processes. We are committed to never divulging confidential information during corporate business, and responsibilities have been demarcated properly for data security. Meanwhile, employees are required to sign the Information Security Commitment Letter to fulfill their privacy protection responsibilities. We protect the rights and interests of information subjects in accordance with the law, with no complaints of privacy infringement during the reporting period. Meanwhile, there were no violations related to product and service information and identification or marketing communication during the reporting period.

Sustainable Supply Chain

Astronergy's Targets In Sustainability Strategy

Short-term targets (By 2028)

· All core suppliers - Accept audits on due diligence and assessment in social, environmental aspects

Achievement in 2023

· **54.5%** of core suppliers - Accept audits on due diligence and assessment in social, environmental aspects

Medium and long-term targets (By 2035)

· All core suppliers - Obtain ISO 45001 Certification
· All core suppliers - Obtain ISO 14001 Certification

Achievement in 2023

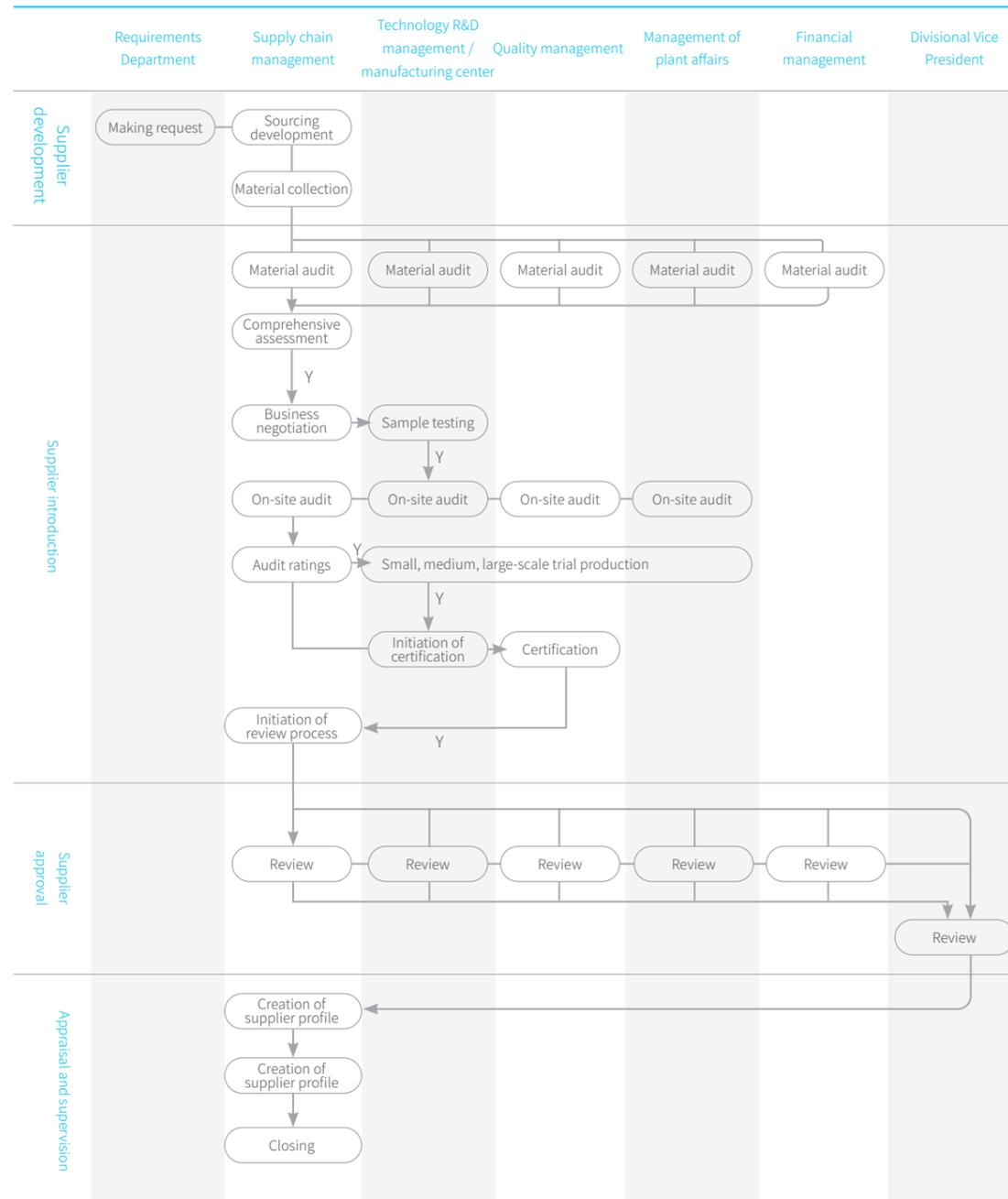
· **100%** of core suppliers obtained ISO 45001 certification
· **81.8%** of core suppliers obtained ISO 14001 certification

· All high-risk secondary suppliers - **100%** accept due diligence audits



Astronergy works with its suppliers to fulfill social responsibilities, aiming to refine the social responsibility performance of the industrial chain and promote the sustainable development of its business and supply chain. On the basis of the supply chain management system documents such as Supplier Management and Supply Chain Social Responsibility Management System implemented in 2022, we prepared and released process management documents such as Supplier Entry Management, Supplier Exit Management, Supplier Performance Management and other documents in 2023 for improved supply chain management.

Supply Chain Management



At the entry stage, the registration information of new suppliers shall be submitted in accordance with the Information Questionnaire for Suppliers of Productive Materials, the Intellectual Property Status Questionnaire and the Social Responsibility Due Diligence Form and relevant qualifications. In addition, confidentiality, integrity, ESG and other relevant requirements shall be educated across the entry audit stage, and the audit team shall evaluate suppliers on quality, commercial, technical and ESG aspects based on the Supplier Entry Audit Score Sheet. During the reporting period, all new suppliers were contracted after conducting social impact due diligence, while screened through environmental evaluation dimensions to comply with the access threshold. No suppliers under evaluation had actual and potential major ESG risks in 2023.

For routine assessment and supervision, the supplier management department shall complete the summary of the previous year by February each year, fill in the Annual Supplier Performance Assessment Rating Form, and inform the suppliers of relevant results. To promote the green supply chain management system, we have set up an annual performance appraisal bonus item with reference to requirements for green plants. For suppliers' daily operation, performance and rectification, we will trigger the application of supplier freeze, unfreeze and blacklist processing according to the rules for suppliers' continuous improvement.

Through pursuit of green supply chain management, 9 of our excellent green suppliers were awarded the honor of "Green Product" and national "Green Factory" by MIIT, and 6 of them were awarded the honor of national "Green Supply Chain" by MIIT, 7 of them were awarded the honor of municipal /provincial "Green Factory" in 2023. And Astronergy was honored as a national "Green Factory" by the MIIT as well.

We require our suppliers to comply with laws, regulations and industry standards, and have developed corporate standards to standardize their social responsibility management, ensuring that all aspects of the process align with social responsibility requirements. While signing the Procurement Framework Contract, suppliers are required to sign a Supplier Code of Conduct, committing to CSR requirements from child labor, remuneration, equality, fair treatment, anti-discrimination principles, legal immigration, trade union freedom, health and safety, voluntary recruitment, working hours, the environment, business ethics, management systems, conflict minerals, etc. For details, please refer to the Supplier Code of Conduct.

case
Excellent Green Supplier Contest

In June 2023, Astronergy launched the Excellent Green Supplier Contest, in which 65 suppliers participated. Through a comprehensive process involving self-evaluation, Astronergy's evaluation, training & counseling and on-site audits to assess their green efforts, 6 suppliers were distinguished for their exceptional performance. Looking ahead, Astronergy will empower suppliers in terms of obtaining certifications, ESG audits, controversial procurement, raw material traceability, and capacity-building training, to promote sustainable development and build a green future for all.

Verification Statement of Environmental, Social And Governance Report **TÜVNORD**

TÜV NORD (Hangzhou) Co., Ltd. ('TNHZ' for short) has been commissioned by the management of Chint New Energy Technology CO., Ltd. ('Astronergy' for short) to carry out an independent verification of Environmental, Social And Governance Report 2023 ('ESG report' for short) .

Astronergy is responsible for the collection, analysis, aggregation and presentation of information within the Report. TNHZ is responsible for conducting this work (report verification) is in accordance with terms of reference agreed in the scope of engagement with Astronergy. Astronergy is the intended users of this statement.

This statement is based on the 2023 ESG Report which prepared by Astronergy, and Astronergy is responsible for the integrity and authenticity of the information and data contained in the report.

Verification Scope

- We evaluate the accuracy and reliability for key performance, information and management system in the environmental, social and governance areas revealed in the Report which happened in 2023.
- Verified address: No.1 Jisheng Road, Jianshan New District, Haining City, Zhejiang Province. The headquarter of Astronergy; No.2 Jisheng Road, Jianshan New District, Haining City, Zhejiang Province. Chint Solar (Haining) Co., Ltd. We didn't visit other branches or sites.
- We evaluate the collection, analysis, aggregation of the information and data.
- Due to finance data had been audited by the third party, so the correctness of the financial data in the report is not in our assurance scope.

The verification was done from Apr. 7th, 2024 to Apr. 9th, 2024.

Verification Methodology

Verification process including following activities:

- Review the document information which provide by Astronergy;
- Interview the person who collected the report information;
- View the related websites and media reports, verify the data and information through sampling method;
- Sustainability reports are assessed against the requirements of Sustainability Reporting Guidelines (GRI Standards 2021) for balance, comparability, accuracy, timeliness, clarity and reliability.
- Refer to AA1000AS (V3) Assurance methodology;
- Assurance activity is based on TNHZ Report Verification supplement procedure (SP-C-A015,Rev.00) .

Verification conclusion

Astronergy 2023 ESG Report provide an appropriate and objective view of the environmental, social and governance programs and performances during 2023. The data in report is reliable and objective, TNHZ didn't find the system error or substantial error.

Balance

The report objectively disclosed the number of complaints of privacy violations and information security incidents, which has a certain balance;

Comparability

In the appendix "Key Performance", the three-year key performance of energy use, greenhouse gas emissions, employee structure, training information and other indicators are disclosed, and the comparability is good.

Accuracy

Through sampling audit, it is found that the cases and data disclosed in the report are basically objective and accurate;

Timeliness

The disclosure period of this report is 2023 sustainable development performance, and the company has issued reports regularly for two consecutive years, with good timeliness;

Clarity

The report uses pictures, charts, cases and other forms to make the information in the report easy to understand;

Reliability

The Sustainability Department of Astronergy led the establishment of the report preparation team, which is responsible for collecting, recording, arranging and analyzing the information and process used in the preparation of the report, and the sampled data in the inspection process can be traced to ensure the quality and substance of the information to a certain extent.

Suggestion for improvement

Through assurance and evaluation, we had following improvement suggestion on sustainable development practice and management:

- In order to improve the company's future data collection efficiency, it is recommended to implement a more intelligent data collection system, so as to obtain relevant information more efficiently and provide a solid data foundation for ESG evaluation.
- Encourage reference to international advanced practices, and continuously improve the mode and content of overseas performance disclosure, so as to give stakeholders a comprehensive understanding of Astronergy 's global performance status.
- We recommend that you maintain the good practice of regularly publishing ESG reports to demonstrate your commitment to the environment, society and corporate governance.

Special statement:

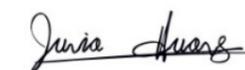
This statement excluding:

- The activity beyond information reveal;
- The position, idea, faith, object, future developing direction, and promise which stated by Astronergy.

Statement of Independence and Competence

- TÜV NORD is the world's leader certification authority in inspection, testing and verification, operating in more than 100 countries throughout the world and providing services which includes management systems and product certification; verification and training of quality, environment, occupational health and safety management system certification, social responsibility; assurance of environmental, social responsibility, and sustainability report.
- As one of the global branches of TÜV NORD, TNHZ affirms its' independence from Astronergy and confirms that there are no conflicts of interest with the organization or any of its subsidiaries and stakeholders when conducting the assurance of the Report. All information in this report was provided by Astronergy, and TNHZ was not involved in the report preparation process.

TÜV NORD (Hangzhou) Co., Ltd.



The team leader: Ms. Huang Li

Date : 29.04, 2024

Note: In case of conflict between the Chinese and English versions of this statement, please refer to the Chinese version.



The Authorized person: Mr. Song Haining

Date : 29.04, 2024

Appendix

Key Performance Indicator

Environment performance²

Greenhouse gas emissions

Indicator	Unit	2021	2022	2023
Scope I GHG emissions	tCO ₂ e	16079.43	46673.38	7537.55
Scope II GHG emissions	tCO ₂ e	204518.60	326541.15	446536.48
Scope I + II emission intensity (based on module capacity)	tCO ₂ e/MW	42.12	30.47	28.73

Energy consumption

Indicator	Unit	2021	2022	2023
Petrol	L	23181.34	38313.26	66089.20
Diesel	L	97283.62	299251.05	128857.33
Natural Gas	m ³	351162	298939	936691.80
Solar Energy	kWh	1170221	6588852.80	19685237.60
Electricity Consumption	kWh	351178833.2	579185690.00	812078381.31
Total Energy	GJ	1262425.31	2130657.57	3034321.29
Energy Intensity	Tonnes of standard coal / MW	8.34	5.94	3.91

Water Resource³

Indicator	Unit	2021	2022	2023
Total water withdrawal	Ton	2015822	1852559	6847488.64
Total water discharge	Ton	1513988	1476211	5745698
Total water consumption	Ton	501834	376348	1101790.64

²Note: The data of Greenhouse gas emissions and Energy consumption in 2022 are calibrated values based on GHG verification.

³Note: The scope of the 2022 water resources indicator includes only the Haining site.

Waste

Indicator	Unit	2021	2022	2023
Waste generated	Ton	13970.75	13745.87	36813.96
Non-hazardous waste generated	Ton	13897.09	13663.97	36670.53
Non-hazardous waste diverted from disposal	Ton	5294.09	6042.09	18593.579
Hazardous waste generated	Ton	73.66	81.90	143.43
Hazardous waste directed to disposal	Ton	73.66	81.90	143.43

Social performance

Diversity and Equal Opportunity

Indicator	Unit	2021	2022	2023
Total employees	People	2804	4157	7553
Employee diversity				
By gender				
Male	People	2092	2825	5114
Female	People	712	1332	2439
By age				
Under 30 years old	People	1308	1910	3767
30-50 years old	People	1485	2224	3748
Over 50 years old	People	11	23	38
By ethnicity				
Han people	People	2583	3466	5996
Minority people ⁴	People	221	691	1557
By region				
Mainland China People	People	2667	3621	6488
People outside Mainland China (including Hong Kong, Macao, and Taiwan)	People	137	536	1065
By employment type				
Full time person	People	2804	4157	7553
Part-time person	People	0	0	0
Governance diversity				
Senior management staff ⁵	People	2	11	25
Female senior management staff	People	0	1	8
Middle management staff ⁶	People	7	27	153

⁴Note: Foreign employees in Thai factories are included in the ethnic minority category

⁵Note: Deputy General Manager and above, the same below.

⁶Note: Managers and directors, the same below.

Indicator	Unit	2021	2022	2023
Female middle management staff	People	0	4	31
Ordinary management staff ⁷	People	123	218	459
Female ordinary management staff	People	7	10	94
General employee	People	2672	3901	6916

Employee turnover

Indicator	Unit	2021	2022	2023
Employment				
Total number of new employee hires	People	4318	3046	6244
Rate of new employee hires	%	66	57	83
By gender				
Male	People	3407	2053	4325
Female	People	911	993	1919
By age				
Under 30 years old	People	2320	1716	3604
30-50 years old	People	1993	1329	2633
Over 50 years old	People	5	1	7
By region				
Mainland China People	People	4263	2349	5414
People outside Mainland China (including Hong Kong, Macao, and Taiwan)	People	55	697	830
Turnover				
Total number of employee turnover	People	3710	1499	2754
Rate of employee turnover	%	36	22	27
By gender				
Male	People	2855	1035	1909
Female	People	855	464	845
By age				
Under 30 years old	People	2006	841	1532
30-50 years old	People	1703	657	1219
Over 50 years old	People	1	1	3
By region				
Mainland China People	People	3478	1221	2413
People outside Mainland China (including Hong Kong, Macao, and Taiwan)	People	232	278	341

⁷Note: Supervisor and team leader grades, the same below.

Collective bargaining agreement⁸

Indicator	Unit	2021	2022	2023
The proportion of people who have signed collective agreements	%	/	/	100
Proportion of employees who have signed female employee protection agreements	%	/	/	100

Basic wages and remuneration for male and female⁹

Indicator	Unit	2021 ¹⁰	2022	2023
Senior management staff				
Basic salary ratio	Ratio	/	0.83	1.45
Basic bonus ratio	Ratio	/	0.80	1.88
Middle management staff				
Basic salary ratio	Ratio	/	0.98	1.17
Basic bonus ratio	Ratio	/	0.73	1.09
Ordinary management staff				
Basic salary ratio	Ratio	1.26	1.03	1.09
Basic bonus ratio	Ratio	1.26	1.01	1.02
General employee				
Basic salary ratio	Ratio	1.19	1.04	1.28
Basic bonus ratio	Ratio	1.33	0.91	1.19

Training and education¹¹

	Unit	2021 ¹²	2022	2023
Average training time				
Senior management staff				
Male	Hour	6	4	69.6
Female	Hour	/	4	69.6
Middle management staff				
Male	Hour	5	5	22
Female	Hour	/	5	22

⁸Note: Relevant data have not yet been collected in 2021 and 2022; currently, this data only covers the Haining base.

⁹Note: The difference in basic salary between men and women may be affected by many factors, such as position, experience, skills, etc., but we do not treat employee wages differently based on gender.

¹⁰Note: There are currently no female senior or middle managers in 2021, so the data is blank.

¹¹Note: Most of the training in 2022 was conducted online, and no statistics have been compiled; the training and education data in 2023 also increased due to the new data added by the base, so there is a substantial increase compared to the data in 2022.

¹²Note: There are currently no female senior or middle managers in 2021, so the data is blank.

Ordinary management staff				
Male	Hour	6	4	75
Female	Hour	6	4	75
General employee				
Male	Hour	8	8	28.41
Female	Hour	8	8	28.41
Proportion of employees who receive regular performance appraisals				
Senior management staff				
Male	%	100	60	100
Female	%	/	0	100
Middle management staff				
Male	%	29	57	100
Female	%	/	75	100
Ordinary management staff				
Male	%	44	61	100
Female	%	90	83	100
General employee				
Male	%	18	30	100
Female	%	20	25	100

Occupational health and safety

	Unit	2021	2022	2023
Work-related injuries				
Work-related injuries resulting in fatality				
The rate of fatalities as a result of work-related injury for employee	%	0	0	0
The rate of fatalities as a result of work-related injury for non-employee	%	0	0	0
High-consequence work-related injuries (excluding fatalities)				
The rate of high-consequence work-related injuries (excluding fatalities) for employee	%	0	0	0
The rate of high-consequence work-related injuries (excluding fatalities) for non-employee	%	0	0	0
Recordable work-related injuries				
Minor injury accident rate per thousand people	‰	1.59	1.05	1.23
Occupational diseases				
Number of employees who died due to occupational diseases	People	0	0	0
Number of cases of occupational-related health problems	Number	0	0	0

Status of science, technology and innovation

Indicator	Unit	2021	2022	2023
R&D/Technical Staff	People	339	440	367

Customer satisfaction

Indicator	Unit	2021	2022	2023
Customer satisfaction	point	92.35	92.89	92.90

Status of suppliers

Indicator	Unit	2021	2022	2023
Suppliers participating in the CSR assessment	Number	11	17	64
Percentage of new suppliers screened using environmental and social evaluation dimensions	%	100	100	100
Localized purchasing rate	%	17.5	19	20

Indices

GRI content index Standards

Statement of use	Astronergy has reported in accordance with the GRI Standards for the period 1st January 2023 to 31st December 2023.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	No Applicable GRI Sector Standard

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
GRI 2: General Disclosures 2021 The organization and its reporting practices		
2-1 Organizational details	Corporate Overview 09	
2-2 Entities included in the organization's sustainability reporting	About This Report 01	
2-3 Reporting period, frequency and contact point	About This Report 01-02	
2-4 Restatements of information	Explanations have been made correspondingly in the text of the report	
2-5 External assurance	Independent Assurance Statement 73-74	
Activities and workers		
2-6 Activities, value chain and other business relationships	Corporate Overview 09	
2-7 Employees	Social performance 76	
2-8 Workers who are not employees	Social performance 76	
Governance		
2-9 Governance structure and composition	Corporate Governance 25	
2-10 Nomination and selection of the highest governance body	Corporate Governance 25	
2-11 Chair of the highest governance body	Corporate Governance 25	
2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability Management 17-18	
2-13 Delegation of responsibility for managing impacts	Sustainability Management 17-18	
2-14 Role of the highest governance body in sustainability reporting	Sustainability Management 17-18	
2-15 Conflicts of interest	Corporate Governance 25	
2-16 Communication of critical concerns	Stakeholders Engagement 19-20	
2-17 Collective knowledge of the highest governance body	Corporate Governance 25	
2-18 Evaluation of the performance of the highest governance body	/	Information unavailable / incomplete, plans to disclose in the future
2-19 Remuneration policies	/	Information unavailable / incomplete, plans to disclose in the future
2-20 Process to determine remuneration	/	Information unavailable / incomplete, plans to disclose in the future
2-21 Annual total compensation ratio	/	Information unavailable / incomplete, plans to disclose in the future

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
Strategy, policies and practices		
2-22 Statement on sustainable development strategy	Sustainability Strategy 17-18	
2-23 Policy commitments	Protection Of Labor And Human Rights 45-48	
2-24 Embedding policy commitments	UNGC index 88	
2-25 Processes to remediate negative impacts	Stakeholders Engagement 19-20 Business Ethics 27-29	
2-26 Mechanisms for seeking advice and raising concerns	Stakeholders Engagement 19-20	
2-27 Compliance with laws and regulations	Full text	
2-28 Membership associations	Industry Associations 13-14	
Stakeholder engagement		
2-29 Approach to stakeholder engagement	Stakeholders Engagement 19-20	
2-30 Collective bargaining agreements	Protection Of Labor And Human Rights 45	
GRI 3: Material Topics 2021		
3-1 Process to determine material topics	Materiality Analysis 21-22	
3-2 List of material topics	Materiality Analysis 21-22	
GRI 201: Economic Performance 2016		
3-3 Management of material topics	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
201-1 Direct economic value generated and distributed	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
201-2 Financial implications and other risks and opportunities due to climate change	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
201-3 Defined benefit plan obligations and other retirement plans	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
201-4 Financial assistance received from government	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
GRI 202: Market Presence 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 48	
202-1 Ratios of standard entry level wage by gender compared to local minimum wage	/	Information unavailable / incomplete, company secrets will not be disclosed for the time being
202-2 Proportion of senior management hired from the local community	Corporate Governance 25	
GRI 203: Indirect Economic Impacts 2016		
3-3 Management of material topics	Community Contribution & Charity And Public Welfare 58-60	
203-1 Infrastructure investments and services supported	Community Contribution & Charity And Public Welfare 58-60	
203-2 Significant indirect economic impacts	Community Contribution & Charity And Public Welfare 58-60	
GRI 204: Procurement Practices 2016		
3-3 Management of material topics	Sustainable Supply Chain 70-72	
204-1 Proportion of spending on local suppliers	Social performance 80	
GRI 205: Anti-corruption 2016		
3-3 Management of material topics	Business Ethics 27-29	

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
205-1 Operations assessed for risks related to corruption	Business Ethics 27-29	
205-2 Communication and training about anti-corruption policies and procedures	Business Ethics 27-29	
205-3 Confirmed incidents of corruption and actions taken	Business Ethics 27-29	
GRI 206: Anti-competitive Behavior 2016		
3-3 Management of material topics	Business Ethics 27-29	
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Business Ethics 27-29	
GRI 207: Tax 2019		
207-1 Approach to tax	Corporate Governance 26	
207-2 Tax governance, control, and risk management	Corporate Governance 26	
207-3 Stakeholder engagement and management of concerns related to tax	Corporate Governance 26	
207-4 Country-by-country reporting	/	Not applicable, we don't report country by country
GRI 301: Materials 2016		
3-3 Management of material topics	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
301-1 Materials used by weight or volume	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
301-2 Recycled input materials used	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
301-3 Reclaimed products and their packaging materials	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
GRI 302: Energy 2016		
3-3 Management of material topics	Energy Management 38	
302-1 Energy consumption within the organization	Environmental performance 75	
302-2 Energy consumption outside of the organization	/	Information unavailable / incomplete. No statistics yet
302-3 Energy intensity	Environmental performance 75	
302-4 Reduction of energy consumption	Energy Management 38	
302-5 Reductions in energy requirements of products and services	Energy Management 38	
GRI 303: Water and Effluents 2018		
3-3 Management of material topics	Water Management 39-40	
303-1 Interactions with water as a shared resource	Water Management 39-40	
303-3 Management of water discharge-related impacts	Water Management 39-40	
303-3 Water withdrawal	Environmental performance 75	

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
303-4 Water discharge	Environmental performance 75	
303-5 Water consumption	Environmental performance 75	
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	Biodiversity Conservation 42	
304-2 Significant impacts of activities, products and services on biodiversity	/	Not applicable. The company and all operating locations are not located in or adjacent to environmentally sensitive areas, and the environmental impact during production and manufacturing operations is controllable, and the impact on biodiversity is negligible.
304-3 Habitats protected or restored	/	Not applicable. The company and all operating locations are not located in or adjacent to environmentally sensitive areas, and the environmental impact during production and manufacturing operations is controllable, and the impact on biodiversity is negligible.
304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	/	Not applicable. The company and all operating locations are not located in or adjacent to environmentally sensitive areas, and the environmental impact during production and manufacturing operations is controllable, and the impact on biodiversity is negligible.
304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	/	Not applicable. The company and all operating locations are not located in or adjacent to environmentally sensitive areas, and the environmental impact during production and manufacturing operations is controllable, and the impact on biodiversity is negligible.
GRI 305: Emissions 2016		
3-3 Management of material topics	Climate Change Response 33-36	
305-1 Direct (Scope 1) GHG emissions	Environmental performance 75	
305-2 Energy indirect (Scope 2) GHG emissions	Environmental performance 75	
305-3 Other indirect (Scope 3) GHG emissions	Environmental performance 75	
305-4 GHG emissions intensity	Environmental performance 75	
305-5 Reduction of GHG emissions	Climate Change Response 33	
305-6 Emissions of ozone-depleting substances (ODS)	/	Information unavailable / incomplete. This indicator is not a company-wide characteristic pollutant indicator, so it is not statistically disclosed.
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	/	Information unavailable / incomplete. This indicator is not a company-wide characteristic pollutant indicator, so it is not statistically disclosed.
GRI 306: Waste 2020		
3-3 Management of material topics	Waste Management 41	
306-1 Waste generation and significant waste-related impacts	Waste Management 41	
306-2 Management of significant waste-related impact	Waste Management 41	
306-3 Waste generated	Environmental performance 76	

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
306-4 Waste diverted from disposal	Environmental performance 76	
306-5 Waste directed to disposal	Environmental performance 76	
GRI 308: Supplier Environmental Assessment 2016		
3-3 Management of material topics	Sustainable Supply Chain 70-72	
308-1 New suppliers that were screened using environmental criteria	Social performance 80	
308-2 Negative environmental impacts in the supply chain and actions taken	Sustainable Supply Chain 70-72	
GRI 401: Employment 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45-50	
401-1 New employee hires and employee turnover	Social performance 77	
401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employee	Protection Of Labor And Human Rights 49-50	
401-3 Parental leave	Protection Of Labor And Human Rights 45	
GRI 402: Labor/Management Relations 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45-50	
402-1 Minimum notice periods regarding operational changes	Protection Of Labor And Human Rights 45	
GRI 403: Occupational Health and Safety 2018		
3-3 Management of material topics	Occupational Health And Safety 54-57	
403-1 Occupational health and safety management system	Occupational Health And Safety 54-57	
403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health And Safety 54-57	
403-3 Occupational health services	Occupational Health And Safety 54-57	
403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational Health And Safety 54-57	
403-5 Worker training on occupational health and safety	Occupational Health And Safety 54-57	
403-6 Promotion of worker health	Occupational Health And Safety 54-57	
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational Health And Safety 54-57	
403-8 Workers covered by an occupational health and safety management system	Occupational Health And Safety 54-57	
403-9 Work-related injuries	Social performance 79	
403-10 Work-related ill health	Social performance 79	
GRI 404: Training and Education 2016		
3-3 Management of material topics	Talent Strategy, Training And Development 51-54	
404-1 Average hours of training per year per employee	Social performance 78	
404-2 Programs for upgrading employee skills and transition assistance programs	Talent Strategy, Training And Development 51-54	
404-3 Percentage of employees receiving regular performance and career development reviews	Social performance 79	

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
GRI 405: Diversity and Equal Opportunity 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45-50	
405-1 Diversity of governance bodies and employees	Social performance 76-77	
405-2 Ratio of basic salary and remuneration of women to men	Social performance 78	
GRI 406: Non-discrimination 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45-48	
406-1 Incidents of discrimination and corrective actions taken	Protection Of Labor And Human Rights 45-48	
GRI 407: Freedom of Association and Collective Bargaining 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45	
407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Protection Of Labor And Human Rights 45	
GRI 408: Child Labor 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45	
408-1 Operations and suppliers at significant risk for incidents of child labor	Protection Of Labor And Human Rights 45	
GRI 409: Forced or Compulsory Labor 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45	
409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Protection Of Labor And Human Rights 45	
GRI 410: Security Practices 2016		
3-3 Management of material topics	Protection Of Labor And Human Rights 45	
410-1 Security personnel trained in human rights policies or procedures	Protection Of Labor And Human Rights 45	
GRI 411: Rights of Indigenous Peoples 2016		
3-3 Management of material topics	/	Not applicable, No incidents involving violations of indigenous rights
411-1 Incidents of violations involving rights of indigenous peoples	/	Not applicable, No incidents involving violations of indigenous rights
GRI 413: Local Communities 2016		
3-3 Management of material topics	Community Contribution & Charity And Public Welfare 58-59	
413-1 Operations with local community engagement, impact assessments, and development programs	/	Information unavailable / incomplete. No impact assessment has been carried out yet.
413-2 Operations with significant actual and potential negative impacts on local communities	/	Information unavailable / incomplete. No impact assessment has been carried out yet
GRI 414: Supplier Social Assessment 2016		
3-3 Management of material topics	Sustainable Supply Chain 70-72	
414-1 New suppliers that were screened using social criteria	Social performance 80	
414-2 Negative social impacts in the supply chain and actions taken	Sustainable Supply Chain 70-72	

GRI STANDARD DISCLOSURE	LOCATION	OMISSION
GRI 415: Public Policy 2016		
3-3 Management of material topics	Business Ethics 29	
415-1 Political contributions	Business Ethics 29	
GRI 416: Customer Health and Safety 2016		
3-3 Management of material topics	Product Quality And Safety 63	
416-1 Assessment of the health and safety impacts of product and service categories	Product Quality And Safety 63	
416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Product Quality And Safety 63	
GRI 417: Marketing and Labeling 2016		
3-3 Management of material topics	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
417-1 Requirements for product and service information and labeling	/	Information unavailable / incomplete. Based on the results of the stakeholder survey, this topic is of low materiality, so no statistics and disclosures were made this time.
417-2 Incidents of non-compliance concerning product and service information and labeling	Customer Relationship Management 70	
417-3 Incidents of non-compliance concerning marketing communications	Customer Relationship Management 70	
GRI 418: Customer Privacy 2016		
3-3 Management of material topics	Information Security 29-30 Customer Relationship Management 70	
418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Customer Relationship Management 70	

UN Global Compact (UNGC) The Ten Principles Index

Principle	Content	Report section
Human Rights		
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and	Protection Of Labor And Human Rights
Principle 2	make sure that they are not complicit in human rights abuses.	Protection Of Labor And Human Rights
Labour		
Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Protection Of Labor And Human Rights
Principle 4	the elimination of all forms of forced and compulsory labour;	Protection Of Labor And Human Rights
Principle 5	the effective abolition of child labour; and	Protection Of Labor And Human Rights
Principle 6	the elimination of discrimination in respect of employment and occupation.	Protection Of Labor And Human Rights
Environment		
Principle 7	Businesses should support a precautionary approach to environmental challenges;	Environmental Protection For A Green Future
Principle 8	undertake initiatives to promote greater environmental responsibility; and	Environmental Protection For A Green Future
Principle 9	encourage the development and diffusion of environmentally friendly technologies.	Full Product Lifecycle Management Sci-tech Innovation
Anti-Corruption		
Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	Business Ethics



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