Securities code: 688599 Convertible bonds code: 118031 Securities abbreviation: Trinasolar Convertible bonds abbreviation: TRINA 23 CB

## Trinasolar Co., Ltd.

# Summary of the 2023 Annual Report

#### Section I Important Notes

1. The summary of this annual report comes from the full text of the annual report. To fully understand the Company's operating results, financial situation and future development plan, investors should read the full text of the annual report carefully on http://www.sse.com.cn/.

#### 2. Major Risk Warning

The Company has detailed the possible related risks in this report. Please refer to the "4. Risk Factors", Section III "Management Discussion and Analysis" in this report.

3. The Board of Directors (or the "Board"), the Supervisory Committee as well as the directors, supervisors and senior management of the Company hereby guarantee the factuality, accuracy and completeness of the contents of this report and its summary, and shall be jointly and severally liable for any misrepresentations, misleading statements or material omissions therein.

4. All directors of the company attend the board meeting.

5. RSM China (Special General Partnership) issued a standard unqualified opinion audit report for the Company.

6. When the Company went public, it was unprofitable and had not yet achieved profitability.

 $\Box$  Yes  $\boxtimes$  No.

# 7. The profit distribution plan or the plan of converting reserve fund into share capital in this reporting period adopted by the board of directors.

A cash dividend of RMB 6.33 (including tax) per 10 shares is to be distributed to all the shareholders. As of the date of the board meeting to deliberate the profit distribution plan, the total share capital of the Company is 2,179,364,520 shares. After deducting the 13,491,637 shares held by the Company's special securities repurchase account, the actual number of shares to be distributed is 2,165,872,883 shares, so the total cash dividend to be distributed is RMB 1,370,997,534.94 (including tax). According to the Article 8 of the Guidelines No.7 for Self-Regulatory Supervision on Listed Companies of the SSE — Share Repurchase, if a listed company repurchases shares by call auction with cash as consideration, the amount of share repurchased in the year shall be deemed cash dividends of the listed company and be included in the relevant proportion of cash dividends for calculation. In 2023, the cumulative repurchase amount of the Company through call auction is RMB 399,886,791.21 (excluding stamp duty, transaction commission and other fees), so the Company's total cumulative cash dividend and share repurchase in 2023 is RMB 1,770,884,326.15 after the cash dividends are paid. The Company's total cash dividends accounted for 32.02% of the net profit attributable to the parent company's shareholders in the

consolidated statement in this year. The Company plans not to distribute bonus shares, or to convert capital reserve into share capital.

If the total share capital of the Company changes between the adoption date of the resolution of the Board of Directors on the profit distribution plan and the registration date of the implementation of the distribution, the Company intends not to change the total amount of distribution but adjust the amount of distribution per share accordingly. If the total share capital changes subsequently, the specific adjustment will be announced separately. This profit distribution plan will be implemented after being reviewed and approved by the Company's 2023 Annual General Meeting of Shareholders.

#### 8.Whether there are important matters such as special arrangements for corporate governance

 $\Box$  Applicable  $\boxdot$  Not applicable

### Section II Basic Information of the Company

#### 1. Company profile

#### **Stock Profile**

 $\square$  Applicable  $\square$  Not applicable

	Stock Profile								
Stock type	Stock exchange for listing and board	Stock name	Stock code	Stock name before adjustment					
A shares	Shanghai Stock Exchange Sci-Tech innovation board	Trinasolar	688599	-					

#### **Depository Receipt Profile**

 $\Box$  Applicable  $\boxdot$  Not applicable

#### **Contact Person and Contact Information**

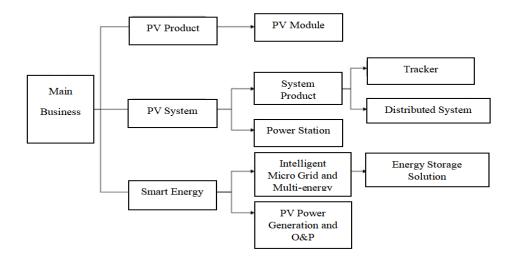
Contact Person and Contact Information	Secretary of the Board of Directors (Domestic Representative of Information Disclosure)	Securities Affairs representative	
Name	Qun Wu	Yun Lu	
Address	Southeast Area, No. 2 Tianhe Road,	Southeast Area, No. 2 Tianhe	
	Tianhe Photovoltaic Industrial Park,	Road, Tianhe Photovoltaic	
	Xinbei District, Changzhou City	Industrial Park, Xinbei	

		District, Changzhou City
Tel	0519-81588826	0519-81588826
E-mail	IR@trinasolar.com	IR@trinasolar.com

#### 2. Brief introduction of the Company's main business during the reporting period

#### 2.1 Main business, products or services

As a global leading provider for photovoltaic smart energy solution, the Company's main business includes photovoltaic products, photovoltaic system and smart energy. Photovoltaic product business generally covers the R&D, manufacturing and sales of photovoltaic modules; photovoltaic system business includes photovoltaic power stations and system products; and smart energy business involves intelligent micro grid, multi-energy systems, and photovoltaic power generation, operation and maintenance.



#### 2.1.1 Photovoltaic product business

The Company has been deeply engaged in the R&D and manufacturing of photovoltaic modules for 27 years. Trinasolar is guided by customer value and leads the industry in unifying the size of large, medium and small modules. Relying on the advanced 210 product technology platform, innovative low-voltage design and the core advantages of "four highs and one low"- high power, high efficiency, high reliability, high power generation and low LOCE, the "Vertex" series that cover large, medium and small modules, fully meet the requirements of all application scenarios such as large-scale above-ground power stations, industrial and commercial distribution, and residential roofs. With the independently developed N-type i-TOPCon advanced cell technology, Trinasolar became the first enterprise in the industry to reach the mass production power of TOPCon modules exceeding 700W+, leading the industry into the PV7.0 era. Benefiting from the advanced technology upgrade of the new generation i-TOPCon, the mass production power of "Vertex" large N-type modules has been upgraded to 720W+. The Vertex S+ N-type modules boasting both performance and appearance deliver high-performance green aesthetics on the roof.

The reliability, bankability and low-carbon sustainability of Trinasolar's products have been recognized by many authoritative third parties. Trinasolar has been awarded "Overall High Achiever" by RETC for four consecutive years, and "TOP PERFORMER" by PVEL for nine consecutive times. At the same time, with its strong bankability and efficient and reliable product quality, Trinasolar has been on the list of Tier 1 photovoltaic module manufacturers of Bloomberg New Energy Finance (BNEF) for many years and rated 100% for bankability by BNEF for many times. The Vertex series and the Vertex N-type modules have obtained EPD certification and mutual recognition with Italian EPD. The Vertex N-type modules series have also obtained carbon footprint certification. Trinasolar covers more than 170 countries and regions around the world and has won unanimous recognition from customers due to its technological and aesthetic value.

#### 2.1.2 Photovoltaic system business

The photovoltaic system business mainly includes system products and photovoltaic power stations.

1) System products

Distributed system business: The company provides integrated solutions of distributed photovoltaic systems to the world, including distributed photovoltaic system and equipment, distributed photovoltaic power generation. Based on application scenarios, the distributed solutions can be divided into household distribution for residential roofs and industrial and commercial distribution for industrial and commercial buildings such as enterprise and factories. The Company has gradually established a complete system integrating product research and development, marketing, installation and after-sales, intelligent operation and maintenance, and continues to build a digital and omni-channel ecological network. By the end of the reporting period, the Company's business covers more than 30 provinces in China, with over 4,000 household and industrial and commercial distributors, over 20,000 service outlets and about 1 million end users. Trinahome has created a new model that combines high-quality technological innovation and service innovation, rural revitalization and green transformation, and green energy and digital platform. The Company's distributed photovoltaic business has become a model of cultivating new quality productive forces in the photovoltaic industry.

Tracker business: The Company's sub-brand "Trina Tracker" is an industry-leading intelligent tracking solution provider focusing on R&D, manufacturing, engineering design, installation and operation and maintenance of photovoltaic trackers. With 20 years' experience in tracking business, Trina Tracker is the only company in the industry that has double centers of R&D and engineering design for modules and trackers in Europe and Asia. Trina Tracker owns Vanguard 1P, Vanguard 2P and Agile, and a proprietary patented technology---a smart control system that includes a smart tracking algorithm and a smart cloud platform, which has been verified by many institutions that it can effectively improve the power generation of photovoltaic power stations on the basis of traditional trackers. Trina Tracker has operation centers in China, Asia-Pacific, Europe, Latin America, North America and other regions around the world to provide customers with the best localized solutions and services. By the end of 2023, Trina Tracker has provided intelligent tracking solutions for more than 700 photovoltaic power stations in more than 60 countries around the world, and the cumulative shipments of Fix and Tracker have exceeded 20GW.

#### 2) Power station business

Over the years, the Company has been deeply involved in the field of photovoltaic power station business and is committed to building a new power supply system based on photovoltaics. The Company has a strong, professional and outstanding photovoltaic power station design team, rigorous procurement process and mature construction management team. At the same time, relying on years of experience in photovoltaic power station development and construction and the accumulated experience in operating, the Company provides customers with one-stop system integration solutions for development, financing, design, construction, operation and maintenance, so that customers can be served with high-level integrated and intelligent energy services. During the reporting period, Trinasolar was awarded as the most influential photovoltaic EPC company and the most influential photovoltaic operation and maintenance company at the Solarbe Solar Industry Summit & Awards in 2023, and led the "Top 100 Photovoltaic Companies of Intelligent Operation and Maintenance" in China in 2023.

#### 2.1.3. Smart energy business

Smart energy business mainly consists of intelligent micro grids, multi-energy systems and power generation, operation and maintenance.

The business of intelligent micro grids and multi-energy systems mainly includes intelligent solutions of energy storage. The energy storage system can realize the time shift of electric energy and promote the efficient utilization of structural demand of electric energy. Through peak regulation and frequency modulation, the operation stability of power system is improved. In recent years, benefiting from the worldwide transformation of new energy system, the global energy storage market has also shown a rapid growth trend.

Trina Storage covers energy storage cells, battery cabinets, PCS, household energy storage and integrated smart energy management. It meets the ever-changing demands of customers with full-stack capabilities, and has a complete global business deployment, core industrial chain layout, research and development platform, product testing center and super factory. Trina Storage adheres to the brand positioning of providing energy storage products and solutions with "cells" under the strategic guidance of integrated development of "Solar+Storage". With the gradual launch of its own cell capacity, Trinasolar's cell cycle life has exceeded 12,000 times. The long cycle life of cells can effectively reduce the full-life-cycle cost and LCOE, improve the cell to pack mass ratio, ensure the safety of battery, and help the system run safely under the guarantee of high conversion efficiency, high consistency and high safety. The Company is actively developing an energy storage system without air conditioners for high-temperature cells to truly take count of both safety and economy. Trinasolar's new-generation "Solar+Storage" power stations not only combine power generation with power storage, but also adopt intelligent and service-oriented means to achieve delivery integration, production visualization, and simplification, which enables Trinasolar to gain the initiative and create higher value for global customers.

Photovoltaic power generation and operation and maintenance business is intended to provide maintenance services for photovoltaic power generation which forms a source of revenue and daily operation of the system. Relying on energy IoT on the basis of advanced detection and supervision equipment and professional technical teams, the business involves the intelligent operation and

maintenance of photovoltaic power stations, including station management, daily operations and maintenance, troubleshooting and the recording and analyzing of operations & maintenance.

#### 2.2 Main business model

#### 2.2.1 Profit model

Trinasolar has always adhered to scientific and technological innovation, responded quickly to customers' needs, and continuously launched products and services that meet the market demand. In addition to consolidating the market share of photovoltaic modules and the leading position in technical indicators, the Company has continuously deepened systematic business and laid out smart energy business in a forward-looking manner. The Company's main profit model consists of selling photovoltaic products, photovoltaic systems and smart energy services.

#### 2.2.2 Procurement model

The Company formulates the annual plan, and breaks it down into such indicators as product characteristics, regional sales and etc., according to the market demand and the planning of the product department. Combined with market information, supply and demand, cost forecast, capacity and output, the annual procurement strategy is defined, and the annual procurement framework agreement is signed. The procurement scope includes silicon materials, silicon wafers, battery cells, auxiliary materials needed for production, production equipment and spare parts, etc. The Company implements the procurement model of "procure by order + reasonable inventory".

The Company has compiled the Procurement Management System, Procurement Control Procedures, Supplier Management System and etc., employed the customized SRM (Supplier Relationship Management System), DQMS (Dynamic Quality Management System), ERP (Enterprise Resource Management System) and other systems, and adopted PDCA (Plan-Do Check-Act, effective quality management tool) to design a reasonable and effective procurement process according to the needs of customers and interested parties. According to the requirements of new products and materials, the Company has made detailed regulations and indicators assessment from the aspects of supplier development, selection, management, rating, price negotiation, contract signing, inspection and warehousing, payment method, inventory management and regular assessment by using industry information or existing supplier database, so as to achieve the objectives of supplier collaboration, information sharing and process prediction.

#### 2.2.3 Production mode

The Company conducts marketing campaigns based on the product strategy and capacity matching, adopts the model of "produce by sales" and combines the expected demand to organize production. The production task is formed and assigned to each workshop of the Company according to the sales contract, technical agreement and the process capability allocation plan of them.

All departments of the Company strictly abide by the "Production Management System" to manage all aspects of production: the process department is responsible for process technique management and the formulation of internal process technique standards; the production department abides by the production operation specifications formulated by the Company, and carries out the production as required; the

quality control department participates in the whole production process and supervises the product quality.

#### 2.2.4 Sales model

The Company's main businesses include photovoltaic products, photovoltaic systems and smart energy. For these three types of businesses, the Company's sales models are as follows:

#### 1) Sales model of photovoltaic modules

The Company adopts two sales models, direct sales and distribution, for different types of module businesses. For the module business of large-scale power stations and large and medium-sized industrial and commercial projects, the Company mainly adopts direct sales model, and sets up professional sales service personnel to provide one-stop service before, during and after sales. For the module business of small industrial and commercial and household markets, the Company mainly adopts the dual models of direct sales and distribution. A comprehensive module distribution network has been established by the Company to sell high-quality and high-reliability module products all over the world.

#### 2) Sales model of photovoltaic system business

① Photovoltaic system products

The Company's intelligent solutions for large-scale power stations and intelligent trackers are mainly sold through direct selling model, and the products are sold to constructors, investors and developers in major photovoltaic markets such as China, Europe, North America, South America, Japan, Asia Pacific, Middle East and North Africa and other countries in the world.

The Company's domestic household photovoltaic systems are mainly sold through direct sales and channel distribution in the form of standardized products; The industrial and commercial photovoltaic systems are mainly sold through both direct selling and partner distribution in the form of customized products.

#### <sup>(2)</sup>Power station business

Relying on its rich experience in project development, construction and operation, the Company has developed a variety of sales models for power station business, such as build-hold-transfer model, build-transfer model and joint development-construction model. The build-hold-transfer model is to sign a sales contract with investors to transfer the assets of a power station project after completing the construction of the power station and continuing to operate it for a certain period of time with the advanced power station system implementation capacity; the build-transfer model is to combine a project's characteristics and investors' investment preferences with special designs and construction schemes at the early stage of project development, and to complete construction and sign cooperation agreements with investors to transfer the assets of power stations. The joint development-construction model is mainly for long-term cooperative strategic investors. Generally, their projects are large-scale. The Company provides package solutions for the design, construction and operation of projects and works with strategic investors to complete the development and construction.

#### 3) Sales models of smart energy business

Smart energy business is an extension of the Company's product business and system business. Relying

on the Company's brand of high-quality photovoltaic products and systems, smart energy business has expanded its business scope in the fields of new energy power generation, energy storage, transmission and distribution and electricity sales. Trina Storage focuses on creating differentiated competitiveness in segmented areas to establish brand differentiation strategy. Smart energy business focuses on intelligent energy storage solutions, and is committed to providing customers with high-security, cost-effective and high-efficiency new energy-side solutions, grid-side solutions, user-side customized solutions and microgrid energy storage solutions through modular, scalable and long-life-cycle energy storage systems, so that customers can enjoy complete system solution services and efficient and reliable energy storage system integration products including demand analysis, scheme design, system integration and construction commissioning.

The Company's energy storage products can help photovoltaic, wind power and other new energy sources to realize off-peak grid connection, improve the self-consumption ratio, reduce the impact of new energy sources on the grid system, attract harmonic waves generated by photovoltaic and wind power generation, and enhance the power quality of new energy power generation. At the same time, the Company actively grasps the market opportunity of the rapid growth of overseas energy storage demand, gives full play to the advantages of its global brand channels, achieves large-scale project breakthroughs in key overseas markets and maintains shipments to vigorously expand overseas high-quality household energy storage customers and achieve remarkable results.

#### 2.2.5 R&D model

Trinasolar always insists on independent innovation. Taking innovation as the top of the company's development strategy, the Company has set up the Central Research Institute, a leading and authoritative platform at the national and industry levels, which focuses on basic research, cutting-edge research, common key technology research and special research for photovoltaic and leads the future development of photovoltaic science and technology. The Company has built the first batch of State Key Laboratories for Photovoltaic Enterprises recognized by the Ministry of Science and Technology in China, and successfully reorganized them into "State Key Laboratories for Photovoltaic Science and Technology" in March 2023. The Company is leading in independent research and development, innovation and other aspects, and was rated as a "national technological innovation demonstration enterprise". Relying on national doctoral workstations, Jiangsu Engineering Center and other innovative platforms, the Company has established an innovation mechanism in terms of R&D platform, R&D team, R&D system and incentive methods. The Company actively promotes the strategy of "Going out and Inviting in" to attract talents, and has gathered a group of top-notch talents in industrial technology innovation and outstanding backbone members in scientific research. It has also built cooperative relationship with outstanding enterprises and universities at home and abroad in an open and cooperative mode, and draws on many advantages to jointly break through the technical challenges in the industry.

Relying on the innovative platform of "One Lab and Two Centers" represented by the State Key Laboratory of PV Science and Technology, the National Enterprise Technology Center and the New Energy Internet of Things Industry Innovation Center, the Company has successively undertaken and participated in the national "863 Plan" and "973 Plan", national key R&D projects, the special fund for provincial carbon peak and carbon neutrality for scientific and technological innovation and the commercialization of provincial scientific and technological achievements, which consolidated and enhanced the Company's global leading position.

#### **2.3 Industry situation**

#### 2.3.1 The development stage, basic characteristics, and main technical thresholds of the industry

Trinasolar is a contributing member of solar photovoltaic industry. The upstream of photovoltaic industry comprises polysilicon smelting, ingot casting, rod drawing, slicing, etc.; the midstream industry includes solar cell production, photovoltaic module packaging, testing, etc.; and the downstream industry consists of the installation of photovoltaic application system, services, etc. After years of development, China's photovoltaic industry has formed a complete industrial chain, and has ranked the first in the world in terms of manufacturing capacity and market share. The photovoltaic power generation is grid-parity, and there is no more subsidy. The market scale has continued to expand, the global market challenges have increased, new technologies have been iterated, and the competition has become increasingly concentrated.

#### 1) The market scale continues to expand

Driven by the transformation of global energy structure, the continuous cost reduction and the efficiency increase of photovoltaic power generation, the market of photovoltaic industry has expanded rapidly. In 2023, the global newly installed capacity was about 390GW, a year-on-year increase of 69.6%; Among them, the newly installed capacity in China is about 217GW, up 148.1% year-on-year, accounting for about 55.6% of the global newly installed capacity. Looking forward to the future, the global demand for electricity will continue to grow, and the proportion of new energy represented by photovoltaics will also continue to increase. According to the forecast of the International Energy Agency, the proportion of renewable energy in global power supply will reach 42% by 2028, of which photovoltaic and wind power will account for 25%, which is significantly higher than 11% in 2022.

#### 2) The challenges of global market increase

The demands of photovoltaic industry are distributed around the world, while the supply is mainly concentrated in China at present. Among the global output of silicon materials, silicon wafers, batteries and modules in 2022, China accounted for 85.6%, 97.4%, 86.9% and 84.8% respectively, and China's production capacity accounts for 87.0%, 97.9%, 86.7% and 80.8% respectively, according to the annual report of CPIA. China's photovoltaic industry is far ahead in global competition, and continues to provide high-quality photovoltaic modules to the world. However, the frequent changes in trade policies in some countries and regions and the increasingly complex and uncertain international environment pose a greater challenge to the internationalization and globalization of photovoltaic enterprises in China. Global leading enterprises represented by Trinasolar are now faced with more complicated and diverse environments, policies and markets. For this reason, the ability of globalization has increasingly become one of the barriers to competition in the photovoltaic industry. Enterprises with reasonable global production capacity layout, stronger brand and channel advantages will obtain higher market share and richer profit returns.

#### 3) Technology iteration continues

Reducing cost and increasing efficiency has always been the target of photovoltaic industry. With the conversion efficiency of traditional P-type PERC cells approaching the theoretical limit, the photovoltaic industry has started to switch to N-type cell technology. According to the CPIA's data, the market share of N-type cells was 26.5% in 2023, of which Topcon was 23.0%. The majority of newly installed lines in 2023 were for the mass production of N-type cells, and 70% of the bidding each month from September

to December in 2023 was for N-type modules. It is expected that the penetration of N-type modules will increase rapidly in 2024.

#### 4) The competition becomes increasingly concentrated

As the photovoltaic industry becomes more market-oriented and gird-parity, the concentration of the industry is expected to show a steady and rising trend. The advantages of leading enterprises in global layout and management capabilities, brand power and channel accumulation, technology research and development and industrialization, integrated production capacity and supply chain management will be more significant in the long run, which is the basis for the gradual increase of their market shares. The industry is currently in the cycle of oversupply. The competition among enterprises is intensified and the price of industrial chain is rapidly declining. Leading enterprises with integrated business are expected to rely on the sales of modules to ensure the upstream operating rate, gain more cost advantages, and rapidly increase their market shares in the future when the balance between supply and demand is achieved.

#### 2.3.2 Analysis of the Company's industry status and its changes

Trinasolar, founded in 1997, is one of the earliest enterprises to enter the photovoltaic field in China. After years of continuous cultivation and navigating through market cycles, Trinasolar has accumulated profound industry experience and brand value and become a top enterprise leading the development of photovoltaic module industry. By the end of 2023, the Company's production capacity of wafers, cells and modules was 55GW, 75GW and 95GW respectively, of which the production capacity in Southeast Asia was 6.5GW, 6.5GW and 6.5GW respectively. The Company's module shipments have ranked among the top three in the industry for many years. In 2023, the shipment volume was 65.21GW with a year-on-year increase of over 51.3%.

Adhering to the business philosophy of orienting toward customer demands and creating value for customers, the Company is devoted to the R&D and mass production of innovative technologies in the photovoltaic industry to accelerate the photovoltaic cost reduction, further respond to the "14<sup>th</sup> Five-Year Plan" of the country, promote the realization of "carbon peak and carbon neutrality", and contribute to the low-carbon transformation towards clean energy and green development.

The Company continues to lead the photovoltaic industry in ecological construction and technological innovation. According to the phased demand of industry development, the Company jointly launched 210mm large-size silicon wafers, cells and modules together with partners of the industrial chain, led the establishment of "Innovative and Open Ecoalliance for 600W + Products", improved the supply pattern of all parts of the photovoltaic industry chain. At the same time, the Company actively explores and innovates. By combining the independently developed N-type i-TOPCon advanced cell technology with 210mm large-size modules, Trinasolar became the first enterprise in the industry to realize the mass production power of TOPCon modules exceeding 700W+ in 2023, leading the industry into the PV7.0 era. With the advanced technology upgrade of the new generation i-TOPCon, the mass production power of the Vertex N-type large version has been upgraded to 720W+.

While continuously improving the core competitiveness of photovoltaic module industry, the Company actively develops energy storage business, forming a business development pattern of "Solar+Storage".

Benefiting from the worldwide transformation of new energy system, the global energy storage market is also showing a rapid growth trend. With the large market demand, the strong brand and the channel advantage, the Company's "Solar+Storage" customers account for as high as over 65%. Ranked top 5 by BNEF in terms of bankability, Trinasolar highlights its value guarantee for customer as a global provider of energy storage and system integration. Relying on its global system solutions and global delivery service network, the Company's "Solar+Storage" solution upgrades and iterates rapidly to respond to the ever-changing needs of customers in an agile and efficient manner. Through the three-wheel drive of "210mm-based N-type high-efficiency modules, intelligent trackers and energy storage systems", Trinasolar will continue to promote the deep integration of Solar+Storage, give full play to the advantages of cost, channel, management and technical system, build power grid-friendly energy storage power stations, and promote the transformation of new power systems.

# 2.3.3 The development of new technologies, new industries, new forms of business and new models and their future development trends during the reporting period

The Company has always insisted on investing in the research and development of advanced technologies in the fields of high-efficiency solar cells and high-power modules, paying attention to both the research of cutting-edge technologies and the promotion of mass production technologies.

1) Research on product technology and industrialization of N-type i-TOPCon module: Trinasolar firmly cultivates the N-type advanced technology route, proposes the bifacial structure and process flow of "i-TOPCon" suitable for industrial production, and continuously iterates and upgrades the TOPCon technology. In 2023, the Company introduced a new generation of N-type i-TOPCon advanced technology with its original rectangular-shaped cell technology, large-area boron laser doping selective emitter, back surface reflector and Poly-Si films deposited by the PECVD approach, and the cell efficiency rapidly improved. As of the disclosure date of this report, the maximum power of the module has exceeded 740W using the new generation of N-type i-TOPCon advanced technology, and 210+N has become the vanguard to lead the industry into 700W+.

2) Research on the technology and industrialization of HJT high-efficiency module: the R&D team systematically studied the key industrialization technologies such as HJT cell technology, module materials, mass production technology, equipment cost reduction technology and long term reliability. Focusing on the national "863 project" undertaken by Trinasolar-"Key Technologies for Industrialization of MW Thin Film Silicon/Crystalline Silicon Heterojunction Solar Cells", the R&D team has continuously explored the possibility of lowering the cost of equipment and production. The Company actively conducts multidimensional research and technical reserves in HT cell technology, and the conversion efficiency of mass-produced HJT cells has reached 26.21% (Germany ISFH • CalLab test certification), and the conversion efficiency of mass-produced cells of the same size ranks first in the industry.

3) Technology research on the mass production of "Vertex" modules: as the production capacity of crystalline silicon industry chain is becoming increasingly concentrated and large silicon wafers are becoming the development trend, the Company actively responds to the market changes, conducts forward-looking technology research and demonstration, proactively integrates with equipment manufacturers, main and auxiliary material manufacturers, logistics suppliers, etc. for research and

development, and continuously launches high-power "Vertex" module series to lead and promote the accelerated development of the industry. Based on the 210mm and 210R large-size silicon wafer, the Company introduced high-power + "Vertex" series by adopting innovative model design, multi-grid technology, superimposed nondestructive cutting, high-density packaging and other advanced technologies. The average power of mass production is 690W-700W, and it is constantly moving towards 700W+. Trinasolar is committed to maximizing the value of ultra-high-power modules and solutions in the application and leading the industry to usher in a new era of photovoltaic 700W+.

4) Tracking system: During the reporting period, the Company released a brand-new upgraded Vanguard 1P tracker, which has the core advantages of terrain adaptability, construction adaptability, climate adaptability and peripheral adaptability. It is equipped with a self-developed SuperTrack intelligent algorithm, which can automatically adjust the tracker's angle through machine learning, real-time monitoring and analysis of the irradiance and shading of arrays. Compared with the 630W module, the BOS cost is reduced by 0.038 yuan /W and the IRR gain is as high as 0.4% under the typical working conditions of flat terrain.

5) Research on the technology of special long-life lithium battery for energy storage: Trina Storage developed the innovative technology of "3+1+1" by studying the capacity attenuation mechanism during the lithium battery cycle to slow down and replenish the loss of active lithium. It successfully developed the "Trina Cell" with long-life cycle of 306Ah and 314Ah, which realized the full-stalk self-research and self-production and significantly reduced the cost. Based on the in-depth understanding of electrochemistry, a new electrochemical system is explored from the atomic and molecular scale. The zero attenuation technology can achieve zero attenuation after 2000 cycles. Based on the energy storage application scenario of high temperature tolerance, the first generation of  $45^{\circ}$ C+ high temperature cell technology has been developed and now applied to new products. The "Trina Cell" continuously reduces the life cycle cost of energy storage cells and ensures customer satisfaction through technical strategies such as extreme safety, continuous improvement of cell life and applications expansion. In terms of safety, the "Trina Cell", as a vehicle-grade cell, has passed all the abuse testing of energy storage cells such as thermal runaway, overcharge and extrusion required by the national standard, as well as more stringent nail penetration test.

6) Research on integration technology of liquid cooling system: Trina Storage launched Elementa, a flexible liquid cooling battery cabinet on the basis of self-developed long-life dedicated energy storage cells, which can be equipped with series inverters and centralized inverters according to application scenarios and customer requirements. Using the self-produced and self-developed long-life "Trina Cell" equipped with the innovative Pack Plus technology, the cell temperature difference inside PACK is reduced to within  $2.5^{\circ}$ C, and the temperature difference of the whole system is reduced to within  $4.5^{\circ}$ C. In addition to the improved volume energy density and space utilization efficiency, Pack adopts standard IP67 protection and lightweight high-strength shell, which greatly improves the security of the system. With the development of cloud-side collaborative intelligent diagnosis system, system anomalies and cell anomalies are identified in advance, and the system security and operation and maintenance efficiency are enhanced

#### 3. Major accounting data and financial indicators

### 3.1 Main accounting data and financial indicators in recent 3 years

		τ	Jnit: Yuan	Currency: RMB		
	2023	20	22	Year-on- year increase/ decrease( %)	2021	
		Before adjustment	After adjustment			
Total assets	120,312,286,474.63	89,977,706,102.23	89,976,063,881.83	33.71	63,539,881,859.12	
Net asset	31,521,757,649.42	26,340,485,928.62	26,338,970,001.84	19.67	17,111,933,473.15	
attributable to the listed company's						
shareholders						
Operating	113,391,782,628.35	85,051,792,848.83	85,051,792,848.83	33.32	44,480,390,071.81	
revenue						
Net profit attributable to the listed company's	5,531,301,971.10	3,681,238,776.77	3,680,021,833.74	50.26	1,804,231,711.50	
shareholders						
Net profit attributable to	5,754,883,902.99	3,466,453,912.82	3,465,236,969.79	66.02	1,547,710,580.43	
listed company shareholders after deducting non-recurring						
profits and losses						
Net cash generated from in operating activities	23,996,441,283.40	9,237,091,543.07	9,237,091,543.07	159.78	1,098,092,296.85	
Weighted average return on equity (%)	18.97	16.16	16.16	Increase 2.81 %	11.27	
Basic earnings per share (RMB/share)	2.55	1.72	1.72	48.26	0.87	
Diluted earnings per	2.42	1.71	1.71	41.52	0.87	

share					
(RMB/share)					
R&D	4.88	5.43	5.43	Decrease	5.74
investment as a				0.55 %	
proportion of					
operating					
revenue (%)					

#### 3.2 Major accounting data by quarter during the reporting period

	Unit: Yuan Currency: RM						
	Q1	Q2	Q3	Q4			
	(Jan Mar.)	(AprJun.)	(JulSep.)	(OctDec.)			
Operating revenue	21,318,993,761.96	28,064,643,931.67	31,735,787,504.58	32,272,357,430.14			
Net profit attributable to the listed company's shareholders	1,767,852,537.51	1,772,154,507.43	1,537,026,917.98	454,268,008.18			
Netprofitsattributabletolistedcompanyshareholdersafterdeductingnon-recurringprofits and losses	1,729,868,423.11	1,982,216,100.67	1,407,648,185.60	635,151,193.61			
Net cash generated from in operating activities	-893,372,313.32	3,698,103,823.38	7,449,892,060.22	13,741,817,713.12			

Description of differences between quarterly data and disclosed data in periodic reports  $\square$  Applicable  $\square$  Not applicable

#### 4. Shareholder information

4.1 Total number of common shareholders, total number of preferred shareholders with voting rights restored, total number of shareholders with special voting rights and the top 10 shareholders

Unit: share

Total number of common shareholders at the end of the period	48,085
Total number of common shareholders at the month-end prior to the disclosure of this	49,669
report	

Total number of preferred shareholders with voting rights restored at the end of the	0
reporting period	
Total number of preferred shareholders with voting rights restored at the month-end	0
prior to the disclosure of this report	
Total number of preferred shareholders with special voting rights at the end of the	0
reporting period	
Total number of preferred shareholders with special voting rights at the month-end	0
prior to the disclosure of this report	

### Shareholding situation of the top 10 shareholders

				Number of shares	Number of restricted shares held including loaned shares through refinancing	Shares in pledge or frozen		
Name of shareholders (full name)	Increase/dec rease during the reporting period	Total shares held at the period-end	Sharehol ding ratio	holding restricte d sales conditio ns		Status	Quantity	Nature of shareholders
Jifan Gao	290,938	352,219,885	16.20	0	0	None	0	Domestic natural person
JiangsuPanji Investment Co., Ltd.	0	316,408,747	14.56	0	0	None	0	Domestic non-state-own legal person
HuafuCapital Management Co., Ltd.	-19,916,166	233,247,120	10.73	0	0	None	0	State-own legal person
Shenzhen Hongyu Information Technology Co., Ltd.	0	110,782,815	5.10	0	0	None	0	Others

C1 :							1	
China								
Merchant								
Bank-The								
Huaxia	41,934,522	90,698,211	4.1	7 0	0	None	0	Others
Shanghai	41,954,522	90,090,211	7.1	/	0	None	0	Others
Stock								
Exchange 50								
ETF								
Ningbo								
Meishan								
Bonded Port								Domestic
Jingwen	1,050,000	68,369,309	3.1	5 0	0	None	0	non-state-own
Investment	_,,							legal person
Co.,								legui person
Ltd.								
Hong Kong								
Securities								
	4 422 696	46 202 527	0.1	2 0	0	Nama	0	Overseas
Clearing	4,433,686	46,392,527	2.1	3 0	0	None	0	legal person
Company								
Limited								
Trinastella								Domestic
Investment	0	45,340,012	2.0	9 0	0	None	0	non-state-own
Development	0	10,010,012	2.0			rione		legal person
Co. Ltd.								legui person
Jiangsu								Domestic
Qinghai	0	35,156,527	1.6	2 0	0	None	0	non-state-own
Investment	0	55,150,527	1.0	2	0	TONE	0	legal person
Co.,Ltd.								legai person
Industrial and								
Commercial								
Bank of								
China—The								
E Fund	14,007,796	30,031,527	1.3	8 0	0	None	0	Others
Shanghai								
Stock								
Exchange 50								
ETF								
I	the above-menti	oned shareholder-re	elated	Among the to	n ten shareholde	rs of the 4	L company Ti	angsu Panii
Explanation of the above-mentioned shareholder-related relationship or concerted action			Among the top ten shareholders of the company, Jiangsu Panji Investment Co., Ltd. and Trinastella Investment Development Co.					
relationship of (	· ····································				Ltd., Jiangsu Qinghai Investment Co.,Ltd.are the persons acting in			
				concert of Mr. Jifan Gao, the controlling shareholder and the				
Note C	ad aba 1 - 1 1	······································	e ata 1	actual controller of the company.				
		with voting rights r	estored	None				
and the total shares held								

#### **Depository Receipt Holder Information**

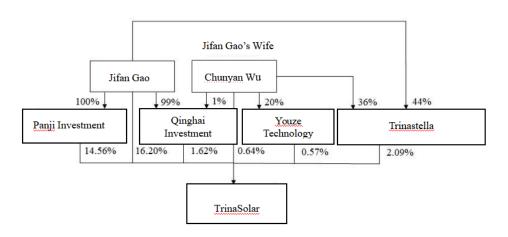
 $\Box$  Applicable  $\boxdot$  Not applicable

#### Table of the Top Ten Shareholders with Voting Rights as of the end of the reporting period

 $\square$  Applicable  $\boxdot$  Not applicable

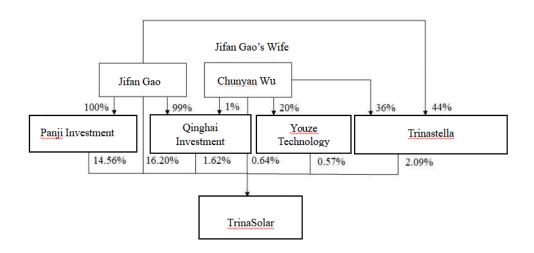
# **4.2** Block diagram of property rights and control relations between the controlling shareholders of the Company

 $\square$  Applicable  $\square$  Not applicable



# **4.3** Block diagram of the property right and control relations between the actual controller and the Company

 $\square$  Applicable  $\square$  Not applicable



# 4.4 The total number of preferred shareholders and the top 10 shareholders of the Company at the end of the reporting period

 $\Box$  Applicable  $\boxdot$  Not applicable

#### 5. Corporate bonds

 $\Box$  Applicable  $\boxdot$  Not applicable

### Section III Important Matters

 The Company shall, according to the principle of materiality, disclose the significant changes in the Company's operating conditions during the reporting period, as well as the events that have or will have a significant impact on the Company's operating conditions.
Please refer to "I. Discussion and Analysis of Operating Conditions" in this section for details.

2. The Company shall disclose the reasons for potential delisting risk warnings or termination of listing after the disclosure of the Company's annual report.

 $\Box$  Applicable  $\square$  Not applicable