

Solar Energy for All

# 2017 Trina Solar Corporate Social Responsibility Report

Customer-Centric Open-Mindedness Dedication Excellence

Achieve Our Dream  
with Sunlight



[www.trinasolar.com](http://www.trinasolar.com)



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**Trina**solar





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# About the Report

## Range and Scope of the Report

Trina Solar compiled and issued the Corporate Social Responsibility (CSR) report since 2011, and the last report was published and issued in August, 2017.

The report elaborates on Trina Solar's ideas, strategies and concrete practices in relation to corporate social responsibility in 2017, covering all factories and operating business units which were under management control of Trina Solar. It includes all managed operations and consolidates our reporting on economy, environment, supply chain, people and community. In this report, we explain our vision and policy with respect to corporate social responsibility and report on our management approaches, activities, initiatives and our key performance indicators in this field during 2017.

The annual CSR report is dedicated to providing information to all stakeholders, including stockholders, potential investors, clients, staff,

the communities we live and work in, business partners, public welfare organizations, media and government, to help them understand and evaluate Trina Solar's influence, risks and opportunities in relation to sustainable development. We will continue to improve the disclosure quality of social responsibilities and gradually widen our sustainable development road.

## Report Frame

Trina Solar refers to Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines to compile our CSR report every year. The 2017 CSR report is based on the Global Reporting Initiative's Sustainability Reporting Standards (GRI Standards) by revealing relevant information at comprehensive level.

## Data Measurement

The data in this report mainly comes from the original records of practical operation. The information in the

report will receive internal auditing by the company, and some special content will be subject to external auditing. We will periodically validate the effectiveness of the data collection process and data management system. We obtained ISO14001 Environmental Management System certification in 2008 and OHSAS18001 Occupational Health Management System certification in 2010. In 2011, we got ISO14064 certification for Greenhouse Gas Emission Data Verification. In 2012, we passed Product Carbon Footprint Verification PAS2050. In 2015, we were successfully certified with ISO50001/GBT 23331- Energy Management System. We validate the effectiveness of these systems through external auditing every year.

Our CSR report is prepared both in Chinese and English. The report is retrievable at Trina Solar's website ([www.trinasolar.com](http://www.trinasolar.com)). We appreciate your comments or feedbacks on this report via e-mailing to [CSR@trinasolar.com](mailto:CSR@trinasolar.com).



# 32



Cumulative module shipments reached over 32GW, ranked No.1 globally. In 2017, shipments reached 9 GW.

# 100+



As of end of 2017, the upstream and downstream business covered 100 countries and regions.

# 2



Global cumulative grid-connected PV power stations reached 2 GW.

# 14,666



The number of employees worldwide reached 14,666.

# 10%+



Cumulative module shipments occupied 10% of global market share.

## 'Zero' Carbon Emission

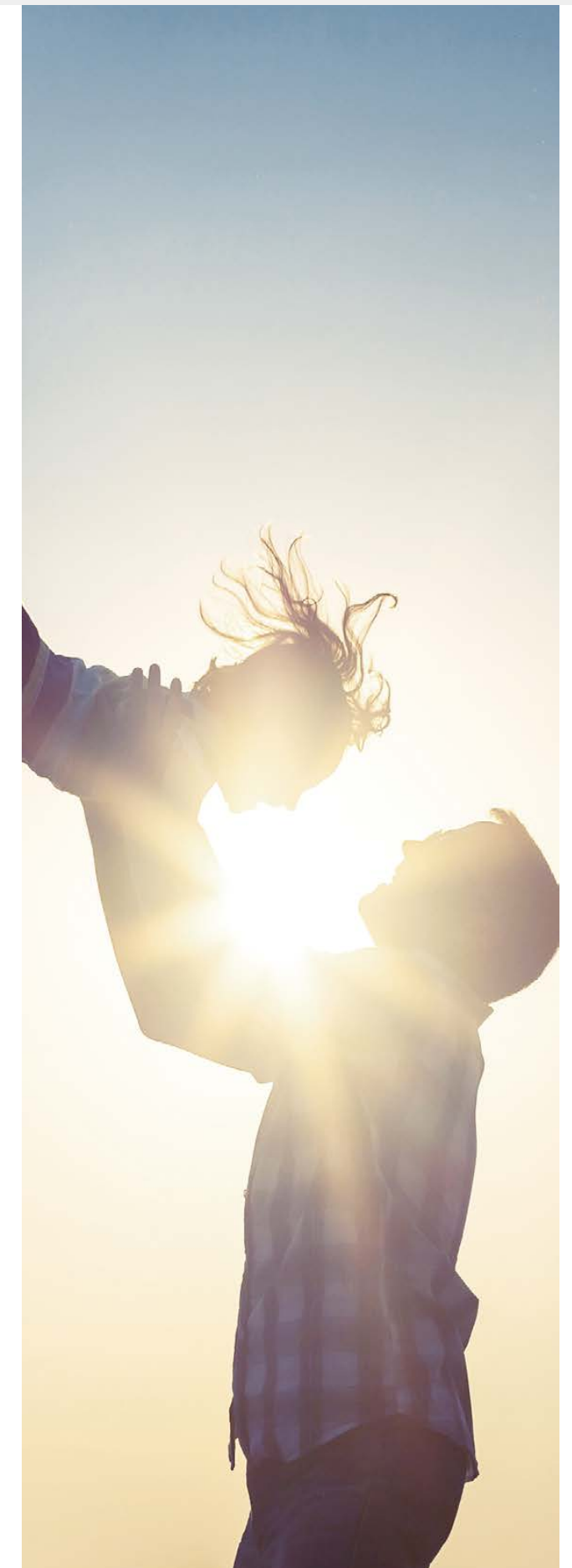


Achieved 'zero' carbon emission since 2016.

# 20.8%



Electricity Consumption per MW Module Production in 2017 reduced by 20.8% compared to that in 2012.



## Trina Era 3.0: A Global Leader of the Energy Internet of Things (IoT)



**We believe that beautiful tomorrow comes from our joint efforts of today. Our commitment to corporate social responsibility remains as strong as ever. We will integrate our efforts and practices into the collaborative partnership towards the UN's sustainable development goals. We will make our unremitting efforts to forge ahead for the better and sustainable future.**

### Sustainable Development Strategy: Trina Era 3.0

Time flies. In 2017, Trina Solar entered the milestone of 20<sup>th</sup> anniversary since its establishment. 2017 was a successful and remarkable year for Trina Solar and its more than 14,000 employees. We not only achieved a healthy, steady and sustainable growth in our various businesses, but also forged ahead into Trina Era 3.0: A Global Leader of the Energy Internet of Things (IoT).

From the founding of Trina Solar in 1997 to 2006, Trina Era 1.0, we laid the foundation for the manufacturing of photovoltaic modules and achieved the globalization of market, capital and talent. From Trina Era 2.0 of 2007 to 2016, we became the world's leading provider of photovoltaic modules and solar energy overall solutions' leader. In 2017, we successfully opened up a new era of Trina Era 3.0 - A Global Leader of the Energy Internet of Things (IoT). Energy IoT makes the use of energy system and IT integration to establish a smart energy cloud platform. We believe that energy IoT is bound to bring a revolutionary and breakthrough impact to the energy industry over the next two decades. As a global leader in solar industry, Trina Solar will seize the

opportunity to keep pace with the times and open up a new chapter in bringing solar energy into the tens of thousands of homes and factories in Trina Era 3.0.

In 2017, we put forward the six strategies of innovation, branding, globalization, intelligence, platformization and industry and financial integration. Our businesses have spread to more than 100 countries and regions. Our annual module shipments exceed 9 GW. Our accumulated shipments, continuously maintaining the number one position in the world, amount to more than 32 GW, which is equivalent to sum of the capacity of the Three Gorges Power Station and the Gezhou Dam Power Station. We are actively responding to the country's "Belt and Road Initiative". Trina Solar invested USD 100 million to build the largest 1 GW solar photovoltaic cell manufacturing facilities in the Yun-Zhong Industrial Zone, Beijing Province in Vietnam. We are both a distributor of solar energy industry and a propagator of photovoltaic technology in Vietnam. We bring more than 1,000 jobs and widely disseminate clean energy application in the region.

We are always adhering to the concept of innovative development and extending our business to the downstream. We are

committed to providing customers with one-stop system integration solution for project development, financing, design, construction, operation and maintenance etc. We strive to implement "PV+" strategy, integrating photovoltaic application with commercial, agriculture, construction, transportation, communications and other industries. As of the end of 2017, Trina Solar achieves the cumulative PV grid-connected projects of nearly 2 GW worldwide.

In 2017, we launched the world's first residential PV brand – Trinahome and achieved shipments of more than 20,000 sets of residential PV system. We provide total solutions to our customers by providing integrated services such as quality assurance, insurance, operation and maintenance, and financing. We put a plan in place to implement the "Million Solar Roofs Plan" over the next five years. The plan will install Trina Solar's PV system for one million households to help millions of homes around the world meet their dream of photovoltaic green energy.

### Care for the Earth: Win Green Future Together

Trina Solar makes our efforts to support the UN Sustainable Development Goals (SDGs). We believe that PV clean energy will play an important role in driving the United Nations 2030 Agenda for Sustainable Development. In 2017, Trina's three 'Top Runner' projects, with the total designed capacity of 220 MW, have been successfully connected to grid. The two projects, named as Huaibei 40 MW Floating PV Project and Yingshang Ancient City 130 MW Floating PV Project, were built on water surface in coal mining subsidence area. Another 50 MW 'Top Runner' project, located in Yangquan City, Shanxi Province, made full use of the abandoned areas of coal mining subsidence area, coal gangue hill and mining backfill area. These projects not only realized the reuse of abandoned subsidence area, provided clean power to the localities, but also improved the local ecological environment and increased income for peasants who lose their land.

We strive to reduce the impact on the environment and minimize carbon emission and energy consumption from our business operations. We achieved 20.8% and 23.9% reduction for electricity and water consumption per MW module production in 2017 compared to that of in 2013. Trina Solar has achieved 'zero' carbon emission for operations in China since 2016. In 2016 and 2017, the solar power stations owned by Trina Solar in China contributed additional 1.1 billion kWh of solar clean power to the world, reducing CO<sub>2</sub> emission by approximately 900,000 tons.

### Focus on Supply Chain: Share Sustainable Development

We integrate sustainable development concept into our sourcing business and processes. While actively fulfilling our social responsibilities, we urge our global suppliers and partners to shoulder their social responsibilities. We reduce our carbon emission related to our transportation and logistics network by optimizing the packaging, lowering shipping weight and increasing local sourcing. We continue to improve supply chain sustainability through our supplier review, assessment and skill-building scheme. We are committed to going hand in hand with global suppliers to jointly promote the sustainable development and share the value of sustainable development.

### Care for Employees: Promote Harmonious Growth

Trina Solar pays attention to talent development. We have attracted talents from over 30 countries worldwide and established a global integrated culture. Through establishing salary incentive mechanism and professional development channels, we explore various ways to make our employees to achieve their own value and career development. In 2017, Trina Solar won the award of 2017 Best Companies to Work from Business Media International, an Asia's leading business

magazine and won the Best Employer Brand Building Award from HR Excellence Center (HREC).

### Contribute to Society: Build a Better Home

Trina Solar is committed to achieving the target of a shared prosperity together with local communities. In 2017, Trina Solar actively developed the targeted poverty alleviation projects. By making use of the characteristics of long-term and stability of PV projects, Trina Solar transforms poverty alleviation from 'blood transfusion' mode to 'targeted poverty alleviation' and 'hematopoietic poverty alleviation'. The 20 MW PV poverty alleviation project in Minqin Hongshagang, Trina Solar's Phase II project in Wuwei, was successfully connected to the grid. The project made full use of the annual 1,420 hours of light resources from the wasteland. It undertook 800 households' poverty alleviation task for annual 3,000 RMB/household poverty alleviation funds in Dongxiang County, Linxia, Gansu Province. In early 2017, we donated 30 KW PV modules to India's Nagarjuna Institute to help them to build a 'solar powered parking shed'.

In 2017, Trina Solar was granted a Gold Recognition Level in Ecovadis' 2017 Corporate Social Responsibility (CSR) assessment, a global supplier sustainability ratings organization. The Gold Recognition Level in EcoVadis' CSR assessment demonstrates Trina Solar's commitment to promote sustainable development. We believe that beautiful tomorrow comes from our joint efforts of today. Our commitment to corporate social responsibility remains as strong as ever. We will integrate our efforts and practices into the collaborative partnership towards the UN's sustainable development goals. We will make our unremitting efforts to forge ahead for the better and sustainable future.

Jifan Gao  
Chairman & CEO of Trina Solar



## Governance & Development - Trina Era 3.0

In 2017, Trina Solar successfully opened up a Trina Era 3.0. In Trina Era 3.0, we will devote ourselves to a higher standard corporate governance by incorporating social sustainability into corporate strategy, management and long-term development. Driven by the six strategies of "Innovation, Branding, Globalization, Platformization, Intelligence and Industry & Financial Integration", Trina Solar operates in good faith. We are committed to complying with laws and regulations, international conventions and business ethics. Trina Solar sticks to tackling the relationship with suppliers, clients, governments, partners, competitors and other stakeholders with principles of fairness and honesty, aiming to achieve the sustainable development together.

32



Cumulative module shipments reached over 32 GW, ranked No. 1 globally. In 2017, shipments reached 9 GW.

100+



As of end of 2017, the upstream and downstream business covered 100 countries and regions.

2



Global cumulative grid-connected PV power stations worldwide reached 2 GW.

14,666



The number of employees worldwide reached 14,666.



# Company Profile



Trina Solar, founded in 1997, head-quartered in Changzhou, China, was one of the earliest solar enterprises listed in NYSE. As the world's leading solar solution provider, Trina Solar developed a portfolio of solar solutions, such as smart module, energy storage system, smart system, smart maintenance, etc. and provided our clients with integrated one-stop system solutions for development, financing, designing, construction and maintenance. In 2017, Trina Solar opened up a new era 3.0 - to become a global leader of the Energy Internet of Things.

Trina Solar has established regional headquarters in Zurich, Switzerland for Europe area, in San Jose, CA, USA for American area and in Singapore for Asian-Pacific & Middle-east area. We also has offices in Tokyo, Madrid, Milan, Sydney, Beijing, Shanghai, etc. Our business covers more than 100 countries and regions worldwide. Trina Solar devotes itself to building a sustainable solar industry together with its installers, distributors, utility and project developers worldwide. Trina Solar is committed to leading solar industry in

terms of technology innovation, product quality, environmental protection and social responsibility and providing its clients with clean & reliable energy. As of the end of 2017, Trina Solar achieved cumulative module shipments of over 32 GW, ranked No.1 globally, occupying 10% of global market share. With each solar module operating normally, these solar modules convert sunlight into electricity, which can reduce carbon dioxide emission by 32 million tons per year compared to that of thermal power generation.

# Our Businesses



PV Module Manufacturing

Strictly adhere to international quality standards. Continuously improve product efficiency and quality through technological innovation.



PV Power Station Development and O & M

Provide one-stop system integration solutions, including development, financing, designing, construction, operation & maintenance (O&M).



Energy Storage and Off-grid System

Provide energy storage solutions to commercial & residential users, medium-low speed new energy vehicles and communication industry.



Branded Residential PV System

Provide branded PV products and solutions to residential users, aiming to build the first brand of global residential PV system.



Energy Internet of Things

Establish smart energy cloud platform to provide solutions to energy generation, storage, distribution, use and cloud service.



Large scale ground PV station



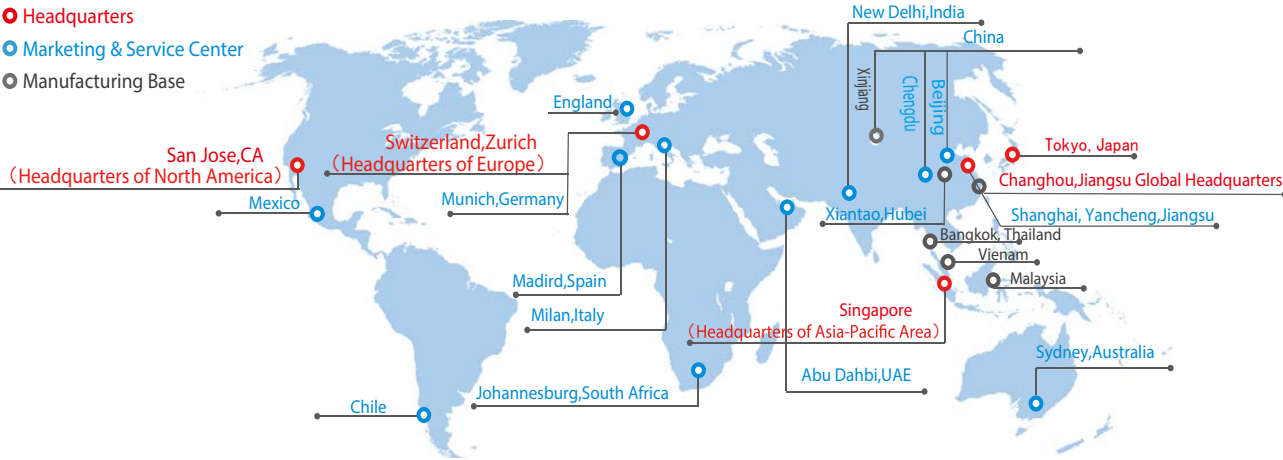
Commercial PV system



Residential PV system

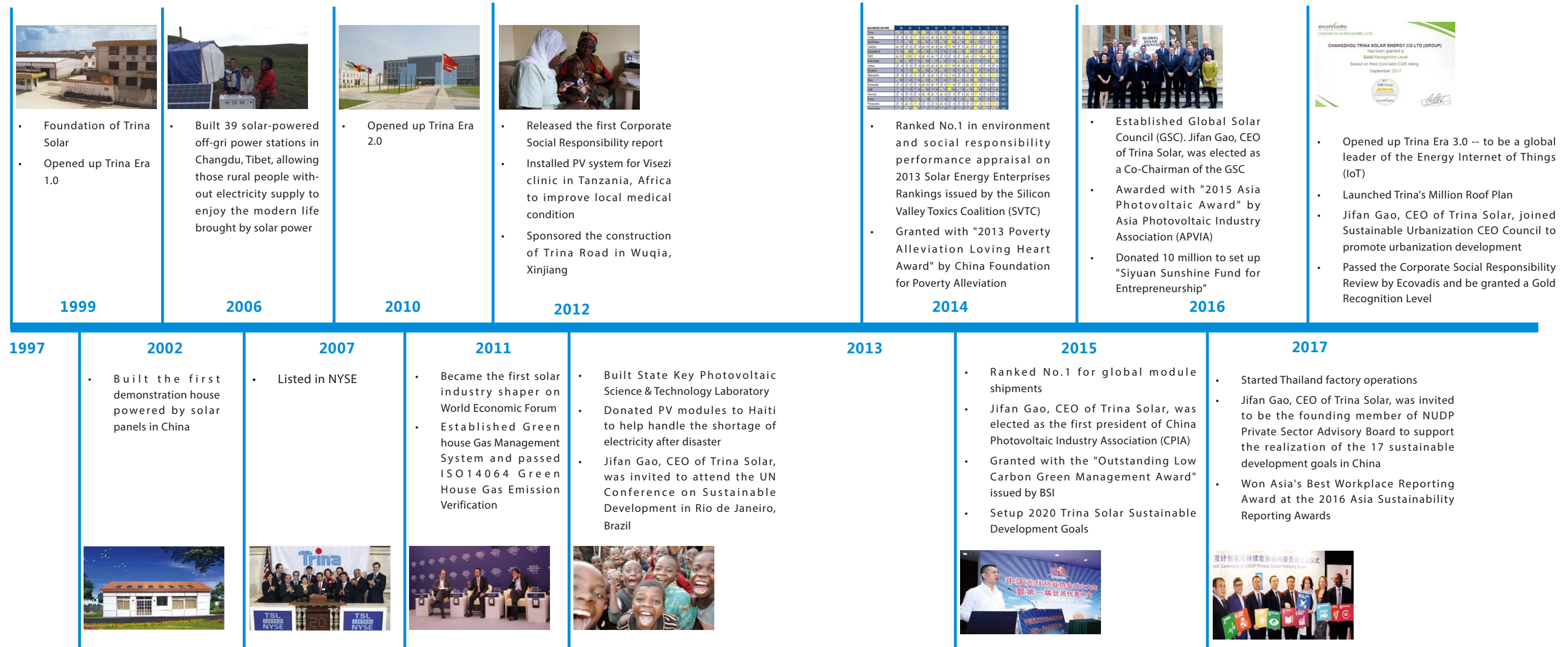


# Global Layout





## Sustainable milestones during Trina Solar's 20 years development



Trina Era 1.0 ( 1997-2006 )

World's Leading Module Manufacturer

Trina Era 2.0 ( 2007-2016 )

World's Leading Solar Solutions Provider

Trina Era 3.0 ( 2017~ )

Global Leader of the Energy Internet of Things (IoT)

Corporate Governance

Legal compliance is not only the guarantee for the survival of an enterprise, but also the foundation for the long-term healthy development. Trina Solar always adheres to legal compliance and business ethics. We strive to protect intellectual property rights and cultivate an ethical mechanism, so as to build a responsible, honest and compliant corporate governance mechanism.

Trina Solar sticks to the philosophy of upholding integrity first. We consciously abide by laws and regulations, international conventions and business ethics, and build our integrity throughout the whole process of production and business activities. Trina Solar promises to continuously create value for our stakeholders, and strives to build a brand image of both 'model management' and 'integrity first'. In December 2017, Trina Solar was awarded the award of Provincial Credible Enterprise by Jiangsu Administration Bureau for Industry and Commerce.

Mission, Vision and Strategies



Mission

Solar Energy for All



Strategies

Be a Global Leader of Energy Internet of Things (IoT)



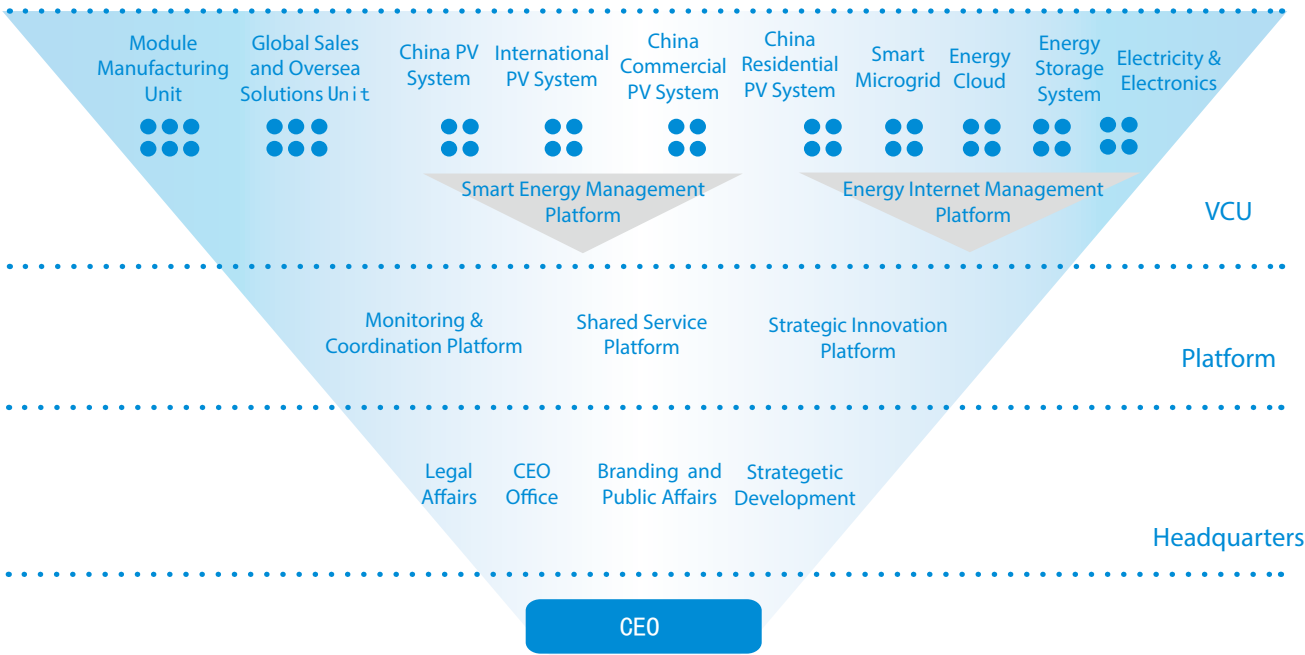
Vision

Be the World's Most Trusted and Respected Solar Energy Company

Organizational Structure

In order to adapt to the ever-changing of solar industry, Trina Solar continuously makes organizational structure transformation, aiming to enhance core competitiveness and vitality. In 2017, Trina Solar adopted a "Platform + Value Creation Unit (VCU)" business model to achieve a flatten organizational structure transformation, which motivated internal employees, and attracted external resources. The "Platform + Value Creation Unit (VCU)" business model is the key to Trina Era 3.0. With

focusing on the value creation, we setup Monitoring and Coordination Platform, Shared Service Platform, Upstream VCU and Downstream VCU. The employees were motivated from being passively managed to self-driven. The operational efficiency gets significantly improved. We continuously synchronize all resources for entrepreneurship, innovation and value creation.



Strategies



Innovation

- Formulate Innovation Committee & Working Group
- Continuously realize the value of innovation by making use of innovative capabilities
- Promote solar energy grid parity
- Achieve the target of millions of households using solar energy



Branding

- Formulate Branding Promotion Committee
- Use 'Achieving our Dream with Sunlight' as our slogan for brand promotion
- Build brand capabilities from all our aspects
- Improve Trina's brand from 'Tier One' to 'Being the First Choice' in the industry



Globalization

- Globalize talents, markets, R&D, and manufacturing bases
- Strengthen and deepen international cooperation in solar industry
- Achieve mutual benefit and win-win situation for global partners



Platformization

- Establish 'Platform + Value Creation Group (VCG)' business model
- Focus on value creation and managing employees from being passively managed to self-driven
- Improve operational efficiency
- Synchronize all resources for entrepreneurship, innovation and value creation



Intelligence

- Make use of new technologies, such as the Internet, Big Data, Cloud, and IoT
- Build intelligent business, intelligent management, as well as intelligent cooperation platform



Industry and Financial Integration

- Fully integrate the power of technology, industry and capital
- Enhance overall strength

Risk Management & Internal Audit

Risk management and control is a necessary condition for the stable development of the company and the security of its employees. Trina Solar sets up a Board of Directors (BOD), and formulates a series of corporate-level rules and regulations, such as General Manager Discussion Procedure, Internal Audit Procedure. The BOD is sub-grouped into three special committees. The important issues submitted to the BOD must be discussed by the special committees to form a formal proposal, so that it is ensured that the decision is made in a scientific, standardized and efficient way.

Trina Solar's BOD has an Audit Committee and an Internal Audit Department. Internal Audit Department strictly abides by the International Internal Audit Standard and Trina Solar Internal Audit Procedure to ensure business compliance and risk control needs. The audit plan approved by the Audit Committee and management is carried out independently. The scope of audit covers R&D, procurement, manufacturing, sales, customer service, human resource, finance, and other aspects and functions. The audit scope and plan are adjusted annually in order to continuously meet the company's business development needs.

Besides, Trina Solar establishes a Risk Control and Compliance Department in order to identify and respond to both external and internal risks adequately. We formulate a Risk Control Working Committee. The members of the committee consist of management representatives from various departments. We regularly identify the various company risks including strategic risks, operational risks, financial risks, compliance risks, the company's platform transformation risks and others. Meanwhile, a risk control plan must be developed to ensure that a balance between potential risks and benefits is reached. We established a Trina's Risk Control and Tracking System (RCTS) in 2017 to ensure that all audit findings were properly and effectively closed.

Risk Control & Tracking System (RCTS)

- 01 Identify responsible persons, deadline for corrective actions, and action plan for all audit findings.
- 02 Audit findings will be closed after verification of evidence submitted to Internal Audit Department.
- 03 All findings will be analyzed and evaluated from different aspects of departments, functions and responsibilities.
- 04 The findings that can't be closed within deadline will be reported to top management quarterly.



## Legal Compliance and Ethics

Trina Solar always adheres to legal compliance. We have integrated ethics and compliance requirements into the company's daily operation. We formulated a series of rules and regulations to guide behaviors of employees and suppliers, e.g., Trina Solar Code of Business Conduct and Ethics, Anti-Corruption Policy, Antitrust Compliance Policy, Reward and Punishment Regulations on Employee Behavior, etc. We also set up Business Ethics Committee, being responsible for ethics management. We have issued requirements and operation guidance about corporate governance on the company's official website ([www.trinasolar.com](http://www.trinasolar.com)).

We ensure employees to abide by business ethics in a clear, simple and direct way. We operate our company to ensure that our operation and management are always in line with applicable business ethics.



## Intellectual Property Rights

Trina Solar respects all intellectual property rights. We are committed to complying with international conventions on intellectual property, as well as local laws and regulations. We established Intellectual Property Management Committee and formulated Intellectual Property Management General Principles, Patent Management System, and Business Secret Management Procedure, to protect Trina Solar's intellectual property rights.

As of the end of 2017, Trina Solar has applied for 1,387 patents, among which 220 are invention patents (including 32 PCT patents, 11 international patents). We boast 802 valid patents, among which 263 are invention patents (including 1 patent in America, 1 patent in Japan, 1 patent in Taiwan). The number of valid invention ranks in the front of Chinese PV industry. In December 2016, Trina Solar's Interdigitated Back Contact (IBC) silicon solar cell was awarded the Excellence Award at the 18<sup>th</sup> China Patent Awards. In December 2017, Trina Solar's Back Bridge Type Contact Electrode of Crystalline Silicon Solar Cell and Preparation Method was awarded the Excellence Award at the 19<sup>th</sup> China Patent Awards.



### Intellectual Property Rights

#### Win the Excellence Award at the 19<sup>th</sup> China Patent Awards

In December 2017, Trina Solar's Back Bridge Type Contact Electrode of Crystalline Silicon Solar Cell and Preparation Method was awarded the Excellence Award at the 19<sup>th</sup> China Patent Awards. The method has successfully solved the key technical problem such as the formation of the backfield of the back-passivated cell and metal contact, which can greatly improve the structure and performance of the crystalline silicon solar cell, so as to improve the conversion efficiency of the crystalline silicon solar cell. The product produced by this technology are widely used in various large power stations, roof-top installations and agricultural shed projects. The method can also provide customers with higher efficiency and lower cost of crystal silicon solar cell products.



## Corporate Culture

Corporate culture is the soul of an enterprise and an inexhaustible source of sustainable development. Trina Solar always advances with the times, and updates our corporate culture in different development stages so that we can improve company's cohesiveness, ensure sound development, help employees realize self-values, and finally realize our mission and vision.

In 2017, we conducted a series of interviews and questionnaires for corporate culture, so as to collect the understandings of core values and suggestions of corporate culture construction and improvement from employees in different positions, grades and regions. We finalized Trina Solar 3.0 core values by interviews and questionnaires.: C-customer-centric, O-open-mindedness, D-dedication, E-excellence, abbreviated as CODE, which means 'A Successful Password for the Future'.

### C: Customer-Centric

Serve our customers with full heart.

- Understand customer' needs
- Quickly respond to customer requests
- Provide superior products and services
- Create excellent customer experience



### O: Open-Mindedness

Embrace change openly.

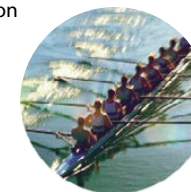
- Value honesty, integrity & candor, accept different view
- Focus on teamwork & synergy, create and share team successes
- Practice self-reflection and self-criticism
- Face the future and embrace change



### D: Dedication

Dedicated to creating values for customers, and our company.

- Be proactive and take quick actions
- Dedicated to work and strive hard to achieve goals
- Be fearless in the face of challenges and difficulties
- Persevere and committed to achieve the mission



### E: Excellence

Pursue higher goals.

- Seek transformational change and continuous improvement
- Courage to innovate and adopt rapid iteration
- Learn fast and surpass ourselves
- Strive to be the best with determination







## Corporate Culture Communication

In order to integrate the core values into the daily behaviors of each Trina employee and put words into actions, we continue to take a variety of programs to ensure that the core values are rooted in every employee's mind and every aspect of our business. We ensure that we maintain our unified thoughts and actions in our day-to-day operations and provide customers with effective services.



Establish Trina Solar Culture Construction Team to promote the company's cultural construction.



Launch Wechat enterprise account, titled with "Trina Culture", to send company news, push office guides and event notifications. Employees could participate in corporate cultural activities more actively.



Set up a mailbox for corporate culture communication to collect each employee's suggestions and comments regarding the cultural construction.



Conduct 360-degree Trina Culture Evaluation to help employees have a deeper understanding of Trina Solar's culture and core values. Let employees know their own advantages and improvement opportunities, and make improvements.

### Trina Culture Stars

#### Dedication

The interpretation of "Dedication" is:

Be proactive and take quick actions;

Dedicate to work and strive hard to achieve goals;

Be fearless in the face of challenges and difficulties;

Persevere and commit to achieve the mission.

In August 2017, we initiated the Trina Culture Star Seeking Program. The program is to seek for employees who were fully dedicated and responsible. We push for integrating the core values of Trina Era 3.0 into employees' minds and actions.



Zhimin Li

Project Manager of Industry and Commerce VCU

He drove thousands kilometers to ensure construction period.



Yufei Zhang

Area Manager of Residential PV Value Creation Units

He exploited the new market of Sinkiang in spite of difficulties.



Weiqian He

Senior Manager of PV System

He overcome any difficulties to win victory.



Guanjun Wu

Manager of Sales in Europe and Latin America

He never stopped surpassing himself.



Jun Hu

Facility Supervisor in Laboratory

He is always conscientious at his work.



Shu Zhang

Manager of High Efficiency Module R&D Department

She was devoted to science and technology industrialization.

### 2017 Trina Family - My Trina & My Love

The purpose of the activities held on the family day was to increase exchanges among the company, the employees and employees' families, which enabled employees to enhance cohesion and inspire pride of employees' families.

families.

We organized Trina Family Day in Changzhou Trina International School on 4<sup>th</sup> November, 2017. There were about 2,600 employees and their family members participated in the event.



Flying balloon: open Trina Family Day event



Visiting Company: know more about the green solar energy industry



Assembling solar racing cars: understand the principles of solar racing car



Old photos exhibition: introduce the development history of Trina Solar

### Trina Story-telling Contest



In December 2017, Trina Solar organized the Trina Story-telling Contest, which is one of the events of Trina Solar's 20th anniversary celebration. The participants told the stories about Trina Solar's history of hardworking and spoke highly of Trina Solar's employees' spirit of striving and pioneering. The speeches delivered by the participants encouraged all Trina Solar's employees to continually move forward.



# Communication with Stakeholders









We regard stakeholders' communication and participation as the focus of Trina Solar's sustainable development. We believe that bilateral, transparent and regular communication will bring about closer ties between us and stakeholders, and enhance mutual trust and respect.

Through systematic identification and classification of stakeholders, we have established stable, multi-aspect communication channels, such as various activities, product launches, face-to-face communication meeting, questionnaires, e-mails, and official website etc. We constantly collect stakeholders' expectations, needs, and suggestions. While actively and effectively responding, we also prioritize the feedbacks from stakeholders as an important input for our continuous improvement.

## Continuously Promote Sustainable Development

Trina Solar is not only a manufacturer of clean energy, but also striving to provide sustainable solutions for climate change and energy crisis. Under the severe situation of global climate change, Trina Solar has continuously promoted the sustainable development of economy, society and ecological environment through joint efforts and global cooperation with government agencies, photovoltaic associations and other stakeholders.



Stakeholders	Communication Methods	Communication Activities
 Customers	<ul style="list-style-type: none"><li>Product launch</li><li>Customer satisfaction survey</li><li>Customer audit</li><li>Meeting</li><li>Exhibition</li><li>Website</li></ul>	<ul style="list-style-type: none"><li>In August 2017, Trina Solar launched a new brand of household PV brand "Trina Home" at Beijing National Conference Center, and announced that Trina Solar's plan of "Million PV Roof" will be completed in the next 5 years. Trina Home is the first brand of original household PV system in PV industry. It is committed to bringing household PV into the tens of thousands of homes. It provides more reliable guarantee and better green energy experience for users with new brand image, upgraded brand standard, high quality products and perfect service.</li></ul>
 Employees	<ul style="list-style-type: none"><li>Communication Meeting</li><li>Roundtable meeting/ lunch meeting</li><li>HR hotline</li><li>Staff suggestion scheme</li><li>Wechat platform</li><li>Training</li></ul>	<ul style="list-style-type: none"><li>Trina Solar held the 20<sup>th</sup> anniversary celebrations &amp; 2017 annual meeting, with the theme of 'Grateful to You, Create Greater Glories'. Trina Solar's executives, manufacturing employees, overseas employees, employees' families and other representatives were gathered together to participate in the activities of the 20<sup>th</sup> anniversary celebration.</li><li>In 2017, HR Employee Relation Department has organized cultural and sports activities, e.g. interested activities, traditional cultural, reading and traditional festivals.</li></ul>
 Shareholders	<ul style="list-style-type: none"><li>Communication Meeting</li><li>Roundtable meeting / lunch</li></ul>	<ul style="list-style-type: none"><li>The company's website (www.trinasolar.com) publishes press releases and announcements from time to time to disclose the news of company operations.</li><li>In April 2017, Trina Solar signed a cooperative memorandum on the 'Super Top Runner' PV project with the Chenzhou Municipal government. The project effectively integrates renewable energy with tailings treatment and vegetation restoration. We tried to build a 'Super Top Runner' PV demonstration base in Chenzhou.</li><li>In December 2017, Trina Solar signed the "Framework Agreement on PV Power Generation and Smart Energy Internet Project Cooperation" with Hegang City Xingshan District Government and Xinghua New Energy Co., Ltd., to help Hegang City achieve a better energy transformation goal.</li></ul>
 Government	<ul style="list-style-type: none"><li>Sign cooperation memorandum</li><li>Participate in policy research</li><li>Participate in government's project</li></ul>	
 Business Partners	<ul style="list-style-type: none"><li>Sign strategic partnership agreement</li><li>Supplier meeting</li><li>Supplier research / audit</li><li>Supplier / contractor training</li></ul>	<ul style="list-style-type: none"><li>In February 2017, Trina Solar signed "Strategic Cooperation Framework Agreement" with Jiangsu Traffic Holding Co., Ltd.. The two companies made full use of their own leading technology in the transportation infrastructure and PV industry, and carried out a deep and multi-directional cooperation with "PV + transportation".</li></ul>
 Non-governmental organizations and Communities	<ul style="list-style-type: none"><li>Participate in community activities</li><li>Employee volunteer activities</li><li>Participate in charity activities</li><li>Collect feedback from community</li><li>Hire local employees to improve profits, and pay tax in accordance with law</li></ul>	<ul style="list-style-type: none"><li>In March 2017, Trina Solar was invited to formally become a member of the Sino-U.S. CEO Council of Sustainable Urbanization. The Council is committed to creating more economic and social benefits for the society on philosophy of clean environment and harmonious development.</li><li>In March 2017, we donated 30 KW PV modules to India's Nagarjuna Institute to help them build a "solar powered parking shed".</li><li>In June 2017, EHS Department conducted a EHS Satisfaction Survey for community residents surrounding the company.</li></ul>
 Public Media	<ul style="list-style-type: none"><li>Disclose information on social responsibilities on a regular basis</li></ul>	<ul style="list-style-type: none"><li>Trina Solar released Corporate Social Responsibility Report annually.</li><li>In January 2017, Trina Solar held a media appreciation meeting with more than 20 national mainstream media, e.g. CCTV, Xinhua News Agency, People's Daily, and Xinhua Daily, and discussed how to better communicate with the public and the media.</li></ul>
 Research Institutions/ Standards Associations	<ul style="list-style-type: none"><li>Industry association</li><li>Seminars</li><li>Technical Cooperation</li></ul>	<ul style="list-style-type: none"><li>In February 2017, Trina Solar's new standard proposal, EVA Cross-linking Degree Test method, was officially released to the International Electrotechnical Commission (IEC), filling the gap in EVA Cross-linking Degree Test for green environmental testing in PV industry.</li><li>In September 2017, the project of "Silicon Solar Cell Micro-nanostructure Manufacturing and Interface Passivation Key Technologies and Applications", launched by Trina Solar, Changzhou University and Jiangsu University, won the first prize of "China Machinery Industry Science &amp; Technology Award", sponsored by the China Machinery Industry Federation.</li></ul>



# Materiality Analysis

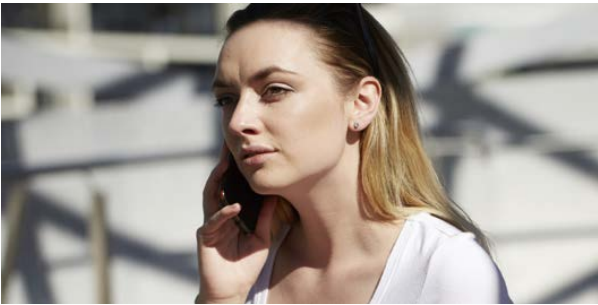
Materiality analysis can help us have a thorough knowledge of the topics that are of greatest interest to our stakeholders, so that we can reveal more comprehensive and relevant information to address

## 1. Identification of Materiality Issues



### Factors Considered

- In defining the material issues, we take into account the factors including:
- reasonably estimable economic, environmental and social impacts
  - interests and expectations of stakeholders
  - main topics and future challenges of solar industry
  - key applicable laws and regulations
  - corporate's vision, mission, core values, strategies and goals



### Identification Sources

- We identify material issues from a wide range of sources including:
- customer and supplier survey
  - company website, email, quarterly communication meeting
  - employee blogs, forums and feedbacks
  - company news release, social media channels
  - meetings with customers, suppliers and government officials
  - third-party audit on management system

the concerns of stakeholders.

Trina Solar makes use of a variety of internal and external sources and channels to identify and prioritize the material issues that are of greatest interest to our stakeholders.

## 2. Determination of Materiality Issues

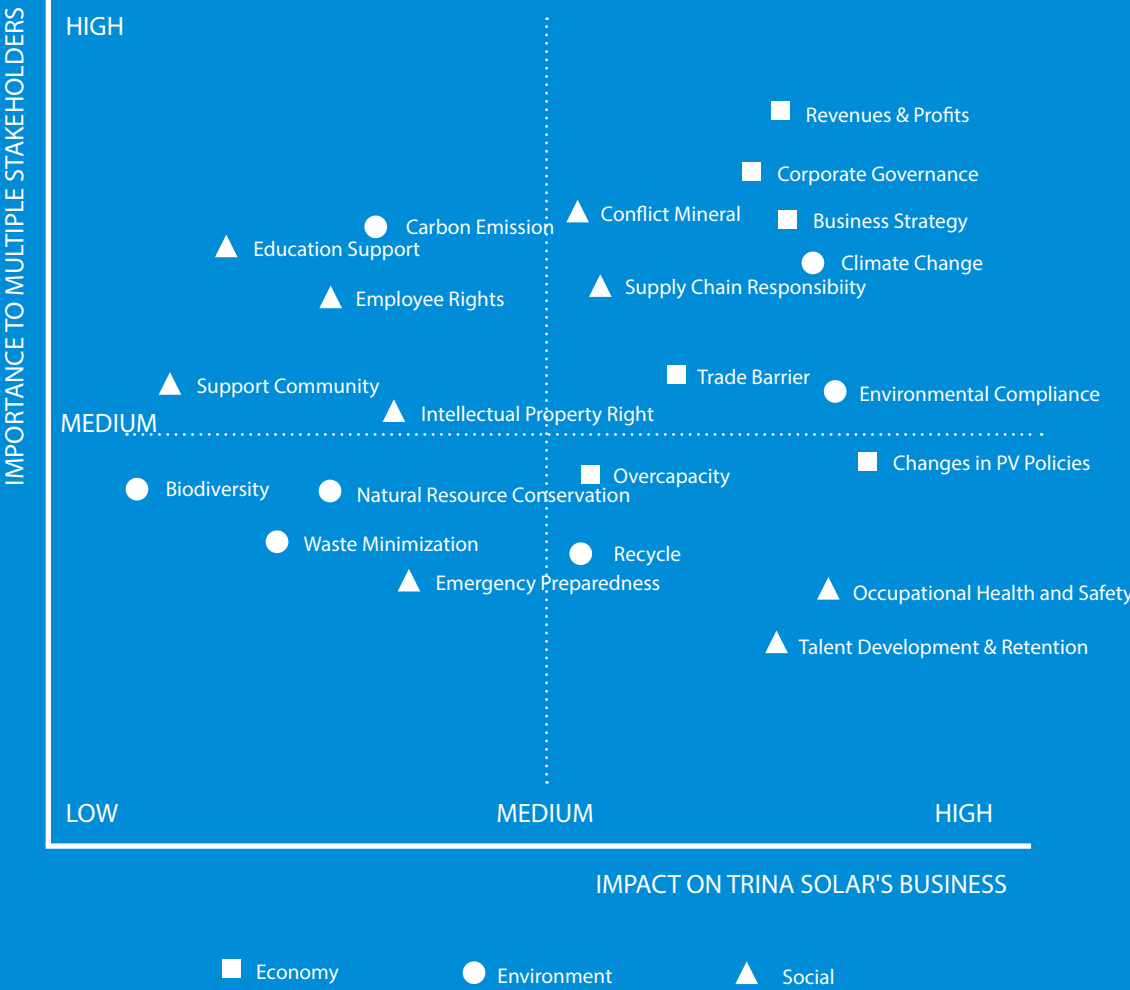
With a combination of internal and external sources, the material issues we identified include:

- **Business and Economy** : business strategy, overcapacity, financial performance, revenues, profits, tax and incentives, political condition, corporate governance, talent development, talent retention, trade barrier, changes in China PV policies
- **Environment** : climate change, carbon emission, natural resource conservation, wastewater treatment, air emission, recycle, waste minimization, environmental compliance, water consumption, chemical consumption, energy efficiency, green building, biodiversity
- **Social Impact** : corporate culture, occupational health and safety, emergency preparedness, supply chain responsibility, conflict minerals, community support, employee relationship, labor union, human rights, intellectual property right, security, gender equalization.

## 3. Priority of Materiality Issues

We review issues and consider both the potential impact on stakeholder decisions and impact on Trina Solar's business development. We prioritize the significance of each issue based on the criteria including business continuity, finance performance, business strategy, product brand, company reputation, competitive advantage, excellent management and community impact. We develop a materiality matrix according to the importance to multiple stakeholders and the impact on Trina Solar's business. The materiality matrix demonstrates the topics being of the greatest interests to our stakeholders. We engage in stakeholders to periodically review the materiality matrix to ensure that it remains updated and continues to meet stakeholders' expectation.

MATERIALITY MATRIX












# Support SDGs

In September 2015, the 2030 Agenda for Sustainable Development was adopted by 193 member states on the United Nations Sustainable Development Summit. The agenda, including 17 sustainable development goals, aims to create a more fair and environmental friendly world, eradicate extreme poverty, overcome inequality and unjust, and prevent climate change.

Trina Solar identifies the goals that are consistent with the company's strategic objective, and makes 2030 sustainable development goals achieved with practical actions. In 2016, Trina Solar was invited to be one of founding members of Private Sector Advisory Board launched by the United Nations Development Programme (UNDP), and signed sustainable development declaration. Trina Solar promised to make its efforts and contributions for the realization of the 17 UN's sustainable development goals in China.

UN's Sustainable Goals	Our Actions
<div></div> <div>Goal 1: End poverty in all its forms everywhere</div> <div>Goal 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture</div>	<p>Energy could help people get rid of poverty and develop local economy. We helped the poor areas to improve their economic and living standards by establishing entrepreneurial funds and PV poverty alleviation, and promote the sustainable development of agriculture and fishery by installing PV modules high above fish pond and farming land.</p> <ul style="list-style-type: none"><li>In 2015, Siyuan Sunshine Fund for Entrepreneurship was founded by Trina Solar. The fund donated 10 million to China Siyuan Foundation for Poverty Alleviation. The Fund desires to help 10,000 poor college students cultivate entrepreneurship and achieve success in PV industry through training.</li><li>PV power station generates green energy and stable income. The station is simple to operate and maintain. PV power station has a guarantee operation period of 25 years. A PV poverty alleviation pilot project, located in Qingzhu village, Guidong county, Chenzhou in Hunan Province, was officially connected to power grid in September, 2016. This was the first village-level PV power station constructed by Trina Solar. In 2017, the 20 MW PV poverty alleviation project, Trina Solar's second phase of Wuwei project, was successfully connected to the grid. The poor families could increase their income by selling electricity. Trina Solar transforms poverty alleviation from "blood-transfusion poverty alleviation" to "targeted poverty alleviation" and "hematopoietic poverty alleviation".</li><li>Trina Solar constructed a 5 MW model project of photovoltaic anagriculture in New Menghe Town, Changzhou City, Jiangsu Province in 2016. The project developed ecological agriculture. The dual-glass modules were installed on the greenhouse roof and the strong permeability ensures the sufficient light that the crops need.</li><li>Trina Solar has established the Employee Assistance Program(EAP) and invited experts periodically to give guidance in terms of stress management, occupational mental health, and healthy lifestyles to help employees relieve the work pressure, which helps to eliminate psychological distress and improve work efficiency.</li><li>Trina Solar has established an internal clinic to provide the employees with medical and health counseling services.</li><li>Trina Solar provides annual health examination for employees. In 2015, it launched the flexible benefit program to provide physical health insurance choices. Employees can choose insurance items for themselves and their families according to their own demands.</li><li>Trina Solar continuously increases investment in training, education and culture cultivation to provide a strong career support system for our employees.</li><li>In 2016, Trina Solar launched the UMU online learning system and various micro-lectures to meet those needs in a simpler, more convenient and efficient way.</li><li>Since 2009, the volunteers from Trina Solar have started to subsidize the students whose families have financial problems in Daibu Primary School and Hengjian Primary School in Liyang City. In the last 9 years, the volunteers subsidized 375 students. Among them, 46 students have completed the nine-year compulsory education.</li></ul>
<div></div> <div>Goal 3: Ensure healthy lives and promote well-being for all at all ages</div>	
<div></div> <div>Goal 4: Ensure inclusive and quality education for all and promote lifelong learning</div>	

UN's Sustainable Goals	Our Actions
<div></div> <div>Goal 5: Achieve gender equality and empower all women and girls</div> <div>Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all</div>	<ul style="list-style-type: none"><li>Trina Solar strictly adheres to relevant international conventions, local laws and regulations, to ensure gender equality and prohibit employment discrimination.</li><li>While facilitating the diversification of our staff, Trina Solar is striving to provide our employees with good working conditions and welfare benefits. It is also actively promoting the localization of employment, and providing more working chances for local people.</li><li>In 2016, Global Solar Council (GSC) put forward to create 10 million solar jobs by 2030. This goal will serve as a key indicator to evaluate the effectiveness of the Global Solar Council's activities in the future.</li></ul>
<div></div> <div>Goal 6: Ensure access to water and sanitation for all</div>	<ul style="list-style-type: none"><li>Trina Solar has implemented various water-saving projects, such as reuse of RO rejected water, treatment and reuse of wastewater, collection of condensated water from air conditioning system etc. In 2017, water consumption per MW module production has decreased by 23.9% compared with that of 2013. The water-saving project has saved 3.86 million tons of water from the year 2013 to 2017.</li></ul>
<div></div> <div>Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all</div> <div>Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation</div>	<ul style="list-style-type: none"><li>By the end of 2017, Trina Solar's accumulated shipments were more than 32 GW, which is equivalent to sum of the capacity of the Three Gorges Power Station and the Gezhou Dam Power Station.</li><li>Trina Solar actively responds to "Belt and Road Initiative". It invested USD 100 million to build the largest 1 GW solar photovoltaic cell manufacturing facilities in the Yun-Zhong Industrial Zone, Beijiang Province in Vietnam. We bring more than 1,000 jobs and widely disseminate clean energy application in the region.</li><li>Trina Solar are always adhering to the concept of innovation and development, We strive to implement "PV+" strategy, integrating photovoltaic application with commercial, agriculture, construction, transportation, communications and other industries. As of the end of 2017, Trina Solar achieves the cumulative PV grid-connected projects of nearly 2 GW worldwide.</li></ul>
<div></div> <div>Goal 12: Ensure sustainable consumption and production patterns</div> <div>Goal 13: Take urgent action to combat climate change and its impacts</div>	<ul style="list-style-type: none"><li>Trina Solar has established ISO50001 Energy Management System, received ISO14064 certification for Greenhouse Gas Emission Verification, and passed PAS2050/ISO14067 Product Carbon Footprint Verification. We are continuously dedicated to improving energy efficiency, reducing GHG emission and saving resources.</li><li>Trina Solar continued to focus on energy efficiency improvement by identifying and implementing energy-saving projects and optimizing energy use. The electricity consumption per MW production decreased by 20.8% compared with that of 2013. The energy-saving project has saved electricity 19,400 MWh, and reduced carbon dioxide emission by 17,000 tons from the year 2013 to 2014.</li></ul>



## Challenges & Opportunities

Energy and environmental problems are two prominent problems that restrict the sustainable development of the world economy and society. We believe that an excellent enterprise can embrace challenges, grasp opportunities and keep social demands in mind to explore a broader market as well. Trina Solar always puts the responsibility for sustainable development on top of commercial interests. When formulating sustainable development strategies and goals, we fully take into account the risks and opportunities, and consider them as important factors in product design, procurement, manufacturing, and product delivery.

While enjoying the tremendous achievements brought by economic growth, scientific and technological progress, and social development, humankind has also gradually and clearly recognized the energy shortage, climate change, and ecological and environmental challenges brought by the excessive use of fossil fuels. As a world leading photovoltaic company, Trina Solar will take this opportunity to address climate change and use solar energy for the benefit of all mankind. We will always pay attention to opportunities and risks facing the world and where we operate, take the initiative to cope with risks and embrace opportunities. We will continue to promote technological innovation and sustainable development in the photovoltaic industry. We push photovoltaic power generation for thousands of households, aiming to benefit all mankind by coping with climate change and improving ecological environment.

### Belt and Road Initiative — Build the Largest Solar PV Cell Plant in Vietnam



Trina Solar actively responded to China's 'Belt and Road Initiative' and invested 100 million U.S. dollars in Yunzhong Industrial Zone, Beijiang Province, Vietnam in 2017 to build the largest 1 GW solar photovoltaic cell manufacturing facilities. Trina Solar's Vietnam plant has introduced the most advanced photovoltaic manufacturing technology for the local area. Equipped with 14 production lines, the plant produces a variety of mono-crystalline and multi-crystalline solar cells to meet the US and European market needs. This project not only brings more than 1,000 job opportunities to the local community, but also widely spreads the clean solar energy application.



Jifan Gao,  
Chairman & CEO  
of Trina Solar

"Trina Solar built a clean and tidy plant on a deserted grassland just in a few months, and meanwhile achieved full production. The achievement fully demonstrates Trina Solar's hardworking spirit and entrepreneurship. It is also inseparable from the strong support of the Chinese Embassy, Vietnam government as well as other relevant parties. The plant has not only demonstrated another success of Trina Solar in the globalization of its manufacturing base, but also introduced the advanced solar cell manufacturing technology to Vietnam. It created nearly 1,000 job opportunities for the local community. As an important member of ASEAN, Vietnam has always maintained a rapid economic growth, and actively participated in China's 'Belt and Road Initiative'. The cooperation between China and Vietnam has kicked off a wonderful start and will bring a mutual benefit and win-win situation. I am fully confident and looking forward to a bright future."

Aspects	Risks and Opportunities	Counter-measures
Business Strategy	The factors, including overcapacity, cyclical change in supply and demand, fluctuations in raw material price, increased project development and financing cost, product price decline etc., have led to fierce competition and reduced profitability of enterprises. They post the challenges to the sustainable development of enterprises in solar industry.	Trina Solar adopts a new business strategy. We successfully open up a new era of Trina Era 3.0 : to be a Global Leader of the Energy Internet of Things (IoT). Trina Solar vigorously develops smart energy and energy Internet of Things (IoT). Trina Solar strives to create an integrated solution for 'Energy Generation, Storage, Distribution, Energy Use and Cloud' and promote the transformation of solar energy into digital and intelligent energy. We make full use of various resources to accelerate the differentiation of our products, services and brands, and break through fierce competition.
Climate Change	<p>The challenge of climate change has become major focus areas for both governments and private sectors. It presents one of the biggest threats to sustainable development. Driven by the Paris agreement, increasing environmental concerns, and favorite energy policies, expectations for renewable energies and emission reduction to address the climate issues have increased. Domestically, China has setup a climate pledge including the goals for 2030:</p> <ul style="list-style-type: none"><li>Lowering carbon intensity by 60% to 65% from 2005 level;</li><li>Peaking carbon dioxide emission by around 2030 and making best efforts to peak earlier;</li><li>Increasing the share of non-fossil energy, including renewable and nuclear energy, to around 20% of total energy consumption;</li><li>Increasing forest stock volume by around 4.5 billion cubic meters from 2005 levels.</li></ul>	The increasing focus on climate change presents a golden opportunity for us to apply our expertise and capabilities to tackle on climate issues, including clean PV power products, technology, power station development , energy storage. This year in 2017, Trina Solar opened up a new era 3.0 – to become a global leader of the Energy IoT (Internet of Things). Trina Solar Energy IoT technology will further enhance its capabilities to support fighting climate change. We play our part in helping to build a clean, more prosperous world and offer solutions for 'zero' carbon emission.
Trade Barrier	Trade protectionism being raised by some countries in PV industry, mainly in U.S. and European Union, posts a challenge for healthy development of PV industry. For example, early 2016, Suniva, an U. S. based solar manufacturer, filed a petition with U.S. International Trade Commission (ITC) and called for new tariffs on PV products imported from other countries. U.S. Administration announced the protection measures under the Section 201 trade clause, which imposed an unreasonable tariff on import of solar cells and modules from other counties.	As a key member of the global photovoltaic industry, Trina Solar resolutely opposes to the US Section 201 investigations and imposition of the harsh tariff on imported photovoltaic products. Trina Solar will continuously play an active role in promoting free-trade and healthy PV industry development. Trina Solar implemented an overseas expansion strategy and established manufacturing facilities in countries and regions along the 'Belt and Road Initiative', such as Thailand and Vietnam. We work tirelessly to lower down overall cost of our PV products and solutions toward reaching the milestone of grid parity. We are committed to continuing to deliver our high quality PV products and solutions to consumers worldwide, including the consumers in the U. S. market.
Overcapacity	Solar power generates electricity with no global warming pollution, no fuel cost, and no risks of fuel price spikes. It has the advantages of moving world toward cleaner, reliable, and affordable source of electricity. With support of favorite policies and technology improvement, PV industry has experienced a rapid development during past a decade. However, overall favorite background leads PV manufacturing overcapacity and products oversupply, which leads to a fierce competition and PV products price decline. The situation affects the company's profit margin and posts challenges of healthy sustainable development for PV industry.	Trina Solar tackles the challenge by deploying a differentiated strategies including innovation, branding, globalization, intelligence, platformization and industry and financial integration. We expand our capacity prudentially and actively focus on the technology advancement to increase power conversion efficiency and energy yield. Trina Solar excises a variety of cost reduction programs to raise our competitive capabilities. We develop a portfolio of modules and solutions to fit various solar project needs including Allmax, TallMax, Duomax and smart PV modules, so as to differentiate Trina Solar from other peers and avoid homogenous competition. Besides, Trina Solar seizes the opportunity to open up a Trina Era 3.0. Trina Era 3.0 well positions itself to become a leader in energy Internet of Things.





Aspects	Risks and Opportunities	Counter-measures
Organization Capability	With development of Internet and information technology, as well as the ever-changing of market competition, the traditional pyramid organization has many shortcomings, such as bloated organization, operational inefficiency and high management cost etc. The shortcomings have become obstacles and challenges for enterprises’ sustainable development in the new economic era. Enterprises are required to take an effective organizational transformation to turn challenges into opportunities.	Trina Solar adopts a 'Platform + Value Creation Unit' strategy to achieve a flatten organizational structure transformation. After implementing the “Platform+ Value Creation Unit” organizational structure transformation, every employee is business operation owner. Driven by markets and customers, every employee observes the operational rule of 'self-management, cost-orientated', so that the operational efficiency gets significantly improved. Meanwhile, Trina Solar enhances the management efficiency through artificial intelligence (AI) technology. We adopt the light-asset strategy and brand concept to improve capability of sustainable development. In the transformation of organizational structure, it brought impacts on employees, performance management, compensation system and corporate culture etc. Trina Solar adopts the value-orientated concept of 'sharing profits and responsibilities together, and win-win' to improve the synergy among Value Creation Units. By the organizational structure transformation, we improve our market competitiveness and realize the maximization of the company’s overall interests.
	Environmental protection has been increasingly valued by governments around the world. Known as the most stringent law in history, Environmental Protection Law of the People’s Republic of China has been in effect since 1st January, 2015 in China. Public awareness on environmental protection continues to increase. It has become the trend of sustainable development that all enterprises are required to constantly transform and upgrade to reduce the emission intensity. These requirements pose new challenges for the sustainable development.	<p>Trina Solar has established, maintained and implemented a strict environmental management system. We have implemented our company-wide environmental protection responsibility system. With our sophisticated pollution control facilities, we strengthen manufacturing process control, including procurement, R&amp;D, manufacturing, transportation and use, etc., to ensure that our operations meet the requirements of environmental protection laws and regulations.</p> <p>Trina Solar has continuously reduced the impact on the environment and the product carbon footprint through technological innovation and energy use optimization. We are committed to providing clean solar energy for all mankind. As of the end of 2017, the cumulative capacity of PV projects we developed in China has reached 1.6 GW. The projects generated 1.18 billion KWh and 1.55 billion KWh of clean solar energy in 2016 and 2017 respectively, which is much more than what we consumed for our China operations.</p> <p>Trina Solar pays attention to the sustainable development of the entire supply chain. We work with customers and suppliers in both upstream and downstream to create a green and high-efficiency supply chain, so as to enhance our efficiency and competitiveness.</p>

## Awards

No.	Date	Awards
1	January 2017	• Won the 2016 Outstanding Public Relations Award at the China Energy Communication Conference and Awards Ceremony.
2	January 2017	• "High-efficiency and Low-cost P-type Crystalline Silicon Module Research and Industrialization" project was awarded the second prize of 2016 Science and Technology Progress Award by China National Federation of Industry and Commerce.
3	January 2017	• Ranked second in the Top 100 Innovative Enterprises in Jiangsu Province.
4	February 2017	• Trina Solar PV System Test Center is accredited by the China National Accreditation Service (CNAS) for laboratory assessment qualification.
5	March 2017	• Awarded the Jiangsu Manufacturing Outstanding Contribution Award and the honor of Technical Innovation Model Enterprise by the Jiangsu Provincial Government.
6	March 2017	• Hubei factory was awarded with Advanced Safety Organization by Shazui Street Committee of Xiantao City, Hubei Province.
7	June 2017	• Passed the quantification system certification of ISO14064 greenhouse gas emission conducted by BSI.
8	July 2017	• Won the Best Employer Brand Building Award at the 2017 China Recruitment and Appointment Award Ceremony organized by HREC.
9	September 2017	• Won the list of 2017 top 500 Chinese Enterprises and top 500 Manufacturing Industries issued by the China Enterprise Federation and the Chinese Entrepreneurs Association, for Trina's excellent technological innovation , robust financial indicators and contributions to PV industry development.
10	September 2017	• Be granted a Gold Recognition Level in the Corporate Social Responsibility(CSR) performance survey conducted by EcoVadis.
11	October 2017	• Won the 2017 Asia Best Employer Award from the Asian authoritative business magazine company.
12	November 2017	• The scientific project, Key Technology and Application of Microcrystalline Nanostructure Fabrication and Interface Passivation of Crystalline Silicon Solar Cells, co-developed by Trina Solar, Changzhou University, and Jiangsu University, won the First Prize of the China Machinery Industry Science and Technology Award by China Federation of Machinery Industry .
13	December 2017	• In the award ceremony of "2017 Best Corporate Universities in China" organized by Overseas Education Academy of Shanghai Jiaotong University, Trina Leadership Academy won the 2017 Most Growable Corporate University Award.
14	December 2017	• Ranked the 13 <sup>th</sup> in 2017 Global Top 500 New Energy Companies published by China Energy Economics Institute, China Energy News and People’s Network and other mainstream media.
15	December 2017	• Back Bridge Type contact Electrode of Crystalline Silicon Solar Cell and Preparation Method was awarded the Excellence Award by State Intellectual Property Office.
16	December 2017	• Trina Solar was on the list of Chinese Manufacturing Individual Champion Companies which was in the Announcement of the Second Batch of Manufacturing Individual Champion Companies and Single Champion Product List issued by the Ministry of Industry and Information Technology.
17	December 2017	• Successfully passed the surveillance audit of ISO14001 Environmental Management System and OHSAS18001 Occupational Health and Safety Management System conducted by TUV Rheinland.
18	December 2017	• Yancheng factory was awarded with "Safe Enterprise" by the Group of Safe Enterprise Construction of Yancheng city.



## Care for Our Earth - Make a Green Future

Our environment is the foundation for human beings' survival and development. As an advocate of green energy and a practitioner of green development, Trina Solar is committed to promoting sustainable development through continuous innovation. We have established ISO14001 Environment Management System and ISO50001 Energy Management System to minimize the negative impact of our business operations on the environment. We have setup our 2020 Environmental Sustainable Development Goals to ensure that our business is developed in an environmental-friendly, responsible and sustainable way.

20.8%



Electricity consumption per MW module production in 2017 reduced by 20.8% compared to that in 2013.

'Zero' Carbon Emission



Achieved 'zero' carbon emission since 2016.

23.8%



GHG emission per MW module production in 2017 reduced by 23.8% compared to that in 2013.

US\$ 13.7 M



Environmental input in 2017 totaled US\$ 13.7 million.



## Green Sustainable Development




Energy and environmental issues have become the major threat to world economy and sustainable development. While enjoying the benefits of economic growth, technological progress and social development, human beings also realized the challenges brought by over-consumption of fossil energy. Nowadays, human beings are facing a series of problems, such as energy shortage, climate change and ecological environment challenge.

As a leading PV enterprise, Trina Solar is dedicated to developing clean solar energy worldwide. While providing affordable and clean solar energy, we pay much attention to environmental protection and sustainable development. Trina Solar has established ISO14001 Environment Management System and formulated the Trina Solar's 2020 Sustainable Development Goal. We also actively cooperate with global partners, academic institutions, governments

and NGOs to facilitate the realization of PV power parity by technological innovation. Trina Solar is committed to improving energy efficiency and increasing the share of renewable energy for sustainable development, including dealing with climate change. Focusing on the mission of 'Solar Energy for All', Trina Solar always upholds the concept of sustainable development. We'll work unremittingly to make our contribution towards UN's 2030 Global Sustainable Goal.

### 2020 Green Sustainable Development Goals

No.	 2020 Trina Solar's Green Sustainable Development Goals	2015	2016	2017	Decreased Percentage
1	• 15% reduction of CO <sub>2</sub> emission per MW module compared to that of 2015	182.6	168.0	132.3	27.5%
2	• 10% reduction of consolidated energy consumption per MW module compared to that of 2015	13.15	13.12	11.00	16.3%
3	• 15% reduction of electricity consumption per MW module compared to that of 2015	221	187	163	26.2%
4	• 10% reduction of water consumption per MW module compared to that of 2015	1,885	1,744	1,592	15.5%

## EHS and Energy Management Policy


We have established and maintained a comprehensive environment management system and occupational health management system in line with international standards, i.e., ISO14001 and OHSAS18001. We have set up Environment,


Occupational Health & Safety and Energy Management Policy. We advocate each employee of Trina Solar to observe and publicize the policy.


### EHS and Energy Management Policy





Trina Solar is committed to being the world's leading smart energy and energy Internet solutions' provider. We pay attention to employees' health & safety and sustainable development. We are dedicated to creating a safe, healthy and environmentally-friendly workplace for employees and a harmonious green planet for mankind. We promise to use energy and natural resources responsibly and efficiently. Herewith we pledge the following:


- 


Comply with all applicable EHS & energy management laws & regulations and meet interested parties' requirements.
- 


Be committed to prevention of pollution and minimizing negative impact on environment. Promote sustainable development and build a green and low-carbon planet.
- 

Be committed to prevention of occupational injury and illness. Provide a safe, healthy and environmentally-friendly workplace for employees.
- 

Make efficient use of energy and resources. Consistently reduce energy consumption and carbon emission from production and commercial operations.
- 

Enhance employees' EHS & energy conservation awareness and encourage employees to participate in EHS & energy conservation programs.
- 

Provide necessary resources for implementing EHS & energy management system. Continually improve performance via perfecting EHS & energy management system.
- 

Provide transparent EHS report to stakeholders and other relevant interested parties.
- 

Pledge our support and commitment to help our suppliers improve their EHS & energy management performance and take social responsibility.









## Environment Management System

In our continuing efforts to enhance and ensure protection of the environment, Trina Solar has always adhered to the highest standards of environmental protection in our daily operations. Most of our manufacturing plants have established ISO14001 Environment Management System. We integrate the protection of environment and sustainable development into our every work process, including site selection, designing, construction and plant operation. We effectively manage the environmental aspects of products, activities and related services through our established environmental management system.

Trina Solar commits to work together to promote sustained and inclusive economic growth, social development and environmental protection. Trina Solar's Environment Management System is designed to help us improve our environmental performance. It gives us a systematic, organized approach to address the issues of environment protection and sustainable development. The system is part of our overall management system that includes organizational structure, planning activities, responsibilities, procedures, processes and resources for achieving and maintaining environmental performance.

No.	Plants	Established ISO14001 Environment Management System	No.	Plants	Established ISO14001 Environment Management System
1	Plants at Changzhou Headquarters	Yes	5	Hefei Plant	Yes
2	Changzhou Yabang Plant	Yes	6	Xinjiang Plant	Yes
3	Yancheng Plant	Yes	7	Thailand Plant	Yes
4	Hubei Plant	Yes	8	Vietnam Plant	No

Chains	Measures
 Site Selection, Designing and Construction of Plants/PV Power Stations	<ul style="list-style-type: none"><li>Environment Impact Assessment, evaluate the positive and negative impacts of the proposed projects on the community's environment;</li><li>Ensure the environmental protection facilities to be designed, constructed and put into use simultaneously with the main part of construction project;</li><li>Protect the community's ecological environment and biological diversity.</li></ul>
 Research & Development	<ul style="list-style-type: none"><li>Incorporate the concept of environmental protection into R&amp;D and improve the product conversion efficiency.</li></ul>
 Manufacturing	<ul style="list-style-type: none"><li>Ensure sustainable use of resources;</li><li>Continuously promote the energy efficiency;</li><li>Ensure that treated effluent and emission of waste gas meet national and local limits;</li><li>Promote recycling of resources;</li><li>Promote green office.</li></ul>
 Packaging	<ul style="list-style-type: none"><li>Reduce packaging materials without affecting package safety;</li><li>Utilize recycled and degradable package materials.</li></ul>
 Logistics	<ul style="list-style-type: none"><li>Develop a resourceful transportation route;</li><li>Choose the best mode of transportation;</li><li>Improve the utilization rate of containers.</li></ul>
 Product Recycling	<ul style="list-style-type: none"><li>Be a member of PV CYCLE and dispose the waste PV products in an environmental friendly way;</li><li>Be a member of the Glass Recycling Committee of Japan (GRCJ).</li></ul>

## Dealing with Climate Change

The development of world economy is powered by energy. Fossil fuels are the major energy source that are being used in the world today. However, consumption of fossil fuels release greenhouse gases (GHGs), such as carbon dioxide, nitrogen dioxide, sulphur dioxide, carbon monoxide etc. The emission of GHGs can lead to serious environmental issues such as air pollution and global warming.

Besides, fossil fuels are not renewable. Therefore, it is irreversible that the renewable energy, such as solar energy, will take the place of the conventional energy. The renewable energy is playing an increasingly important role and becoming one of the mainstream sources of energy around the world.

### Trina Solar's Engagement in Global Emission Reduction Initiative



Global climate change is a serious environmental, economic and social challenge that warrants an equally serious response by governments and the private sectors. As a global leader in energy IoTs (Internet of Things), Trina Solar is committed to providing clean solar energy for the world. We promise to promote sustainable manufacturing and build an environmentally-secure planet by using energy and natural resources efficiently. We consistently reduce energy consumption and carbon emission from production and commercial operations by enhancing energy efficiency, and work tirelessly to achieve our mission of 'Solar Energy for All'.

- Set up 2020 Green Sustainable Development Goals:** In response to China's commitment to carbon reduction for the 'Thirteenth Five-year Plan (2016 to 2020)' for coping with climate change, Trina Solar formulated the 2020 Sustainable Development Goals, which include 18% reduction of carbon footprint compared to that of 2015 (kg CO<sub>2</sub>-e/KW) and 15% reduction of CO<sub>2</sub> emission per MW module compared to that of 2015 (TCO<sub>2</sub>-e/MW).
- Establishment of EHS Management System:** We have established our matured greenhouse gas inventory and energy management system (ISO14064, ISO14067 and ISO50001) to systematically manage carbon emission and energy consumption. We actively explore and implement energy saving projects, and try our best to reduce carbon emission from our operations. In 2017, Trina Solar's electricity consumption and water consumption per MW module decreased by 20.8% and 23.9%, respectively, compared to that in 2013.
- Clean Solar Power:** As of the end of 2017, the total cumulative module shipments of Trina Solar exceeded 32 GW, ranked the first position in the world. The PV modules will have about 30 years of life span and will be able to reduce carbon dioxide emission by approximately 960 million tons compared to that of thermal power generation over the 30-year's life span. As of end of 2017, the solar power plants that Trina Solar invested in China had a cumulative capacity of 1.6 GW. In 2016, Trina Solar consumed 780 million kWh of power for all factories and R&D centers' operations in China. The solar power plants owned by Trina Solar in China generated 1.18 billion kWh of clean solar power. In 2017, the power consumption for all operations in China was 850 million kWh, and the clean solar power generation reached 1.55 billion kWh. This means that Trina Solar has achieved 'zero' carbon emission for operations in China since 2016. In 2016 and 2017, the solar power stations owned by Trina Solar in China contributed additional 1.1 billion kWh of solar clean power to the world, reducing CO<sub>2</sub> emission by approximately 900,000 tons.
- Pollution Control Facilities:** In recent years, Trina Solar has established sophisticated wastewater and waste gas treatment facilities to ensure that discharge of wastewater and emission of waste gas stably meets environmental standard limits. In 2017, Trina Solar's total environmental protection inputs reached US\$ 13.6 million (about RMB 87 million). In the four years from 2014 to 2017, Trina Solar collected a total of 12 million tons of industrial wastewater, and produced and reused 7.6 million tons of new-water (or recycled water), which could meet the annual water consumption for 41,500 households in China.
- Internal Carbon Trade Scheme:** Trina Solar actively participates in global GHG emission reduction activities and programs to increase employees' awareness of emission reduction. We establish an internal carbon trade scheme. We setup an annual integrated energy consumption target for each department and carry out assessments monthly. We award carbon emission bonuses for those departments who have achieved their targets, and impose carbon emission penalties for those who have not fulfilled their carbon emission targets.
- Supply Chain Sustainability:** Trina Solar has always been both a clean energy promoter and a low/zero carbon practitioner. We actively participate in global emission reduction initiatives. In 2017, Trina Solar took part in the CEOs' Council of China-US Sustainable Urbanization of the Paulson Foundation, being a member for the CEOs' Council. This provides advantage for us to promote the development of clean energy technologies and make our outstanding contributions to worldwide emission reduction campaign worldwide. We pay attention to the social responsibility of our global suppliers and partners. We continuously reduce carbon emission in supply chain by promoting the optimization of the packaging methods, transportation modes, and increasing local supply of products and raw materials, so as to jointly promote the sustainable development of photovoltaic industry.



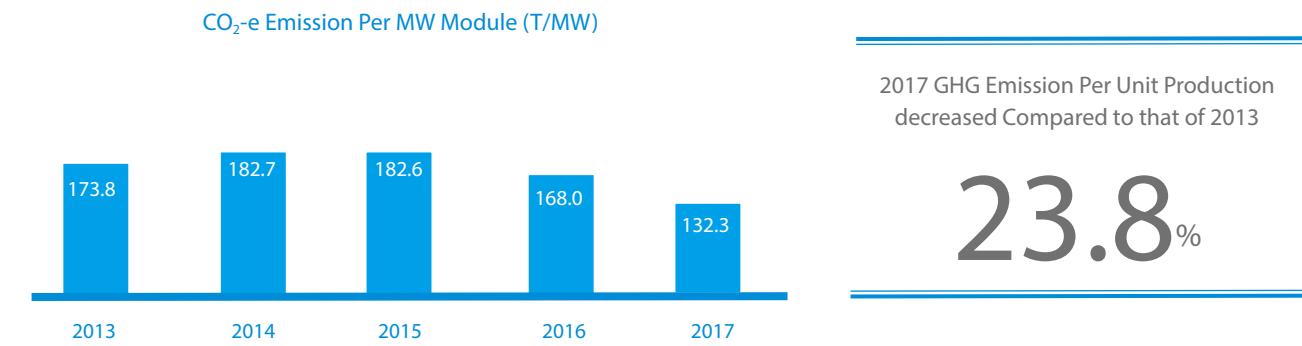
Reduction of GHG Emission

Global climate change is a serious environmental, economic and social challenge which requires governments and private sectors to make joint efforts. Trina Solar has been paying attention to sustainable development. We conduct ISO14064 GHG emission verification and disclose our carbon emission annually. We always look for opportunities to reduce GHG emission in product design, production, and packaging processes. We continuously identify potential energy-saving projects, aiming for fulfilment of our commitment to sustainable development.

Trina Solar established its 2020 Sustainable Development Goals, i.e., 15% reduction of CO<sub>2</sub>-e emission and 18% reduction of carbon footprint per MW module compared to that of 2015. We track the status of GHG reduction goals annually. Trina Solar conducts GHG

verification annually in accordance with international standard ISO14064 requirements. The scope of verification includes scope 1- direct GHG emission and scope 2 - indirect GHG emission. We continuously monitor and improve our GHG management performance. As our business continues to expand, total GHG emission have increased in recent years. However, our GHG emission per MW module production in 2017 have been decreased 23.9% since 2013.

Total greenhouse gas emission for Trina Solar’s China operations in 2017 are 705,900 tons of CO<sub>2</sub>-e, which is approximately 8.4% higher than that of 2016. This is due to the overall growth of Trina Solar’s businesses in China. In 2017, Trina Solar achieved module shipments of 9.0 GW, which represents an increase of approximately 26.2% compared to that in 2016. Based on the requirements of ‘The Vienna Convention for the Protection of the Ozone Layer’ and ‘The Montreal Protocol on Substances that Deplete the Ozone Layer’, all the refrigerants and fire extinguishing agents used in Trina Solar plants do not contain ozone depleting substances (ODS).



GHG Emission CO <sub>2</sub> -e (1,000 tons)	2013	2014	2015	2016	2017
Scope 1	17.6	14.9	11.6	15.1	13.0
Scope 2	426.8	475.8	513.2	636.1	692.9
Total	444.4	490.7	524.8	651.2	705.9

Types of GHG	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>
GHG Emission CO <sub>2</sub> -e in 2016 (1,000 tons)	645.0	0.04	0.004	5.1	0	1.03
GHG Emission CO <sub>2</sub> -e in 2017 (1,000 tons)	699.5	0.04	0.03	5.1	0	1.30

Enhancement of Energy Efficiency

Sustainable development requires not only clean energy, but also higher energy efficiency. Trina Solar focuses on reducing environmental impact from its operations. We strive to enhance our energy use efficiency while using our energy in a responsible manner. Trina Solar continuously reduces CO<sub>2</sub> emission and makes our best efforts to produce more cost-competitive products and contribute to climate change mitigation.

Trina Solar headquarters’ plants in Changzhou took an lead to establish Energy Management System ISO50001 in the photovoltaic industry in accordance with the requirements of international standards. We continuously reduce energy consumption and improve our energy use efficiency by establishing energy targets, defining and refining energy

conservation responsibilities, as well as implementing energy conservation projects. We systematically applied energy conservation measures and energy saving technologies to real practice.

The consumption of electricity is the most important energy used in our production, followed by the consumption of nitrogen and natural gas.

In 2017, we continued to improve energy efficiency by identifying and implementing energy-saving projects and optimizing energy use. Due to the expansion of cell workshops in headquarters’ plants in Changzhou, the consumption of natural gas, nitrogen and electricity has shown a rise in 2017. However, the consumption of natural gas and nitrogen per MW module production was still stable compared to that of 2016. Besides, both the electricity consumption per MW module and the integrated energy consumption in 2017 decreased compared to that of 2016.

Internal Carbon Trade Scheme

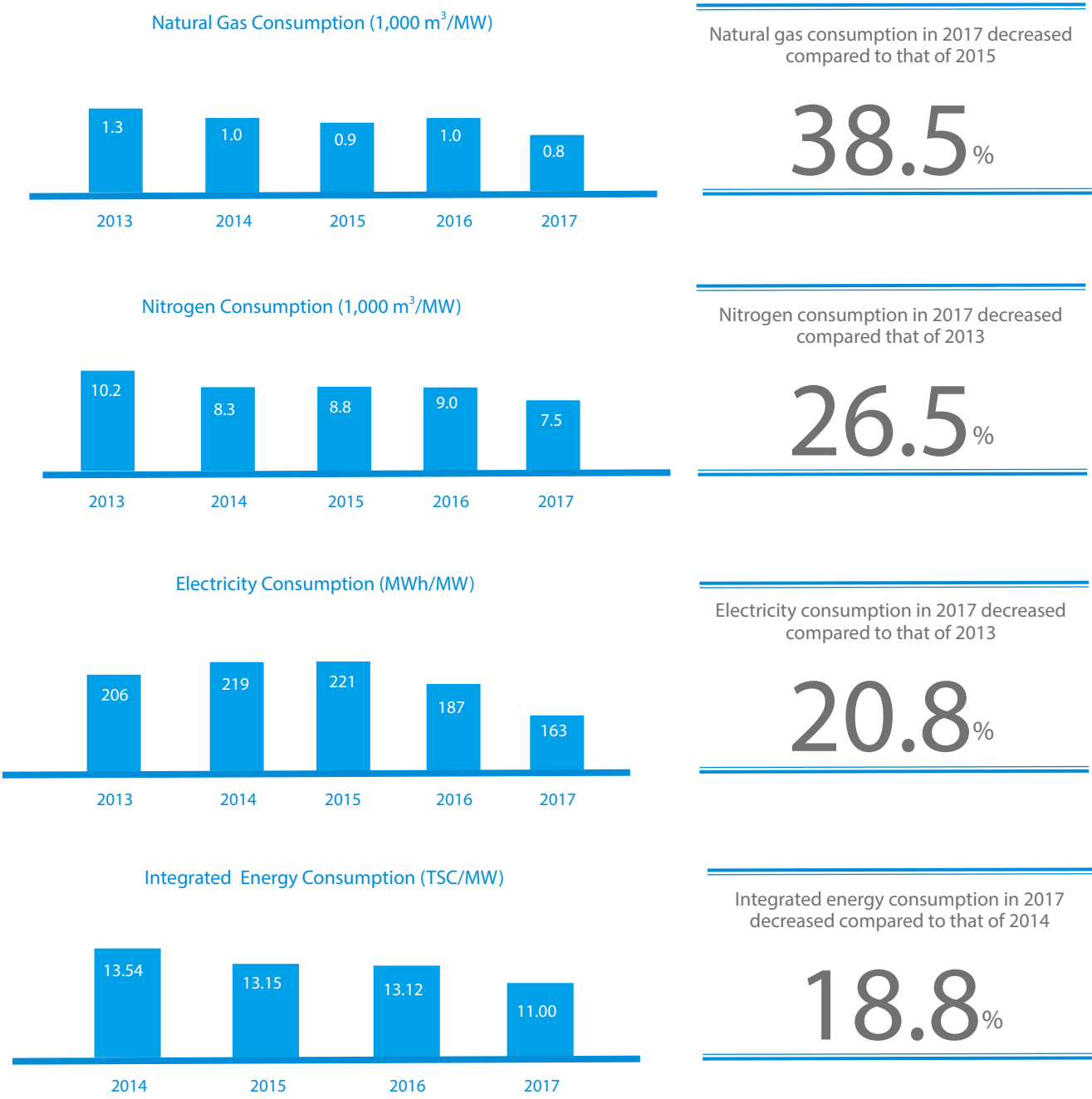


The primary energy mainly used in our company is natural gas. The secondary energy includes electricity and diesel. The energy-consumed media include water, nitrogen, oxygen and argon. We record and analyze the consumption of primary and secondary energy. Meanwhile we calculate the consumption of indirect energy-consumed media. We report them in the form of standard coal-equivalent (SCE) consumption per MW module production on a monthly basis, i. e., integrated energy consumption (Ton SCE/MW).

In 2017, we implemented an internal carbon trade scheme for all domestic and overseas plants. We setup an annual integrated energy consumption target for each department and then performed monthly assessments. Based on the average carbon price in the domestic carbon trade market, we awarded carbon emission bonuses for those departments who have achieved their targets, and imposed carbon emission penalties for those who have not fulfilled their carbon emission targets. We sent a monthly message to department managers, reminding them to be aware of the impact of their operating activities on the environment. We encouraged them to develop technologies and carried out energy conservation project, so as to continuously reduced energy consumption and greenhouse gas emissions from operations.



Types of Energy	2013	2014	2015	2016	2017
Natural Gas (1,000 m <sup>3</sup> )	3,210	2,720	2,710	4,550	3,270
Nitrogen (1,000 m <sup>3</sup> )	21,300	23,710	25,800	42,050	55,150
Electricity Purchased (1,000 kWh )	527,074	589,501	634,931	861,112	998,869



Trina Solar Energy Conservation Project Statistics

Year	Location	Description	Energy Saved	CO2 Reduction (tons/year)
2017	Changzhou, China	Replacement of oven with drying machine to reduce electricity consumption in cleaning process in Silicon Workshop.	500 MWh/year electricity	400
2017	Changzhou, China	Collection and reuse of residue heat from chillers and air compressors.	5,000 MWh/year electricity	4,000
2017	Yangcheng, China	Replacement of axial flow compressors with centrifugal compressors, which have higher COP and capacity, to enhance energy efficiency.	1,400 MWh/year electricity	1,120
2017	Hubei, China	Replacement of T5 fluorescent lamps with LED lamps in the workshop.	100 MWh/year electricity	80
2017	Hefei, China	The lighting control in the warehouse was modified and equipped with the sub-area control switches, which allowed to switch on the lighting based on area needs, so as to help save electricity.	70 MWh/year electricity	56
2017	Vietnam Plant, Vietnam	Fine-tuning and optimization of operation parameters of air compressors, chillers, cooling water pumps and air-conditioning system, so as to reduce electricity consumption while giving guarantee operation conditions in workshop.	1,690 MWh/year electricity	1,352
2016	Changzhou, China	Modification of cooling water process to Multi-crystall furnaces was done. Additional two sets of cooling water heat exchangers, which made heat exchange with cooling towers directly, were installed. The electricity consumption was reduced resulted from reduction of chilled water consumption during the period from May to September each year.	1,220 MWh/year electricity	976
2016	Yangcheng, China	Implementation of PCW (procee cooling water) free-cooling process to reduce electricity consumption. Installation of lighting auto-control sensors in the public areas, including warehouse, packaging material shelter and rain shelter, where the lighting was always on before installation.	500 MWh/year electricity	400
2016	Hubei, China	All fluorescent lamps in the factory were replaced with energy-saving lamps. Installation of VFD (Variable Frequency Drive) for air compressors so as to achieve electricity saving purpose.	600 MWh/year electricity	480
2016	Thailand Plant, Thailand	Instead of pumping water, the water tank was designed in such a way, so that water replenishment is fulfilled by gravity and electricity consumed by water pumps was saved. Residue heat from process cooling water (PCW) was collected to heat the process water, so as to reduce electricity consumption.	1,500 MWh/year electricity	1,200
2015	Changzhou, China	The low power-rated air compressors were replaced with high power-rated air compressors, so that the compressed dry air (CDA) was supplied in centralized way. The energy efficiency was raised and electricity was saved.	333 MWh/year electricity	266
2015	Changzhou, China	Upgraded multi-crystalline furnace from model G5 to G6 in Wafering workshops. G6 multi-crystalline furnace has a big charging capacity, so that energy efficiency was raised significantly.	6,000 MWh/year electricity	4,800
2014	Changzhou, China	Collection and reuse of residue heat from refrigerators (chillers) to raise the water temperature for UPW (Ultra-pure Water) plant, leading to a saving of natural gas consumption.	300,000 Nm3/year natural gas	650
2013	Yangcheng, China	Implementation of free-cooling project for producing of PCW (Process Cooling Water) in Yancheng, so as to save electricity.	245 MWh/year electricity	200
2013	Changzhou, China	Formation of internal air circulation in module workshop by adjusting HVAC system, allowing warm air (warm zone) in laminating process area flow to sorting / soldering process area (cool zone), leading to a saving of natural gas consumption.	130,000 Nm3/year natural gas	284
2013	Changzhou, China	Reuse of cooling water energy from multi-crystalline workshop in West Campus for air-conditioning system of solar cell workshop during winter season, leading to a saving of electricity consumption.	789 MWh/year electricity	650
Total				16,914



### Recovery and Reuse of Residue Heat from Chillers and Air Compressors

Energy Management Department in Trina Solar is responsible for exploring and implementing energy conservation projects. After investigation, the department found that the heat from chillers and air compressors in west campus can be recovered and reused to replace the existing heat pumps. The recovered heat could be used to provide as heat source for the workshops in winter. They installed a heat recovery system to collect the condensation heat from chillers, and implemented a residue heat recovery project for air compressors. The amount of heat recovered is sufficient to replace the heat-supply from air-cooled heat pumps. The project saved 5 million KWh of electricity annually and reduced 4,000 tons/year of carbon dioxide emission.

- Installed the heat recovery system for cooling water and air compressor and supplied the recovered heat to the air-conditioning system. The designed temperature for supply water was 33°C with the maximum of 35°C.
- Installed PLC automatic control and monitoring system for the heat recovery project to ensure that the system was operated efficiently.
- Installed PLC automatic control system to monitor the running condition of heat pumps and circulating pumps. The project was equipped with the automatic switch function between the heat recovery project and the heat pumps to improve the system reliability.

## Environmental-friendly Operation

Creating a sustainable future requires cleaner energy. As the world's population continues to increase, the dealing of the world population's demand for energy has become an unprecedented challenge.

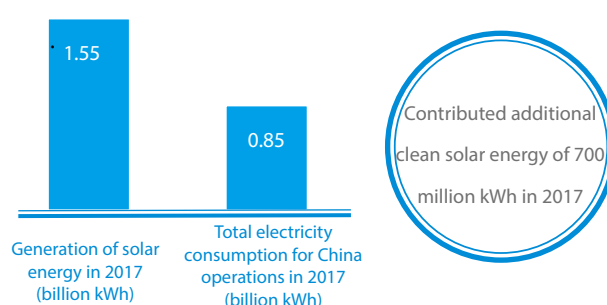
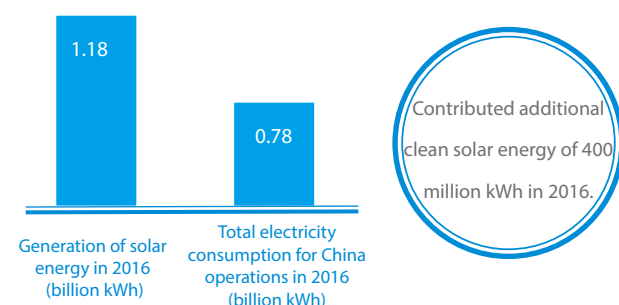
### Clean Solar Energy

Global energy system is accelerating the transition to low carbon. The large-scale utilization of renewable energy and the cleanliness & low carbonization of conventional energy will be the basic trend of energy development. Accelerating the development of renewable energy has become the mainstream of global energy transformation. Compared with traditional coal-fired power generation, solar energy can significantly reduce CO<sub>2</sub> emission. How we can produce more clean energy, which can significantly reduce CO<sub>2</sub> emission, is regarded as one of the biggest challenges we face. Trina Solar is committed to continuously exploring and applying technologies that increase PV product efficiency and help reduce CO<sub>2</sub> emission. We strive to use the clean solar energy to promote energy transformation. We are committed to systematically addressing the issues of economic development, environmental protection and energy security and providing the clean solar energy to the public.

By the end of 2017, the cumulative shipments of Trina Solar's PV modules exceeded 32 GW, which is equivalent to the sum of the capacity of the Three Gorges Power Station plus the Gezhouba Power Station. These solar PV modules had been installed in

We not only conduct our operation in a responsible manner, but also contribute to meet the rising demand for clean energy by establishing Product Stewardship Policy, technological innovations, efficiency improvement, and adequate disposal of end-of-life PV products, so as to actively respond to global climate change.

PV power stations worldwide, providing incessant solar energy for the global users. Trina Solar strives to explore innovative solar energy application model and implement 'PV +' strategy. We make our contributions to the construction of ecological civilization and the response to global climate change. Trina Solar has developed and invested its own PV power plants. As of end of 2017, the solar power plants that Trina Solar invested in China had a cumulative capacity of 1.6 GW. In 2016, total electricity consumption of all manufacturing facilities and R&D centres of Trina Solar in China was 780 million kWh. The PV power plants, owned by Trina Solar in China, had generated 1.18 billion kWh solar energy. In 2017, total electricity consumption was 850 million kWh, and the solar power generation amounted to 1.55 billion kWh. This means that Trina Solar not only has achieved 'zero' carbon emission for our China operations since 2016, but also contributed 1.1 billion kWh clean solar energy for the world in 2016 and 2017, being equivalent to a reduction of 900,000 tons CO<sub>2</sub> emission.



### Total 220 MW of Three "Top Runner Projects" Connected to the Grid Successfully



40 MW Floating PV Project in Huaibei, Anhui

The project was the first 'Top Runner Project' in the Huaibei District, Anhui Province and was connected to the grid on 27<sup>th</sup> September, 2017. It made full use of more than 250 acres of water surface formed by coal-mining subsidence in Suixi County, Huaibei, Anhui province. The project achieved the goal of integrated treatment for coal-mining subsidence areas and reuse of the abandoned subsidence land. More than 120,000 Trina Solar's dual-glass modules were used in the project, of which more than 10,000 pieces were PERC high-efficiency mono-crystal modules. The total power generation hours will be about 27,227 hours in 25 years with total power generation of approximate 1.09 billion kWh.



130 MW Floating PV Project in Yingshang Ancient Town, Anhui

The project was located in the ancient town of Yingshang County, Puyang, Anhui Province, which makes full use of more than 775 acres of water surface formed by coal-mining subsidence. It provided local people with clean solar power and increased the proportion of renewable energy. More than 400,000 Trina Solar's dual-glass modules were used in the PV project, of which more than 34,000 pieces were PERC high-efficiency mono-crystal modules. After the completion of the project, it was estimated that the average annual power generation hours was 1,035.7 hours, and the total power generation in 25 years was about 3.04 billion kWh.



50 MW 'Top Runner' PV Base Project in Yangquan, Shanxi

The 50 MW PV project, located in Yangquan, Shanxi Province, was successfully connected to the grid on 29<sup>th</sup> September, 2017. The project made full use of abandoned areas in coal-mining subsidence areas, coal gangue hills and mining backfill areas. It not only achieved the goal of reuse of abandoned land and increased utilization rate of the land, but also provided green power to local people and improved the local ecological environment. The project covered an area of more than 280 acres, and used more than 10,000 pieces of dual-glass modules and more than 160,000 pieces of PERC high-efficiency mono-crystal modules. It was estimated that total power utilization hours in 25 years were 29,627 hours, and total power generation was about 1.24 billion kWh.

### Continuously Improving Conversion Efficiency

Trina Solar has partnered with Solar Energy Research Institute of Singapore (SERIS), Australian National University (ANU) and other world's leading PV research institutes and universities, to advance solar technology and create cutting-edge solutions for our customers. The State Key Laboratory (SKL) of Photovoltaic Science and Technology (PVST) established by Trina Solar has created 18 consecutive world records in the conversion efficiency and output

power of photovoltaic cells and modules.

In an innovation-driven PV industry, Trina Solar is always focused on developing leading-edge PV technologies and products with improved cell efficiency and reduced system cost. Our goal is to insist on technological innovation, and transform as quickly as possible the laboratory technology into commercial production.

### Trina Solar's IBC Cell Conversion Efficiency Setting a New Record

Trina Solar has set a new record of 25.04% conversion efficiency for an N-type monocrystalline IBC (Interdigitated Back Contact) solar cell with an open-circuit voltage Voc of 715.6 mV. The IBC solar cell was developed independently by Trina Solar's State Key Laboratory (SKL). The test results were independently certified by Japan Electric Safety and Environmental Technology Laboratory (JET).






The IBC solar cell is named for its full back-electrode structure design. In its structural design, the positive and negative electrode metallization lines for deriving current are designed on the back of the solar cell. It is currently the most difficult technology in the commercialization of c-Si cells, representing the highest level of c-Si R&D and manufacturing technology. As there are no electrodes on the front of the IBC cell, it has the advantages of beautiful appearance, especially being suitable for BIPV (Building Integrated Photovoltaic). The IBC cell has a prominent commercial outlook for high-end application. It has been demonstrated to be the first single-junction c-Si solar cell developed in China to attain an efficiency above 25%, and also has been demonstrated to be the highest efficiency c-Si single junction solar cell based on a 6-inch large-area c-Si substrate. The highest conversion efficiency indicates that Trina Solar has taken an important step in the research of differentiated high-end photovoltaic cell technology.



Product Stewardship Policy



Trina Solar is committed to protecting our employees, customers and communities in a responsible manner. We have put Product Stewardship Policy in place to ensure product safety and environmental protection throughout the product life span, including R&D, manufacturing, transportation, use and end-of-life module disposal.

-  Trina Solar conducts business in a manner that ensures compliance with all applicable regulatory requirements and industry standards. We commit to integrating environment, health and safety responsibilities into all stages of our product life cycle.
-  We believe that product stewardship, the ongoing performance improvement of products in terms of environmental, health and safety aspects, is one of the cornerstones of sustainable business. We act in a responsible manner to protect our employees, customers and the communities in which we operate.
-  Trina Solar pledges to implement effective product stewardship management programs, and shows our commitment and leadership to meet the customers' increasing demands on safer and more environmentally sustainable products.
-  Trina Solar actively strives to develop new raw materials and products in a responsible manner by assessing their risks for current and future generations. We commit to conflict-free materials and products, and work diligently to promote sustainable development by way of ethical and green sourcing.
-  Trina Solar offers product guidance to customers, distributors and users so that our products are safely transported, stored and used. We voluntarily participate in take-back and recycling program for defective and/or end-of-life (EOL) solar
-  We pledge to actively engage in fighting against climate change by way of continuously enhancing energy efficiency and reducing greenhouse gas emission.
-  Trina Solar engages with stakeholders to periodically review the policy statement to ensure that it remains adequate and continues to meet stakeholders' expectations.



Compliant Disposal of Waste PV Products

The average lifespan of PV modules is approximately 25 years. The solar modules installed in the 1990s have reached their useful lifespan and will then be scrapped. The compliant disposal of waste PV modules and the recycling of valuable resources of waste modules will be a significant research subject. The investigation of relevant research institution demonstrates that the number of scrapped PV modules will increase tremendously from 2020 and reach 800,000 ton/year by 2030.

Many companies have not considered the problem of compliant disposal of scrapped PV modules which end product life cycle. As a responsible company, Trina Solar actively undertakes the responsibility to ensure compliant disposal of waste PV products. Trina Solar strictly abides by the e-waste management laws and regulations of the countries in which it operates, and proactively pushes for the recycling and reuse of waste electronic products.

Waste Electrical and Electronic Equipment Directive (WEEE, 2012/19/EU) specifies that manufacturers of electrical and electronic equipment must guarantee that waste products created in any EU member states must be recycled and reused, in order to ensure that electrical and electronic equipment, including PV modules, is properly managed by means of recycling, reusing, reclamation and regeneration. In 2012, for the first time, the Directive took PV modules and equipment into account. From 1<sup>st</sup> February, 2014 onwards, all photovoltaic manufacturers, distributors and installation contractors in Europe must fully abide by EU's rules on waste management, including providing necessary funds and administration. All PV products must be labeled with the same "wheelie bin" LOGO designed by WEEE.

Trina Solar always focuses on extended producer and has become a part of the non-profit organization PV CYCLE (European Photovoltaic Module Take-back and Recycling Organization) founded in 2007. PV CYCLE is committed to centralizing and customizing services for the recycling of global waste photovoltaic products.

- EU member countries: PV CYCLE establishes a network consisting of hundreds of certified and recycling points, waste transport firms and dedicated recycling facilities across the Europe. It provides solutions for sustainable PV module take-back and recycling, and uses recycled materials for the making of various new products.
- Other areas: PV CYCLE provides customized services, for example, whoever needs international parcel service can inquire on the PV CYCLE's website ([www.pvcycle.com](http://www.pvcycle.com)) or can send an email to [info@pvcycle.com](mailto:info@pvcycle.com).

Trina Solar (Japan) Limited joined in the Glass Recycling Committee of Japan (GRCJ) in 2015. The core members of the GRCJ consist of associations and companies who promote the use of waste glass. The GRCJ was established for the promotion of recycling PV modules, especially the recycling of waste glass. The recycling process includes collection, transportation, disassembly, sorting, separation and glass production of waste modules. Glass and cell scraps are mainly separated and collected by smashing and gravity separation. Glass scraps can be used as raw materials for building materials and ceramics. The metal component of cell scraps will be recycled and reused by specialized metal recycling companies.



Environment-friendly Operation

As an advocate and practitioner of environmental protection, Trina Solar has always been committed to sustainable development throughout the whole product life cycle, from product development, raw material procurement and manufacturing, to resource & energy utilization and waste management.

We believe that the most precious resource is the natural

environment where human beings live. Trina Solar will spare no efforts to fulfill our commitment to all stakeholders, and will always have concern for the sustainable development of human beings and mother earth. Green manufacturing and environmental protection has always been the lifeline of our company. We implement green operations through rational use of natural resources, adequate treatment of wastewater and air emission, waste recycling, and other environmental promotion activities.



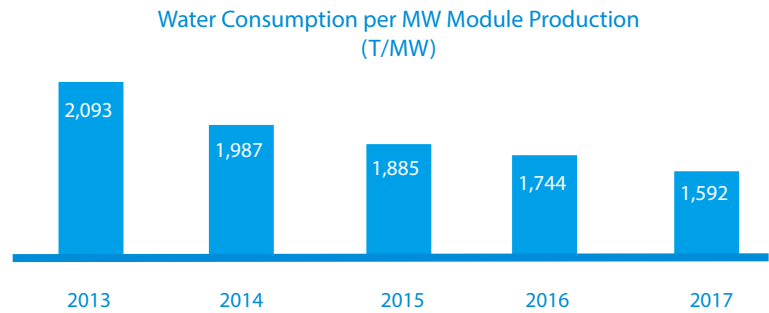
Sustainable Use of Water Resource

Trina Solar regards protecting water resource as one of its important tasks, and strives to reduce the consumption of water resource per MW module production through sustainable use of water resource.

Solar module production consumes a lot of water. To carry out water conservation management, we setup water saving goals for each workshops and implemented various of water saving




projects, such as reuse of RO rejected water, reuse of wastewater, collection of condensated water from air conditioning system etc. We setup a strict maintenance scheme to clean RO membrane to increase DI (De-ionized) water yield. With business expanding, the total amount of water consumption is increasing. But we continuous to develop and implement water conversation measures to increase water use efficiency.

Water Consumption	2013	2014	2015	2016	2017
Water Consumption (million m³)	5.353	5.338	5.418	8.043	9.703



Water consumption in 2017 decreased compared to that of 2013

23.9%

Type	Measures Taken to Save Water from 2013 to 2017	Water Saved (million tones/year)
 Reuse of RO Rejected Water	<ul style="list-style-type: none"><li>A lot of ultra-pure water is needed in the wafering and solar cell manufacturing processes. A lot of RO (Reverse Osmosis) rejected water is discharged from UPW (ultrapure water) plants. We collect those RO rejected water, and use it in those processes where high water quality is not required, such as pre-cleaning, alkaline cleaning, surface grinding, angle grinding in wafering workshops.</li><li>The Hubei plant uses 300 tons RO rejected water every day for wastewater station dispensing, scrubber replenishment, landscaping, flushing and other things.</li></ul>	1.57
 Wastewater Reuse	<ul style="list-style-type: none"><li>Trina Solar worked together with Wuxi Depple Water Investment to build a new water recycling plant. The plant was built using advanced dual-membrane (ultrafiltration and reverse osmosis) technology to treat industrial wastewater generated from the manufacturing process. The treated water was directed back to Trina Solar as supplementary raw water supply. In the four years from 2014 to 2017, Trina Solar collected a total of 12 million tons of industrial wastewater, and produced and reused 7.6 million tons of new-water (or recycled water), which can meet the annual water consumption for 41,500 households in China.</li></ul>	2.14
 Others	<ul style="list-style-type: none"><li>Implementation of internal water recycle for wafer cleaning baths – water used in the post-cleaning bath was diverted and reused in the pre-cleaning bath.</li><li>Collection of condensate water from the air conditioners and use it as supplementary water supply for cooling tower and emission scrubber.</li><li>Circulating water of vacuum pump as supplement water for cooling tower in cell workshop.</li><li>Collection and reuse of humidifying water for air conditioners in module workshop.</li><li>Use of biological-treated effluent water as solution preparation water in wastewater treatment plants.</li><li>Regularly clean RO (Reverse Osmosis) membrane so as to raise DI water yield and reduce RO rejected water.</li></ul>	0.15



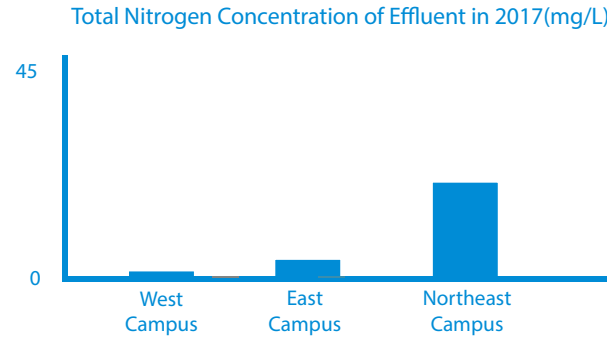
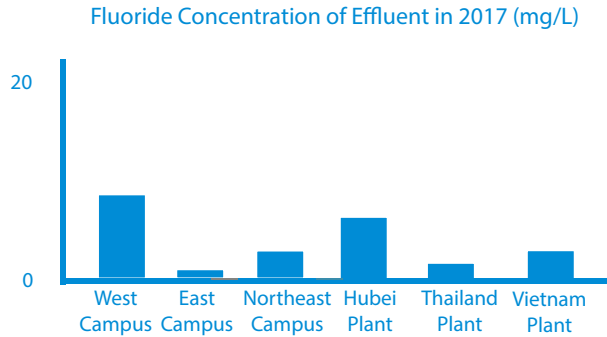
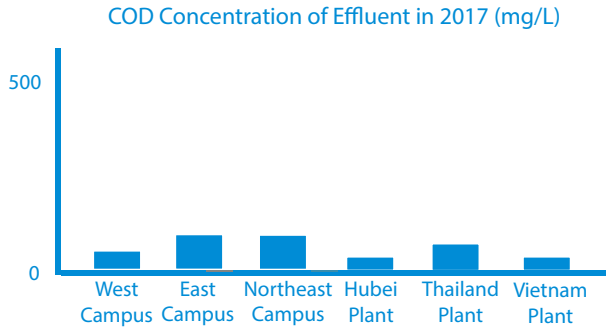
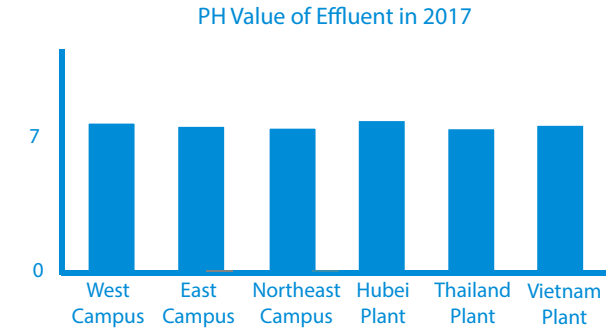
Wastewater Discharge

The wastewater from the manufacturing process which can't be reused or recycled will be adequately treated by our wastewater treatment plant prior to being discharged into the municipal sewer for further treatment. There was no occurrence of chemical leakage or wastewater limit-exceeding event in 2017.

As a company with a strong orientation towards social responsibility, Trina Solar has been striving to lead the solar energy sector in proactively discovering wastewater de-nitrification and dephosphorization technologies. After a few years of experimental exploration, Trina Solar has finally decided upon using the conventional technique-biochemical nitrification and de-nitrification technique to remove nitrogen and phosphorus from wastewater. The manufacturing base of Trina Solar is located in Changzhou, Jiangsu Province within

the reaches of Lake Taihu - one of the most developed areas in China. To meet the requirement of zero emission of nitrogen and phosphorus for projects within Taihu reserve regulated in Jiangsu Provincial Ordinance of Lake Taihu Water Pollution Prevention and Treatment, we have completed the wastewater de-nitrification update project in West Campus, East Campus and Northeast Campus. We have successfully used the organic matter from wastewater generated in the wafer workshop as the necessary carbon source. We also used the small proportion of phosphoric acid generated in the diffusion process as the phosphate source for biochemical nitrification. Thereby, these could realize the goal of "treating waste with waste", and lower the negative impact on the environment. The wastewater discharge per unit production (T/MW) in 2017 is 832 T/MW, which reduced by 36% compared to 1,301 T/MW in 2013.

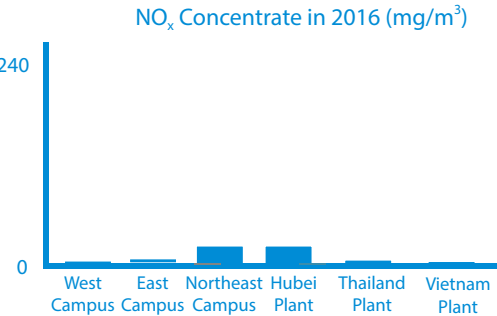
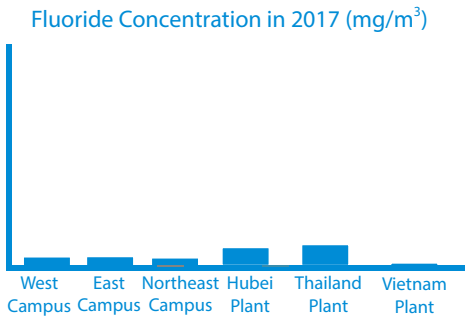
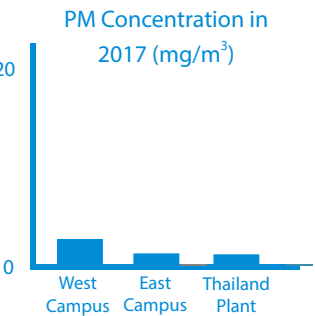




Waste Gas Emission

Trina Solar has also built a range of scrubbers, such as acidic/caustic scrubbers and organic scrubbers to remove pollutants from air emission according to relevant laws and regulations, to lower the concentration of emission and to avoid or lessen the hazards that arise from air pollution.

Trina Solar engaged an accredited third party to carry out annual monitoring of air emission from our exhausts and scrubbers. Results show that air emission from exhaust and scrubbers are well below the local standards.



Upgrade Waste Gas Treatment Facilities to Reduce Pollutant Emission






As a company with a strong orientation towards social responsibility, Trina Solar has been striving to reduce the environmental impact of its own operations. In 2017, the acidic scrubbers in both west campus and southeast campus, located in headquarters in Changzhou, were upgraded in order to meet more stringent requirements.

- 3.8 million RMB was invested to upgrade the acidic scrubbers in west campus from originally being single treatment tower with single-layer sprinkler to two treatment towers with multi-layer sprinkler;
- 3.6 million RMB was invested to upgrade the concentrated acid-scrubbers in southeast campus from single treatment tower to four-stage treatment tower.

Waste Management

The wastes from Trina Solar's manufacturing processes mainly consist of wooden pallets, plastic foam, paper waste, and used oil and sludge from wastewater treatment. Trina Solar treats waste as a resource. We segregate different wastes, and manage

them based on the principle of "3Rs" - Reduce, Reuse and Recycle. We adopt the following measures to reduce the amount of waste from manufacturing processes.

Stage	Measures
 Designing	<ul style="list-style-type: none"><li>• Take waste minimization into consideration at product design stage. Substitute or minimize those toxic materials with less toxic or non-toxic materials.</li></ul>
 Manufacturing	<ul style="list-style-type: none"><li>• Put waste management procedure in place. Categorize the different wastes into general waste, resource waste and toxic waste and manage them in different ways.</li><li>• Setup a recycle scheme for resource wastes, such as carton boxes, paper, plastics, metal scraps and woods.</li><li>• Setup an annual toxic waste disposal plan and maintain a disposal inventory according to environment regulation.</li><li>• Conduct environment awareness training for employees on waste minimization and segregation.</li></ul>
 Packaging	<ul style="list-style-type: none"><li>• Try to use the recyclable materials for packaging. Under the condition of being non-jeopardizing product safety, try to use light-weighted materials.</li></ul>

Green Office

A quarter of our time each week is spent in the office. We believe that green office not only means minimizing the environmental impact of office activities, but also means creating an environment beneficial to the physical and mental health of employees so that they feel physically comfortable and are spiritually uplifted.

We work to gradually incorporate the “green office” theme

into fine detail of our work, to greatly reduce the impact of office activities on the environment. We are gradually reducing the use of hard copies of documents, and promoting the use of electronic documents. We established a video conference system in order to reduce our average annual mileage by 15,000 km, thus reducing the carbon emission generated during travels. We provide a lamp switch for each cubicle to remind employees to turn off desk lamp when they leave their cubicle.

Biological Diversity Management

How to balance the development between enterprise and ecology has been a serious issue of many enterprises. Trina Solar always conducts environmental impact assessment according to local requirements to evaluate the positive and negative environmental impact when developing a new project or constructing a new solar power plant. We are committed to protecting the ecological environment and biodiversity of local communities.

We conducted several projects by installing PV modules high above fish ponds and farming land. In order to protect the evolution of local biodiversity, we place solar panel installations at a sufficient height so that the land can continue to be used while our photovoltaic system is in operation. For example, Trina Solar built a solar farm in Dorset of London. We made nesting places for birds and bats, and planted many types of wild flowers in project locations. We kept a section of the land so that it can be a home for native plants and animals. Moreover, we always try to improve their living environment, and promote the evolution of biodiversity at the project location by conducting awareness-raising activities to improve environmental protection awareness.





# Focus on Supply Chain - Share Sustainable Development

Trina Solar believes that every step of progress depends on the cooperation with, and support of the entire supply chain. A healthy and stable supply chain is the key to sustainable development of Trina Solar. We integrate sustainable development into procurement business and process, and take it as the basic line of choosing supplier. We not only actively fulfill our social responsibilities, but also urge our global suppliers and partners to shoulder their social responsibilities as well, so as to lead the whole PV industry to a sustainable future.

38



There are 38 suppliers who have been on the list of qualified suppliers for more than 5 years.

120



120 suppliers were rated as five-star among 131 suppliers in 2017 Trina Solar's suppliers performance evaluation.

400



More than 400 representatives attended 2017 Trina Solar Annual Supplier Conference



# Sustainable Supply Chain



The effective supply-chain management can help us reduce risks, improve products quality, achieve strategic objectives, enhance the overall performance of suppliers, and create commercial values for ourselves and customers. We constantly focus on our suppliers' performance on corporate social responsibility, and take it as the base line of choosing suppliers. We drive suppliers for continuous improvement through supplier assessment, audit

and capability-building. We strive to continuously raise the overall performance of our suppliers and enhance their sustainability, so as to promote the sustainable development of the entire PV industry chain.

Our supply chain covers more than 80 procurement items, including raw materials, auxiliary materials, infrastructure, equipment, spare parts, packaging, logistics services, personal protective equipment, office suppliers,

certification services, etc. The purchase team in headquarters in Changzhou is responsible for purchasing raw materials, auxiliary materials, infrastructure, equipment, installation and logistics services. The purchase team in local plants purchases those low-priced consumables, such as spare parts, personal protective equipment, office suppliers, etc.

## Supplier Development

Trina Solar focuses on suppliers' sustainable development capabilities. We continuously improve the overall competitiveness of the supply chain through a comprehensive supplier review and evaluation process, as well as the full range of supplier communications and interactions. We focus on building a sustainable and win-win supply chain system. At present, the main suppliers are divided into: potential suppliers, potential qualified suppliers, and qualified suppliers.

**Potential Supplier:** a supplier who is able to produce or deliver materials for Trina Solar but temporarily hasn't obtained Trina Solar's recognition for its qualification and ability. The supplier will be recorded into our potential supplier database. Trina Solar will choose qualified supplier from that database and assess it through questionnaire and formal on-site evaluation.

**Potentially Qualified Supplier:** a supplier who has obtained Trina Solar's recognition for its qualification/ability and is added to Trina Solar's procurement system.

**Qualified Supplier:** once a potentially qualified supplier passes the assessment, it will be upgraded to qualified supplier.

We have established a standardized supplier development process, which includes supplier survey, supplier assessment, new parts/materials approval, qualified supplier approval etc.. The several related departments jointly discuss and decide on supplier selection, evaluation and elimination to ensure fairness and transparency.

The number of suppliers who have been on the list of qualified suppliers for more than 5 years

38

## Supplier Development Procedure



**Supplier Survey:** The procurement department issues a 'Vendor Assessment Form' to the potential suppliers to evaluate their qualifications. The department completes the form by telephone call and on-site audit to assess whether the potential suppliers satisfy Trina Solar's requirements based on the marks: 1) <60 marks, not meeting the development requirements; 2) 60-70 marks, conditionally suppliers for development; 3) 71-80 marks, suppliers for development; 4) > 80 marks, preferred supplier for development.

**Supplier Assessment:** Trina Solar has established detailed assessment guidelines to evaluate suppliers. For those potential suppliers that need on-site assessment, our procurement department will review and assess their integrated abilities in many aspects, such as quality management system, supply assurance ability, product performance and reliability, corporate social responsibility and business ethics, EHS management, new product development, cost, and technical support and sales service. Based on the assessment results, we classify the potential suppliers into four grades: Grade A (Acceptable), Grade B (Basically acceptable), Grade C (Conditionally acceptable) and Grade D (Disqualified). Among them, suppliers of Grade C or above may become our potentially qualified suppliers.

**Approval of New Spare Parts/Materials:** Prior to formal procurement, the new suppliers approval processes, including sample evaluation, batch testing, and reliability verification approval, need to be completed before they become qualified suppliers for bulk purchases.

**Approval of Qualified Suppliers:** After the supplier passes the sample evaluation, batch testing and reliability verification, the procurement department will add it to the qualified supplier list, and update the status of the qualified supplier according to the periodic performance evaluation results.

## Supplier Management

We implement 'status' management on suppliers. The status of suppliers is divided into five states in the procurement system: approval, R&D, abnormal quality, freezing, and elimination. We can only issue bulk POs (purchase orders) to the suppliers with 'approval' status, and POs in small quantities to the suppliers with 'R&D' status. We cannot issue POs to the suppliers with 'abnormal quality', 'freezing', and 'elimination' status.

• Approved Supplier: being approved as a qualified supplier to place a batch purchasing order.

- Developing Supplier: under development and only small order for trial.
- Abnormal Supplier: being disqualified more than three times, the supplier will be classified as 'abnormal'.
- Frozen Supplier: with no deal for one year, the supplier will be frozen and limited for any new orders.
- Eliminated Supplier: with no deal for over two years or classified as 'disqualified', the supplier will be eliminated from the supplier list.

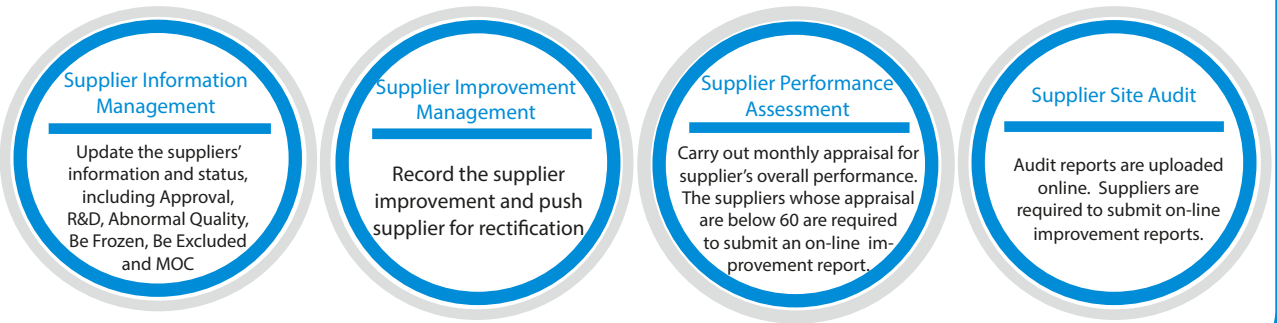






Digital Supplier Information Management System (DSIS)

In 2017, we developed a Digital Quality Management System (DQMS). One of the modules is the Digital Supplier Information System (DSMS), which helps us effectively manage all related supplier information, such as supplier's status, performance & appraisal etc. We can interact with suppliers and drive them for improvement.



'Trina Cup' Supplier Improvement Project Competition



In November 2017, Trina Solar organized the first 'Trina Cup' Supplier Improvement Project Competition. The purpose of the competition is to encourage suppliers to continuously improve product quality and reduce manufacturing costs. The competition also provides suppliers with a platform for communicating, learning, sharing improvement results, so as to create excellent quality together.

Awards	Company	Name of Project
First prize	Xihua Run Huajing Microelectronics Co., Ltd.	Reduction of Broken Rate for Wave Soldering
Second Prize	Suzhou Zhonglai Photovoltaic New Material Co., Ltd.	Improvement for KFB-30 Inter-layer Peel Strength
Second Prize	Qiang Mao Electronics (Wuxi) Co., Ltd.	Increase of Diameter CPK for SMAP Surface Dispensing
Third Prize	Kangweiming Engineering Film (Zhangjiagang) Co., Ltd.	Reduction of Dirt During Cutting Process
Third Prize	Nanjing Hongfa Non-ferrous Metals Manufacturing Co., Ltd.	Improvement for Product Yield
Third Prize	Zhongtian Photovoltaic Materials Co., Ltd.	Reduction of Stencil Prints after Replacement of Glue

Conflict-free Minerals

'Conflict minerals' refer to metallic minerals, such as tin, tantalum, tungsten, gold and cobalt exploited from Democratic Republic of Congo and surrounding nations, which may produce serious problems regarding human rights and environment during exploit and sales. Trina Solar has put its policy, systems and processes in place to ensure that its supply chains are conflict-free. We are committed to sourcing only materials from environmentally and socially responsible suppliers. We highly focus on conflict minerals and work diligently with suppliers to promote sustainable development by way of ethical sourcing. The copper strips coated with tin are used in the production process of PV modules. We have proactively taken actions since we realized that there is a

possibility of conflict:

- Formulate formal conflict mineral management policy;
- Establish management system and conduct conflict mineral survey for supply chain;
- Organize conflict mineral training for key suppliers;
- Inquire all suppliers to sign formal agreement to promise no conflict mineral in their products, and deliver the requirement to downstream suppliers.

Cooperation for Win-win Situation

Trina Solar not only pays attention to its own green development, but also takes initiative to convey its vision and goal of sustainable development to its global partners. Trina Solar is committed to working with global partners to gather

ideas and contribute inspiration and innovative solutions for the sustainable development of the photovoltaic industry.

2017 Trina Solar Annual Supplier Conference



Regardless of difficulties or dangers, we have been hand-in-hand and move forward together for 20 years to create a brilliant future. In November, 2017, Trina Solar held annual global supplier conference in Changzhou. More than 400 global suppliers attended the conference. Together with senior management team, including Feng Zhiqiang, VP of Strategic Open Innovation Platform, Wei Zhou, VP of Quality, Minhong Hua, VP of Manufacturing etc., Jifan Gan, Chairman & CEO of Trina Solar, attended the conference and made a keynote speech. Trina Solar shared participants with its perspectives of strategy, brand, innovation, quality, supply chain, downstream business development and energy IoT (Internet of Things). Four categories of award were established and awarded during the conference: Excellent Innovation Award, Excellent Service Award, Excellent Quality Award and Excellent Supplier Award. Thirteen suppliers including Longji Green Energy and GCL-Poly won the awards. Trina Solar demonstrated its leadership position in the PV industry by openly sharing the suppliers with products information and the industry development trend, which allowed suppliers have a full understand on Trina Solar's strategy. Looking ahead, Trina Solar is committed to working hand-in-hand with all suppliers and striving to create a brilliant future together.

Trina Solar's Solar Race Car Wins World Championship for the Third Time

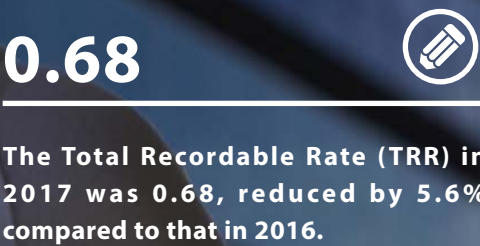
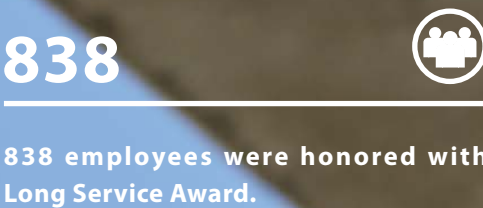


On 5<sup>th</sup> August, 2017, Trina Solar's Solar Race Car won the World Championship for the Third Time during the '2017 FIA Electronics and New Energy Solar Racing Championship', the world's largest solar car competition. Since 2015, Trina Solar has been cooperating with Osaka Sangyo University (OSU) to develop the 'OSU-Model-S' solar racing car. The car was 100% powered by Interdigitated Back Contact (IBC) solar cells developed by Trina Solar's State Key Laboratory of Photovoltaic Science and Technology. The car consecutively won two championships in the FIA Solar Racing Competition in 2015 and 2016.



## Care for Employees - Promote Harmonious Growth

Employees are essential force for pushing forward Trina Solar’s sustainable development. We believe that it depends on every employee’s support and dedication to achieve our mission and vision. Therefore, we are committed to providing our employees with safe and healthy working conditions. We also provide highly professional training, a competitive salary and benefit package, and open communication channels for our employees, hoping to stimulate their enthusiasm and to create a win-win future between the company and the employees.





# Talent Sustainable Management



Trina Solar treats talents as one of the most important factors of long-lasting development. We focus on employees’ personal development and has formulated a sustainable talent cultivating strategy. We attract and retain outstanding talents through reasonable performance evaluation, systematic training, competitive salaries and incentive mechanisms. Trina Solar makes every effort to offer an international platform for our employees to become comprehensive management talents.

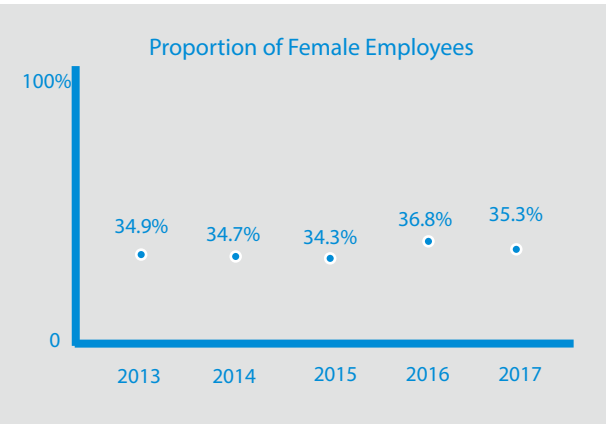
In order to meet the increasing demand

for talents, we recruit employees through Internet and campus-oriented channels. Moreover, we cooperate with domestic and overseas colleges, establish professional training courses, and organize Trina Solar exclusive job fairs. Our employees can really be regarded as a mini-UN.

As of the end of 2017, Trina Solar had a total of 14,666 staff from 36 countries and regions around the world. We strictly adhere to relevant international conventions, local laws and regulations, to ensure gender equality and prohibit employment discrimination. The

proportion of female employees in Trina Solar remains quite stable during the past several years. In 2017, we have 5,183 female employees, occupying 35.3% of the total. While facilitating the diversification of our staff, we are also actively promoting the localization of employment, which widens our knowledge of local culture, and provides more working chances for local people as well. Till the end of 2017, Trina Solar hired a total of 1,785 overseas employees work locally.

Area	Male	Female
America	24	18
Europe	69	26
Asia Pacific, Middle East & Afica	779	1,102
China	8,611	4,037
Total	9,483	5,183



## Employees' Rights

Trina Solar strictly adheres to international conventions on human rights and labor standards, as well as local labor laws and regulations. We protect the legitimate rights and interests of employees according to law.

- With the globalization of business, we learn local requirements about work time, holidays and social security systems to ensure compliance with international conventions on human rights and labor standards and to be an attractive and legitimate employer. We respect employees’ rights to exercise freedom of association and collective bargaining and establish labor union organizations in every plant at home and abroad.
- Comply with local laws in the region where our factories or offices are located. Child labor is strictly forbidden. Men and women enjoy equality in the workplace. Resolutely eliminate forced labor in the production or service provision process. There has been no occurrence of forced labor event in Trina Solar’s operation process.
- We formulate the regulation of ‘Management of Paid Leave’ to allow employees take paid vacation. We provide all employees with pensions, insurance for work-related injuries, unemployment, medical care, maternity and housing provident funds. Company benefits also include birthday cake vouchers, health days, cash gifts for weddings, traditional festival allowances, accident insurance and medical hospitalization subsidies. We have formulated sound compensation policy to ensure that our employees' compensation is higher than the lowest level of the regions our plants/offices located in.
- Adhere to the fair and equal recruitment policy to promote good relations between employer and employee. Trina Solar will never interfere with employees’ freedom of belief or discriminate any employee in terms of nationality, ethnicity, religion, gender, age, disability or marital status. Till now, no discrimination incidents related to gender and health status happened in Trina Solar.

## Employees' Development

Employees’ passion and contribution is an inexhaustible source for the success of Trina Solar.

We focus on our employees’ personal growth and development and treasure the efforts

made by them. We provide training courses and setup awards to encourage employees to make improvements and obtain common developments with the company.

### Training and Education

Training and education can help employees grow and realize their own value. Hence, Trina Solar continuously increases investment in training, education and culture cultivation to provide a strong career support system for our employees. We hope that they can make further progress in their daily work.

We have established a mature training system, including training regulations, courses, lecturers, etc. In 2016, we setup a lecturer club to foster and encourage internal lecturers to share their professional work experience with others, so as to

effectively accumulate valuable company-specific expertise. With the rapid development of mobile networks and smart phones, employees are inclined to use their scattered hours to learn the courses they are interested in. Therefore, we launched the UMU online learning system and various micro-courses to meet their learning needs in 2016. In 2017, we started Individual Development Plan to encourage our employees to set up their individual development plan together with their supervisor for further improvement.

#### 'Almighty King' Training Program



Trina Solar organized a series of 'Almighty King' training program to develop management talents, being capable of meeting future challenges. The training program included courses of financial management of non-financial managers, HR management of non-HR managers, products and technology, legal management for non-legal managers, IT management of non-IT managers, etc. These courses were conducted by internal company elites in the related professional fields. 223 employees participated in the training program. The trainees expressed that the curriculum was comprehensive, well-organized, and combined with the actual application scenarios, which was very helpful for their future work.



Methods	Descriptions
Library	<ul style="list-style-type: none"><li>To build a better learning platform to support employees' development, Trina Solar has cooperated with Changzhou Library to jointly open a library with a collection of over 20,000 books. The library shares the same management system as the one used in Changzhou Library. The readers can borrow books from and return books to either one.</li><li>The library regularly organizes reading and sharing activities to foster employees' interest in reading and learning.</li></ul>
Leadership Institute	<ul style="list-style-type: none"><li>The Leadership Institute aims to develop and implement learning programs for senior and middle managers in the company. In 2017, the Institute launched various training programs according to different needs of middle and senior managers.</li><li>In 2017, a total of 33 leadership training sessions were conducted with a total of 608 participants.</li></ul>
New Employee Training	<p>To help new employees adapt the company's corporate culture and start their career quickly, we provide them with a two-day's intensified training:</p> <ul style="list-style-type: none"><li>Welcoming: Company milestones review through communication with top leaders;</li><li>Team building: Promoting employee communication and enhancing team cohesiveness;</li><li>Policy and process introduction: Allow new employees get acquainted with workflows and procedures;</li><li>Exhibition hall and workplace visit: Understanding the company's products and production processes.</li></ul>
Face-to-face Training	<p>In 2017, the total training hours is 278,038 hours, covering the following training contents:</p> <ul style="list-style-type: none"><li>Professional skill training such as procurement, finance, sales, HR, EHS, etc.;</li><li>Time, cost, team management;</li><li>Training in stress and mood management, EQ management, effective communication, and software applications etc..</li></ul>
UMU Interactive Learning Platform	<p>To provide convenient learning resources for employees worldwide, Trina Solar's Learning and Development Department launched a multi-functional UMU App;</p> <ul style="list-style-type: none"><li>Employees worldwide can log in through smart mobile phone, ipad, etc. to search, share and learn the online courses;</li><li>Learners can create online learning groups, interact with lecturers and learners, which promotes collaboration spirit;</li><li>UMU can make micro-lectures by presenting pictures, voices, passages and texts. It also supports video micro-lecture and live broadcasting. Trina Solar's employees can use their scattered time to learn their interested courses anytime, anywhere;</li><li>As of end of 2017, there were 358 UMU online courses and 3,985 people participated in the training.</li></ul>

Development and Motivation

To attract, retain and motivate employees, Trina Solar has established an effective performance management mechanism. Employees are required to set personal development plan (PDP) every half year, and their leaders will evaluate and rate their performances. PDP is composed of three aspects of appraisal, including business objectives and key tasks, employee management objectives, and personal development goals to achieve balance among individual growth, team development and organizational goals.

We set objectives for management staff and leaders through performance management. Employees who enter the company can make their choices to take a technical or a managerial position for career development. Trina Solar will award and encourage excellent employees and teams every year. Employees with outstanding performance will be promoted according to the company's regulations. Trina Solar helps its employees to achieve individual values and keep same pace of development with the company.

Rewards	Description
Excellent Employee	Employees who have a strong sense of responsibility and outstanding performance will be awarded. In 2017, 776 employees were awarded as department-level excellent employees. 159 employees were awarded as company-level excellent employees, including 21 employees as New Sailing Award, 33 employees as Voyage Award, 33 employees as Excellent Expedition Award, 18 employees as Outstanding Business Leadership Award, and 54 employees as Excellent Culture Award.
Long Service Award	In order to appreciate employees who worked hard for a long term at Trina Solar, we awarded 838 employees with Long Service Award in 2017, including 559 employees who have been working for Trina Solar for 5 years, 254 employees for 10 years, 11 employees for 15 years and 14 employees for 20 years. We encourage our employees to develop with Trina Solar to create a bright future together.
Excellent Team Award	Teams with excellent performances will be awarded. In 2017, 16 teams were awarded with Excellent Team Award.
Stock Granting	Grant stocks to employees with excellent performance, key talents or rare talents.
Performance Award	Set up quarterly and annual individual performance prizes to encourage and acknowledge employees' contribution.
Model Worker Award	Set up awards for employees who have outstanding performances in work, reasonable proposals, cost reduction, resources conservation, environmental protection and safe production. In 2017, 24 employees were awarded with the title of 'Model Worker'.
Safety Model Award	Set up awards for employees who have strong sense of safety accountability, strictly abide by safety rules, and actively participate in safety training and emergency exercises. In 2017, 16 employees were awarded with the title of 'Safety Model Employee'.
Model Team and Star Employee	Teams and employees with excellent performance in energy-saving, cost reduction and safe production will be honored. In 2017, 83 teams were awarded with 'Model Team', and 264 workers were honored with 'Star Employees'.

Trina Solar Awarded with '2017 Asia's Best Corporate Employer Award'

On 27<sup>th</sup> October, 2017, the HR Asia Awards list, launched by Business Media International, an Asia's leading business magazine, was announced. As a leader in the global energy internet of things (IoT), Trina Solar stood out from among 158 candidates and won the '2017 Asia's Best Corporate Employer Award'.

HR Asia Awards, which has been held for 5 consecutive years since 2013, is an Asia's prestigious award in the field of human resource management. Candidates were assessed from nine dimensions for the award, including employee engagement, employee satisfaction, company brand and employer brand building, talent attraction and retention, workplace safety and social responsibility, training and development, global development platform, work-life balance, and employee communication. 28 world-renowned companies, such as Bloomberg, KPMG, Schneider and Trina Solar, won the award. Trina Solar will continuously strive to attract outstanding talents and provide employees with global development opportunities. We will build a good cultural atmosphere and enhance employees' sense of mission, belonging, and happiness.



Stephanie Shao  
CHO of Trina Solar

"We greatly appreciate Business Media International and the judging panel for their trust and recognition of our company. Under the guidance of the mission of "Solar Energy for All", we will continue to embrace changes, encourage innovation, and create a low-carbon, green and sustainable living environment."



Listen to Employees

We value the communication and participation of employees, and encourage them to join the Labor Union. We have established a variety of efficient and transparent communication channels within the company to build multi-channel and multi-level employee communication, so as to promote culture construction and allow employees to fully exercise their democratic rights as a real member of the

company.

We respond to the questions raised by employees and try to resolve them promptly. For the problems that cannot be resolved temporarily, we will acknowledge the problems and admit that the company will try to find a way to address them, so as to win employees' recognition and forgiveness.

Channels	Contents
Quarterly Communication Meeting	A quarterly communication meeting between the management and employees on the topics of company development, current status, future missions, objectives and challenges, strategies, etc. There is an on-site Q&A session between senior management and employees.
Round-table Meeting	Communication meeting between management and employees on management, salaries and benefits, workplace environment, safety and health, employee life, etc.
Staff Communication Meeting	Organizing internal communication activities between new employees and old employees, new employees and excellent employees, and communication between team leader and other staff, so as to establish exchange platform, understand employee voices and promote corporate culture.
Vulnerable Group Meeting	Caring for the company's vulnerable employees, such as organizing communication activities for deaf employees and minority employees. Bringing the warmth and care for the vulnerable group.
HR Hotline	Through the HR hotline, employees can consult issues like company activities, policies, salaries and benefits, workplace environment, safety and health, etc.
'Lync' Communication Platform	Employees worldwide can use 'Lync' internal communication platform to identify issues in their daily work, so as to enhance work efficiency.
'Corporate Culture' Communication Platform	'Corporate-culture' Communication Platform can promptly release company news, activities, training, work flow, and outstanding employees' excellent deeds to all employees worldwide.

Communication Between Excellent Employees and New Employees



Trina Solar regularly organizes communication between excellent employees and new employees to ensure that new employees are adapted to the work environment quickly and efficiently. In April 2017, we invited Kai Sun and Haiming Zhuang, winners of the 2016 Outstanding Newcomer Award, to share their experience and feelings on winning the Outstanding Newcomer Award with new employees. For example, they had good learning habits, earnest and meticulous work attitude, and good teamwork sprits. The main purpose of the communication is to enhance the communication between excellent employees and new employees. We strive to lead new employees to learn the excellent employees through the power of role models and achieve the inheritance of corporate culture.

Employees' Health

Employees with sound physical and mental health will have a higher work enthusiasm and work efficiency. Trina Solar continuously pays attention to employees' mental and physical health. We strive to create an efficient, relaxed and caring work environment for our employees, and help them make a good balance between work and life, so as to improve their work performance and quality of life.

We have established an internal clinic to provide the employees with medical and health counseling services. We regularly organize health examination for employees and annual health checkup for female employees to show our caring for them. We also provide free traditional acupuncture therapy for employees. In brief, we do our utmost to create a healthy, safe and comfortable workplace for all employees and help them improve their work performance and quality of life.

In 2017, Trina Solar launched a wonderful welfare platform based on its existing flexible welfare program. Employees can choose their own welfare items for themselves and their families according to their own needs, such as telephone-doctor, physical examination, critical illness insurance, accident insurance and other self-paying programs, to meet their different hearth-care needs. Employees are given their own decision-making rights to guarantee their welfare so that they can fully be engaged in enjoyment of work and life.

In order to facilitate relationships between parents and children, Trina Solar persists in conducting parents-children activities to benefit children's physical and mental health, such as Trina children summer camp, art training class, painting and calligraphy show, parent-child reading club, mother's day activities, etc. The activities are both fun and entertaining. They not only help promote emotional communication between parents and children, but also allow employees pay more attention to their children's healthy growth.

Employee Assistance Program (EAP)



Trina Solar provides employees with Employee Assistance Program (EAP), and periodically invites psychological counselors and senior mental-health practitioners to provide guidance and training on work and life balance. In 2017, we provided psychological counseling and assistance to more than 50 employees to help them alleviate work stress and eliminate psychological distress.

- EAP Counseling Scope: workplace stress, love and marriage, parent-child education, family relationships, psychological emotions, etc.;
- EAP Consulting Method: psychological counseling hot-line, face-to-face consultation, hypnosis, special lectures, etc.

Relaxing and Efficient Work Atmosphere

We believe that creating a good work atmosphere can help employees balance their work and life. Employees can relieve their stress by participating in various kinds of cultural activities, and promote their professionalism, dedication and work enjoyment.

Trina Solar has many sports clubs such as football, basketball, badminton, table tennis, swimming, fishing, etc. We organize sports competitions every year according to employees' interests. For example, we held basketball league games for consecutive 9 years, badminton games for consecutive 8 years, tug-of-war

events for 7 years, Ping-Pong matches for 6 years, and snooker competitions and marathon for 4 years.

In order to popularize local cultures and enrich employees' cultural life outside of work, we prepare various activities to celebrate local traditional festivals. Moreover, we also have reading clubs, Tai-chi classes, and Yoga classes and flower arrangement classes for female employees. The relaxing, soft movements can help people calm down amidst the hustle and bustle of life, cultivating their minds and making them more confident in their work and life.

Trina Solar 20<sup>th</sup> Anniversary Celebration



Jifan Gao, Chairman & CEO of Trina Solar, led senior executives to take the oath: 'Regardless of 20 years' hardships and rains, Trina employees stand together. We set off again to create brilliant future.'

In 2017, Trina Solar celebrated its 20<sup>th</sup> anniversary with the theme of 'Thank You for Your Perseverance, and We'll Create Brilliant Future Again' at the Changzhou Grand Theatre. Together with thousands of employees and their families, Jifan Gao, Chairman and CEO of Trina Solar, reviewed the hardships of Trina's 20-year entrepreneurial development history, and depicted Trina's future mission and vision. Mr. Gao expressed his sincere appreciations to employees and their families for their hard-working, dedication, understanding and support. Meanwhile, he encouraged all employees to put the company's core values into actions, be dedicated to work and strive to achieve the goal of 'Solar Energy for All'.



Employees’ Occupational Health & Safety (OH&S)

The employees’ safety and health is the foundation of our business. We integrate occupational health and safety (OH&S) management requirements into every aspect of the company's operation management.





We are committed to creating a safe, healthy and environmentally-friendly workplace for our employees, so as to allow employees enjoy a better quality of life and grow and develop together with Trina Solar.

OH&S Management System

We believe that a good OH&S management system can continuously help us improve OH&S performance. Most of our manufacturing plants have established OHSAS18001 Occupational Health and Safety Management System. We implement OH&S improvement projects in every operation step, including plant design, construction, research and development, manufacturing and packaging. We are dedicated to ensure the health and safety of our employees, contractors, customers and other interested parties.

Trina Solar is committed to providing clean solar energy and creating a safe, healthy and environmentally-friendly workplace for our employees. We always keep in mind that our people are our most important asset. We have established a mature OH&S Management System (OHSAS18001) to reduce work-related accidents and occupational diseases.

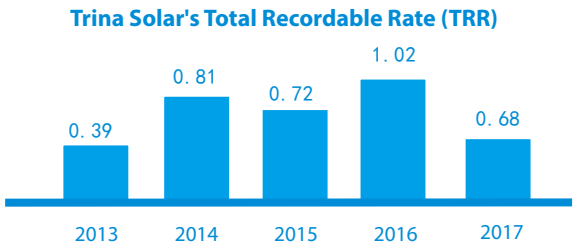
No.	Plant	OH&S Management System	No.	Plant	OH&S Management System
1	Plants at Changzhou Headquarters	Yes	5	Heifei Plant	Yes
2	Changzhou Trina Yabang Plant	Yes	6	Energy Storage Solutions Plant	Yes
3	Yancheng Plant	Yes	7	Thailand Plant	Yes
4	Hubei Plant	Yes	8	Vietnam Plant	No

Chains	Measures
<div> Designing and Construction of Plants</div>	<ul style="list-style-type: none"><li>Carry out OH&amp;S assessment, assess the potential impact on employees’ OH&amp;S and the communities, and ensure establishment of adequate OH&amp;S protection facilities;</li><li>Safety and occupational health facilities are designed, constructed and put into use simultaneously with the main part of a construction project.</li></ul>
<div> Research &amp; Development</div>	<ul style="list-style-type: none"><li>Only safe methods and materials with no or low occupational hazards are used.</li></ul>
<div> Manufacturing</div>	<ul style="list-style-type: none"><li>Identify hazards of every work process, and take protective measures according to the risk levels;</li><li>Compile work instructions, improve and implement the responsibility system of safety and occupational health, and promote safety performance continuously;</li><li>Ensure sufficient investment in safe production and occupational health to protect employees' occupational health;</li><li>Provide occupational health and safety training for employees;</li><li>Conduct emergency evacuation drills;</li><li>Promote employees' safety awareness and cultivate safety culture.</li></ul>
<div> Packaging</div>	<ul style="list-style-type: none"><li>Utilize recycled and non-toxic package materials to ensure customers' safety.</li></ul>



We have established a medium-term OH&S goal that the total recordable rate (TRR) in 2020 will be 15% lower than that in 2015. Continuously improving OH&S performance is an integral part of our production operations.

The total recordable accident rate (TRR) rose in 2016 due to the start-up of domestic and overseas new plants and the introduction of automation equipment. Based on the type of each accident, we analyzed in detail the reasons for the rise in TRR, and implemented corrective and preventive measures as well as special safety improvement projects. TRR in 2017 decreased by 5.6% compared to that in 2015.



Note: Total Recordable Rate (TRR ) is calculated by multiplying the sum of dangerous occurrence, lost time injuries (LTIs), fatalities (Fs), restricted work injuries (RWs) for employees for the reporting period by 10<sup>6</sup> and dividing by the total working hours in that period (H).

Trina Solar Granted Global Corporate Social Responsibility (CSR) Gold Award

Headquartered in Paris, EcoVadis is a world-renowned independent third-party assessment agency. Since 2007, EcoVadis has been operating a platform to provide sustainability ratings for global supply chains. The platform delivers simple and reliable scorecards to monitor supplier practices, covering 150 purchasing categories, 120 countries, and 21 CSR indicators in four themes: environment protection, labor practices, fair Business practices and sustainable procurement.

Due to its outstanding performance in environmental protection, labor practices, fair business practices, and sustainable procurement, Trina Solar was granted a Global Corporate Social Responsibility Gold Award in Ecovadis' 2017 Corporate Social Responsibility (CSR) assessment. We have obtained its best-ever result of top 5% suppliers of ranking in all categories and top 9% of suppliers in Manufacture of electronic components and boards.

Jifan Gao, Chairman & CEO of Trina Solar, said that the Global Corporate Social Responsibility Gold Award from EcoVadis fully affirms Trina Solar's contributions and long-term commitments to promote sustainable development as a responsible corporate citizen.



Jifan Gao  
Chairman & CEO  
of Trina Solar

"We are very honored that our unremitting efforts got recognized by international professional organization. Trina Solar pledges our commitment to provide clean renewable energy to the world. We strive to promote sustainable development by continuously raising energy supply security, improving environmental friendliness, and creating job opportunities. We'll work tirelessly to achieve our mission of 'Solar Energy for All.'"



Employees’ Workplace Safety

Trina Solar is dedicated to providing a safe and healthy workplace for all employees and contractors. Our goal is to continuously reduce work-related injuries in the workplace through hazard identification and risk control, and make efforts to improve OH&S performance.

Trina Solar proactively conducts risk assessments in relation to the health and safety risks posed to any person who may be affected by his undertaking in our workplace. A procedure has

been established and implemented to systematically identify the hazards and assess the risks related to manufacturing activities, products and services. Risk control strategies have been implemented, focusing on elimination/replacement, engineering measures, administrative measures and personal protective equipment controls. Trina Solar maintains an active emergency response plan. The plan is to ensure, to the best of our abilities, that the site facilities are maintained and operated in a safe way.

A Fire Emergency and Evacuation Drill in Trina Solar’s Vietnam Plant

Trina Solar’s Vietnam plant organized a factory-wide fire emergency and evacuation drill on 1<sup>st</sup> December, 2017. The drill aimed to test the employees’ self-rescue ability, the Emergency Response Team’s (ERT) emergency preparedness and their capability to cope with local fire brigade. ERT includes commander team, communication team, evacuation team, first-aid team, rescue team, alert team and logistics team. We simulated that there was a fire emergency in the production building. A plant-wide evacuation was initiated. The drill tested the actions to be taken for each individual in event of a fire emergency, including activation of alarm, evacuation, ERT response, assembly, etc. The drills not only improved ERT response skills, but also raised fire safety awareness for all employees.



Fire Extinguisher Usage



Evacuation and Assembly



Activation of Local Fire Brigade

Use Hydraulic Barrel Clamp-forklift Instead of Hydraulic Flat-bed Vehicle to Reduce Employees’ Risk of Being Pinched

Workers who work on the module-framing post need to use silica gel, which is about 270 kilograms per barrel. It requires two workers to move the silica gel barrel together to the hydraulic flat-bed vehicle. Since the hydraulic flat-bed vehicle holds two barrels of silica gel, workers’ fingers are inclined to be pinched when moving the second barrel on the vehicle.

Engineering Measure: use hydraulic barrel clamp-forklift instead of hydraulic flat-bed vehicle to reduce employees’s risk of being pinched.



Risk of fingers pinched at the point of two barrels’ contact



Use of hydraulic barrel clamp-forkliftvehicle

Chains	Occupational Health and Safety (OH&S) Management
Risk Identification	<ul style="list-style-type: none"><li><u>Hazard Identification and Risk Assessment</u>: We have put Hazard Identification and Risk Assessment Procedure in place to identify the hazards and assess the risks related to manufacturing activities, products and services. Hazard identification is the recognition process of sources or situations that can cause harm to people (accident or illness). Risk assessment is the process of estimating the risk levels for the hazards and their acceptability. Based on risk level determined, risks are categorized as major risks, medium risks and minor risks.</li><li><u>Safety Inspection</u>: Trina Solar has established the EHS Inspection and Management Procedure to assess the strengths and weaknesses in the plant’s safety system by the identification of unsafe acts and unsafe conditions. The procedure gives the notification of line management for appropriate, effective and prompt corrective actions.</li><li><u>Near-miss Reporting</u>: Trina Solar adheres to an open and effective reporting mechanism to encourage correct behaviors, practices and processes in order to avoid the occurrence of accidents and personal injury. We encourage all employees to report near misses they observe around them via different channels, such as an EHS reporting card, near miss reporting database in E-flow system, email and telephone notification etc.</li><li><u>Industrial Hygiene Monitoring</u>: We carry out industrial hygiene monitoring each year based on legal requirements. Engineering and management measures will be taken to ensure that employees are provided with a healthy working environment.</li></ul>
	<ul style="list-style-type: none"><li><u>Safe Production Responsibility</u>: According to the principle of 'Responsibility-oriented Management', EHS Responsibility Agreement was signed to ensure safety precautionary measures to be implemented in every location and every department.</li><li><u>EHS Training</u>: We make EHS Trainings for employees, contractors and suppliers, such as New Employee Training, On-the-job Training, Professional Safety Training (e.g. chemical safety, electricity safety, fire safety). That could help improve the employees and suppliers' safety and health awareness, so they can take precautionary or porper measures in case of an emergency.</li><li><u>Hazardous Work Management</u>: We set up a permit-to-work system to ensure the safety of contractors and employees. This system requires employees and contractors to get an Area Work Permit prior to the commencement of any work within Trina Solar premises. We strictly control activities that may cause major injury or losses, such as working at a height, hot work and confined-space work. The responsible person for a project needs to complete a permit for such works, which shall be approved by relevant parties prior to commencement of the work.</li></ul>
	<ul style="list-style-type: none"><li><u>Chemical Management</u>: We strictly adhere to all the applicable rules of not to use the prohibited or restricted chemicals in the places where we operate. We formulated 'Chemical Management Procedure' to ensure the introduction, purchase, storage, usage and discard of chemical are adequately supervised and the related risks are well controlled.</li><li><u>EHS Management of Change (MOC)</u>: EHS Management of Change (MOC) is an essential building block to maintain operation integrity and prevent serious EHS accident. Trina Solar set up a MOC procedure. An evaluation should be conducted if the changes have a strong relation with those that may be harmful to people, the environment, safety or quality of products.</li><li><u>Occupational Hazard Notification</u>: We set up occupational hazard notice cards in workplace to allow employees to know the possible occupational hazard factors and the protection measures.</li><li><u>Occupational Health Examination</u>: We arrange employees who are exposed to occupational hazards to have occupational health examinations every year. In case of occupational contraindication symptom, we promptly take corrective measures, such as swap of positions.</li></ul>
Emergency Management	<ul style="list-style-type: none"><li><u>Emergency Management Plan</u>: In case of an emergency, the way how to response makes the difference between a positive and a negative outcome. We believe that effective contingency plans and periodic drills will play a crucial role in stabilizing the situation upon emergency. Therefore, we have developed a comprehensive emergency response plan, including fire emergency, chemical spill and burn, power outage, etc., to ensure that we are able to promptly and effectively respond to a variety of safety and environmental incidents. We also conduct emergency drills regularly in each responsible area to ensure our emergency response plan can work well while improving our emergency response preparedness.</li><li><u>Medicare Green Channel</u>: Trina Solar sets up Medicare Green-card Scheme with local hospitals in Changzhou for our employees. Employees can receive immediate medical attention after showing their 'Trina Solar Medicare Green Card'. Trina Solar will pay for medical expenses afterwards to make sure that employees receive timely treatment.</li></ul>



Safety Culture Development

Caring for employee's work safety is one of the key performance indicators of our corporate culture. Trina Solar always sticks to the 'Safety First' principle. We persistently make our effort to foster a people-oriented culture. We have established various communication channels and programs, including monthly

EHS committee meeting, annual EHS promotion month and EHS training program etc., aiming to raise employee's safety awareness, improve employee's safe behavior and promote the corporate culture of 'safety first'.

2017 EHS Promotion Month

We carry out EHS Promotion Month in June every year to strengthen employee's safety awareness. In 2017, we organized a series of EHS activities with the theme of 'Full Implementation of the Enterprise's Responsibility for Safe Production'.

Activity	Content
Opening Ceremony of EHS Promotion Month	<ul style="list-style-type: none"><li>Zhenxiang Zhao, Senior EHS Director, reported Trina Solar's safety performance in 2016 and EHS work plan in 2017.</li><li>Mr. Zhigang Hu, Chairman of Labor Union, made a speech with the theme of 'Safe Production is a Base for Enterprise Development', stressing that Labor Union would safeguard the employees' legitimate rights and interests in safe production.</li><li>Together with Minghong Hua, President of Manufacturing VCU, Mr. Jifan Gao, Chairman &amp; CEO, awarded honorary certificates to 16 individuals from wafering, cell and module workshops for their outstanding safety performance. Mr. Gao encouraged them to make persistent efforts, hold the 'Safety First' principle, and act as a safe production model for all employees.</li></ul>
EHS Quiz	<ul style="list-style-type: none"><li>Each employee can answer the quiz in hard-copy or electronic form. The content of quiz covered chemical safety, electricity safety, occupational health, fire safety, traffic safety and so on. There were a total of 1,561 employees participated in the program.</li></ul>
Emergency Response Team (ERT) Competition	<ul style="list-style-type: none"><li>ERT competition included preliminary screening and final content. The preliminary contest covered emergency knowledge of fire, chemical spill, gas leakage, evacuation, first-aid, elevator accident, and use of emergency suppliers. There were 10 teams selected from the preliminary contest. The final contest was to test the ERT operation skills, including physical fitness test, selection and gowning of PPE, first-aid, fire-fighting, etc.</li></ul>
First-aid Lecture	<ul style="list-style-type: none"><li>Professional first-aid doctors were invited to give lectures on first-aid methods like cardiopulmonary resuscitation, to improve our ERT members' emergency response abilities. In 2017, 40 employees received the Primary First-aid Certificate issued by the Changzhou Red Cross.</li></ul>
Public Environmental Satisfaction Survey	<ul style="list-style-type: none"><li>EHS Department conducted an environmental survey to the surrounding residents of the factory. The purpose of the survey is to seek for the opinions and views from the surrounding residents on Trina Solar's operations. In 2017, there were 155 residents surveyed. 93% of the residents were in favor of this kind of the environmental survey. 91% of the residents had a positive feedback towards the development of Trina Solar.</li></ul>



Mr. Jifan Gao, Chairman & CEO of Trina Solar presented awards to safety pacesetters with Mr. Michael Hua, President of manufacturing VCU.

EHS Committee



To promote and improve EHS management, we establish an EHS committee. The committee consists of representatives of both the employees and the management from the department/ groups of production, equipment, technology, facility, EHS, HR, administration, labor union, etc. We hold the meeting on a monthly basis. All EHS issues are discussed and communicated during the EHS committee meeting:

- Potential EHS hazards, risks and control measures;
- Updates of EHS laws and regulations;
- Proposal of correct work-flow and safe-work procedure;
- Review of EHS accidents and EHS performance indicators;
- Update and identification of the latest EHS risks, and formulating control measures;
- Formulating EHS objectives and future work plans;
- Advice from Labor Union.

Traffic Safety on Daily Commute

We uphold the principle of 'People-oriented, Care for life' in our operations. Trina Solar not only focuses on employee's work safety, but also pay attention to traffic safety in their daily commute. To minimize injuries and losses caused by traffic accidents on the way to and from work, we conducted a series of traffic safety improvement measures.

- Formulate a Traffic Safety Management Procedure. The procedure defines the responsibilities in traffic safety management, and summarizes the typical traffic safety violations, aiming to regulate employees' driving behaviors in the factory and on the way to or from work;
- Invite traffic patrolmen to explain about the traffic situation, common traffic violations, correct driving habits, and how to handle a hit-and-run accident, etc.;
- Placing reflective strips for employees' motorcycles and electric bicycles to reduce the occurrence of night traffic accidents;
- Deploy volunteers to guide the vehicle drivers and cyclists to follow traffic rules at crossroads;
- Inspect licenses of motorcycles and electric vehicles regularly;
- Distribute road safety pamphlets to our employees and post posters about traffic safety on promotion windows.





# Contribution to Society - Build a Beautiful Community

Trina Solar fully takes our operation impact on the community into consideration and takes effective measures to reduce the impact, so as to establish mutual trust with the community and win their support and respect. Trina Solar is devoted to promoting economic and social development of local communities while expanding our business. We consistently promote and implement public welfare programs and try to achieve the goal of common prosperity with local communities. We work together with our partners to bring long-term benefits to local communities through investing in education, promoting public welfare and implementing volunteer programs.

1,000



Invested RMB 10 Million Yuan to Establish Siyuan Sunshine Fund for Entrepreneurship

46



Sponsored 46 Students to Complete 9-year Compulsory Education

30



Donated 30 kilowatts (KW) PV Modules to Nagarjuna Institute in India to Build a Solar-powered Parking Shed

40+



Tianai Volunteer Team, consisting of more than 40 Trina employees, has been volunteered to teach children in Tianai Rehabilitation Center since 2014.



## Education Support

Trina Solar constantly pays attention to education of local communities. We make investment in education and promote the cultivation of innovative talents, so as to facilitate the sustainable development of the society.

In 2015, Siyuan Sunshine Fund for Entrepreneurship was founded by Trina Solar. The Fund donated RMB 10 million to China Siyuan Foundation for Poverty Alleviation. By adhering to the philosophy of 'being grateful for the favour received, and paying back to the society', the Fund aims to help poor students

in western China through providing teacher-training, public lectures, public electives, etc. These knowledge and skill training courses help poor college students in western China start their own business in the Photovoltaic (PV) industry, so as to contribute to the economic and social development in western China.

In 2016, Siyuan Sunshine Fund for Entrepreneurship launched the first public PV training program for teachers, and rolled out two public PV training sessions in Xining, Qinghai Province and Wuwei, Gansu Province. We provide education support for poor areas and help college students in western China to start their own business.

### Siyuan Sunshine Fund for Entrepreneurship

Public Photovoltaic Training Sessions Held by Siyuan Sunshine Fund for Entrepreneurship

In September 2017, Siyuan Sunshine Fund for Entrepreneurship, founded by Trina Solar, rolled out two public PV training sessions respectively in colleges of Qinghai and Lanzhou. We granted a scholarship of a total amount of RMB 100,000 to college students with excellent performance.



Colin Yang,  
Chief Brand  
Officer of  
Trina Solar

"As a responsible corporate citizen, Trina Solar actively promotes education, environmental protection and the popularization and application of clean energy. We provide support and assistance to young talents and facilitate the sustainable development of the whole society."



### Innovation & Entrepreneurship Competition Held by Siyuan Sunshine Fund for Entrepreneurship

In December 2017, Siyuan Sunshine Fund for Entrepreneurship held 2017 Innovation & Entrepreneurship Final Competition. The primary election started in the colleges of western China since July 2017. Through several rounds of selections and fierce competitions, 12 teams from new energy major of six colleges in western China entered the final. The themes of submitted programs cover new energy buildings, residential distributed solar power project, recycling and reuse of PV modules, and solar energy applications.

The entrepreneurial competition focused on the practicality and operability of the participating projects, and was dedicated to solving the current difficulties and problems in PV industry. The competition had several parts, including exhibition of entrepreneurial projects, Q&A session between participants and judges, etc. The solar module recycling project of Qinghai University won the first prize with a good score of 91.6 points. The PV Application Product Development & Application project of Lanzhou Jiaotong University and the PV Intelligent Emergency Broadcasting System project of Lanzhou Polytechnic won the second prize. The two projects of Lanzhou Jiaotong University, i.e. Solar Smart Roadside Parking and Promotion, and Application of a New Solar Tracking Device Based on Thermal Drive Technology, and the Distributed PV Power Station Operation and Maintenance project of Wuwei Vocational College won third prize. We will work diligently provide assistance for college students to start their own business in PV industry, and continue to encourage and support college students' entrepreneurial projects.

## Donations

As a corporate citizen, Trina Solar actively engages in public charity. Together with local communities, we organize public welfare activities to build a safe, harmonious and green community.

In 2016, Trina Solar donated modules to earthquake disaster-suffered area in Nepal, and participated in reconstruction of disaster area together with British Prince Harry. Trina Solar took practical action in public welfare, disaster relief and infrastructure construction to create a better world.

### Trina Solar Donated Modules to Nagarjuna Institute in India



In March 2017, Trina Solar donated 30 kilowatts (KW) solar modules to Nagarjuna Institute in India to help carry out the construction of solar-powered parking shed. On the Chan Tea musical held in India, Ven. Miaohai from Boshan Zhengjue Monastery handed on Trina Solar's donation certificate to Lokamitra, president of Nagarjuna Institute. The Chan Tea musical was staged on Annbeca Square, Nagpur. It was an important activity of 2017 Buddha Culture Festival which attracted thousands of local people.

Jifan Gao, Chairman and CEO of Trina Solar, said that Nagarjuna Institute has actively promoted Buddha dharma for more than 20 years and provided free boarding for the public. It has a positive influence on local social and cultural development. Nagarjuna Institute's broad mind has similarities with Trina Solar's core values of 'Customer-centric, Open-mindedness, Dedication, Excellence'. We hope the donation can help Nagarjuna Institute develop better in the future.

## Volunteer Programs

Trina Solar focuses on mutual development with its local communities. We encourage our employees to voluntarily participate in public welfare activities, i.e., 'left-behind' and impoverished children caring, vulnerable group helping, etc. Trina Solar vigorously strengthens its volunteer fostering. We actively involved in various community services and sustainable development projects, so as to inherit the volunteer spirit of contribution, friendship, mutual help and progress.

Trina Solar established Tian'ai Volunteer Team in 2014. The team consists of more than 40 volunteer members from various departments of Trina Solar. They persist in helping children in Tian'ai Rehabilitation Center with their study every week. They also bring school supplies and daily necessities to the children to help them get out of autism.

Since 2009, the volunteers from Trina Solar have started to subsidize the students whose families have financial problems in Daibu Primary School and Hengjian Primary School in Liyang City. In the past 9 years, the volunteers subsidized 375 students with a total donation amount of RMB 340,000. Among them, 46 students completed the nine-year compulsory education.



## GRI Index

To enable stakeholders fully understand Trina Solar's social responsibility, 2017 Trina Solar Social Responsibility Report

discloses relevant information as the comprehensive disclosure plan based on GRI (Global Reporting Initiative).

Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
Organizational Profile					
102-1—102-7	Name of the organization; Activities, brands, products, and services; Location of headquarters; Location of operations; Ownership and legal form; Markets served; Scale of the organization	●	• Company Profile	07-10	
102-8	Information on employees and other workers	●	• Care for Employees	55	
102-9—102-10	Supply chain; Significant changes to the organization and its supply chain	●	• Sustainable Supply Chain	47	
102-11	Precautionary Principle or approach	●	• Corporate Governance • Challenges & Opportunities	11 23	
102-12	External initiatives	●	• Support SDGs	21	
102-13	Membership of associations	●	• Communication with Stakeholders	17	
Strategy					
102-14—102-15	Statement from senior decision-maker; Key impacts, risks, and opportunities	●	• Message from Leadership • Corporate Governance • Challenges & Opportunities	03 11 23	
Ethics and Integrity					
102-16—102-17	Values, principles, standards, and norms of behavior; Mechanisms for advice and concerns about ethics	●	• Corporate Governance • Corporate Culture	11 14	
Governance					
102-18	Governance structure	●	• Corporate Governance • Employees' Occupational Health and Safety	11 61	
102-19	Delegating authority	●	• Corporate Governance • Green Sustainable Development	11 29	
102-20	Executive-level responsibility for economic, environmental, and social topics	◐	• Corporate Governance • Materiality Analysis	11 19	
102-21	Consulting stakeholders on economic, environmental, and social topics	◐	• Corporate Governance • Materiality Analysis	11 19	
102-22—102-24	Composition of the highest governance body and its committees; Chair of the highest governance body; Nominating and selecting the highest governance body	◐	• Corporate Governance	11	
102-25	Conflicts of interest	◐	• Corporate Governance	11	
102-26—102-28	Role of highest governance body in setting purpose, values, and strategy; Collective knowledge of highest governance body; Evaluating the highest governance body's performance	◐	• Corporate Governance	11	
102-29—102-31	Identifying and managing economic, environmental, and social impacts; Effectiveness of risk management processes; Review of economic, environmental, and social topics	●	• Corporate Governance • Materiality Analysis	11 19	
102-32	Highest governance body's role in sustainability reporting	●	• About the Report	01	
102-33—102-34	Communicating critical concerns; Nature and total number of critical concerns	●	• Communication with Stakeholders • Challenges & Opportunities	17 23	

● Covered in the Report

◐ Partially Covered in the Report

○ Not Covered in the Report

Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
102-35—102-39	Remuneration policies; Process for determining remuneration; Stakeholders' involvement in remuneration; Annual total compensation ratio; Percentage increase in annual total compensation ratio	●	• Corporate Governance • Communication with Stakeholders	11 17	
Stakeholder Engagement					
102-40—102-44	List of stakeholder groups; Collective bargaining agreements; Identifying and selecting stakeholders; Approach to stakeholder engagement; Key topics and concerns raised	●	• Communication with Stakeholders	17	
Reporting Practice					
102-45	Entities included in the consolidated financial statements	●	• About the Report	01	
102-46	Defining report content and topic Boundaries	●	• About the Report	01	
102-47	List of material topics	●	• Materiality Analysis	19	
102-48	Restatements of information	●	• About the Report	01	No restatements of information
102-49—102-56	Changes in reporting; Reporting period; Date of most recent report; Reporting cycle; Contact point for questions regarding the report; Claims of reporting in accordance with the GRI Standards; GRI content index; External assurance	●	• About the Report	01	No significant change in previous reports
ECONOMIC					
Management Approach					
103-1	Explanation of the material topic and its Boundary	●	• Materiality Analysis	19	
103-2	The management approach and its components	●	• Message from Leadership • Challenges & Opportunities	03 23	
103-3	Evaluation of the management approach	●	• About the Report • Communication with Stakeholders	01 17	
Economic Performance					
201-1	Direct economic value generated and distributed	◐	• Message from Leadership	03	
201-2	Financial implications and other risks and opportunities due to climate change	●	• Message from Leadership • Dealing with Climate Change	03 32	
201-3	Defined benefit plan obligations and other retirement plans	○			
201-4	Financial assistance received from government	○			
Market Presence					
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	●	• Employees' Rights	56	
202-2	Proportion of senior management hired from the local community	●	• Employees' Rights • Employees' Development	56 56	
Indirect Economic Impacts					
203-1	Infrastructure investments and services supported	●	• Contribution to Society	68-69	

● Covered in the Report

◐ Partially Covered in the Report

○ Not Covered in the Report



Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
203-2	Significant indirect economic impacts	●	• Challenges & Opportunities	23	
Procurement Practices					
204-1	Proportion of spending on local suppliers	●	• Sustainable Supply Chain	47	
Anti-corruption					
205-1—205-3	Operations assessed for risks related to corruption; Communication and training about anti-corruption policies and procedures; Confirmed incidents of corruption and actions taken	●	• Corporate Governance	11	
Anti-competitive Behavior					
206-1	Legal actions for anti-competitive behavior, anti-trust,and monopoly practices	○			
ENVIRONMENTAL					
Management Approach					
103-1	Explanation of the material topic and its Boundary	●	• Materiality Analysis	19	
103-2	The management approach and its components	●	• Care for Our Earth • Sustainable Supply Chain	27-44 47	
103-3	Evaluation of the management approach	●	• Care for Our Earth • Sustainable Supply Chain	27-44 47	
Materials					
301-1—301-3	Materials used by weight or volume; Recycled input materials used; Reclaimed products and their packaging materials	●	• Environment-friendly Operation	41	
Energy					
302-1—302-5	Energy consumption within the organization; Energy consumption outside of the organization; Energy intensity; Reduction of energy consumption; Reductions in energy requirements of products and services	●	• Dealing with Climate Change	32	
Water					
303-1—303-3	Water withdrawal by source; Water sources significantly affected by withdrawal of water; Water recycled and reused	●	• Environment-friendly Operation	41	
Biodiversity					
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	• Biological Diversity Management	44	
304-2	Significant impacts of activities, products, and services on biodiversity	●	• Biological Diversity Management	44	
304-3	Habitats protected or restored	◐	• Biological Diversity Management	44	

● Covered in the Report   ◐ Partially Covered in the Report   ○ Not Covered in the Report

Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	◐	• Biological Diversity Management	44	
Emissions					
305-1—305-5	Direct (Scope 1) GHG emissions; Energy indirect (Scope 2) GHG emissions; Other indirect (Scope 3) GHG emissions; GHG emissions intensity; Reduction of GHG emissions	●	• Dealing with Climate Change	32	
305-6	Emissions of ozone-depleting substances (ODS)	●	• Dealing with Climate Change	32	
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	●	• Dealing with Climate Change	41	
Effluents and Waste					
306-1	Water discharge by quality and destination	●	• Environment-friendly Operation	41	
306-2	Waste by type and disposal method	●	• Environment-friendly Operation	41	
306-3	Significant spills	●			No such incident
306-4	Transport of hazardous waste	●	• Environment-friendly Operation	41	
306-5	Water bodies affected by water discharges and/or runoff	●	• Environment-friendly Operation • Biological Diversity Management	41 44	
Environmental Compliance					
307-1	Non-compliance with environmental laws and regulations	●			No such incident
Supplier Environmental Assessment					
308-1	New suppliers that were screened using environmental criteria	●	• Sustainable Supply Chain	47	
308-2	Negative environmental impacts in the supply chain and actions taken	●	• Sustainable Supply Chain	47	
SOCIAL					
Management Approach					
103-1	Explanation of the material topic and its Boundary	●	• Materiality Analysis	19	
103-2	The management approach and its components	●	• Product Stewardship Policy • Sustainable Supply Chain • Care for Employees • Contribution to Society	39 47 53-66 67-70	
103-3	Evaluation of the management approach	●	• Product Stewardship Policy • Sustainable Supply Chain • Care for Employees • Contribution to Society	39 47 53-66 67-70	

● Covered in the Report   ◐ Partially Covered in the Report   ○ Not Covered in the Report



Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
Employment					
401-1	New employee hires and employee turnover	●	• Care for Employees	55	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	●	• Employees' Rights	56	
401-3	Parental leave	○			
Labor/Management Relations					
402-1	Minimum notice periods regarding operational changes	○			
Occupational Health and Safety					
403-1	Workers representation in formal joint management–worker health and safety committees	●	• Employees' Occupational Health and Safety	61	No work-related fatalities
403-2	Types of injury and rates of injury, occupational diseases,lost days, and absenteeism, and number of work-related fatalities	●	• Employees' Occupational Health and Safety	61	
403-3	Workers with high incidence or high risk of diseases related to their occupation	●	• Employees' Occupational Health and Safety	61	
403-4	Health and safety topics covered in formal agreements with trade unions	●	• Employees' Health • Employees' Occupational Health and Safety	60 61	
Training and Education					
404-1	Average hours of training per year per employee	●	• Employees' Development	56	
404-2	Programs for upgrading employee skills and transition assistance programs	●	• Employees' Development	56	
404-3	Percentage of employees receiving regular performance and career development reviews	●	• Employees' Development	56	
Diversity and Equal Opportunity					
405-1	Diversity of governance bodies and employees	●	• Care for Employees	55	
405-2	Ratio of basic salary and remuneration of women to men	●	• Employees' Rights	56	
Non-discrimination					
406-1	Incidents of discrimination and corrective actions taken	●	• Employees' Rights	56	
Freedom of Association and Collective Bargaining					
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	●	• Sustainable Supply Chain • Employees' Rights	47 56	
Child Labor					
408-1	Operations and suppliers at significant risk for incidents of child labor	●	• Sustainable Supply Chain • Employees' Rights	47 56	
Forced or Compulsory Labor					
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	●	• Sustainable Supply Chain • Employees' Rights	47 56	
Security Practices					
410-1	Security personnel trained in human rights policies or procedures	○			

● Covered in the Report    ● Partially Covered in the Report    ○ Not Covered in the Report

Indicator Number	Description	Status	Report Section(s)	Page(s)	Explanatory Notes
Rights of Indigenous Peoples					
411-1	Incidents of violations involving rights of indigenous peoples	●			No such incident
Human Rights Assessment					
412-1	Operations that have been subject to human rights reviews or impact assessments	●	• Employees' Rights	56	
412-2	Employee training on human rights policies or procedures	●	• Employees' Development	56	
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	●	• Employees' Rights	56	
Local Communities					
413-1	Operations with local community engagement, impact assessments, and development programs	●	• Education Support • Volunteer Programs	69 70	
413-2	Operations with significant actual and potential negative impacts on local communities	●	• Environment-friendly Operation • Volunteer Programs	41 70	
Supplier Social Assessment					
414-1	New suppliers that were screened using social criteria	●	• Sustainable Supply Chain	47	
414-2	Negative social impacts in the supply chain and actions taken	●	• Sustainable Supply Chain	47	
Public Policy					
415-1	Political contributions	○			
Customer Health and Safety					
416-1	Assessment of the health and safety impacts of product and service categories	●	• Product Stewardship Policy	39	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●			No such incident
Marketing and Labeling					
417-1	Requirements for product and service information and labeling	●	• Product Stewardship Policy	39	
417-2	Incidents of non-compliance concerning product and service information and labeling	●			No such incident
417-3	Incidents of non-compliance concerning marketing communications	●			No such incident
Customer Privacy					
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	●			No such incident
Socioeconomic Compliance					
419-1	Non-compliance with laws and regulations in the social and economic area	●			No such incident

● Covered in the Report    ● Partially Covered in the Report    ○ Not Covered in the Report