Trinasolar

www.trinasolar.com

Trinasolar

Power Beyond Solar

Leading the way in smart solar energy solutions
for a net-zero future

Solar Energy for All

Power Beyond Solar

Contents

Company Profile

Founded in 1997, Trina Solar Co., Ltd. (stock symbol: Trina Solar; stock code: 688599) is mainly engaged in the research and development, production and sales of PV modules; power stations and system products; PV power generation, operation and maintenance services; development and sales of intelligent microgrids and multi-energy systems, as well as the operation of energy cloud platforms, etc., committing to lead the way in smart solar energy solutions for a net-zero future.

On June 10, 2020, Trina Solar was listed on the Science and Technology Innovation Board (STAR Market) of the Shanghai Stock Exchange (SSE). It is the first PV company that has gone public on the STAR Market providing PV products and systems as well as smart energy.

With innovation-driven development as its most important strategy and core driving force, Trina Solar has put in place a comprehensive and leading science and innovation system. So far, Trina Solar's SKL has set or broken 23 world records in terms of PV cell conversion efficiency and module output power.

Going forward, all the employees of Trina Solar will be guided by the Company's core values: "Focus on the Customers, Persist in Open Innovation, Persevere through Dedication and Hard Work, Strive for Excellence, Share the Responsibility, Create and Share Value together." By fulfilling its mission of "Solar Energy for All", Trina Solar aims to bring together the strengths of all the stakeholders with a cooperative and open attitude to lead the development of the industry, and make contributions to global energy conservation, emission reduction and sustainable development.

100GW+
Shipments
As of April 28 2022

5.5GW+
Grid-connected

100+
Regions

17000+
Employees

Milestones

1997

Trina Solar was founded in 1997 when the Chairman, Mr. Jifan Gao, took inspiration from the Kyoto Protocol and the U.S. Million Solar Roofs Initiative.

1999

Trina Solar completed China's first solar PV building, the "Sun Hut", featured in the promotional video for Beijing Olympics bid.

2003

Trina Solar participated in the Light Project helping to build 40 PV plants in western China.

2006

Trina Solar was listed on NYSE.

2008

Trina PV industrial park was built.

2010

Trina Solar became first "solar industry shaper" at Davos World Economic Forum.

2012

State Key Laboratory of PV Science & Technology was established in Changzhou headquarters.

2014

Gao Jifan became first President of Chairman of China PV Industry Association.

2015

Gao Jifan served as Co-Chairman of GSC.

Trina Solar rolled out stored-energy business.

2016

Trina Solar built factories in Thailand.

2017

Trina launched the Millions of PV Roofs Plan and unveiled China's first residential PV brand-Trina Home.

Gao Jifan was elected Vice-President of the National Energy Internet Industry and Technology Innovation Alliance.

2018

Trina Solar launched Energy IoT brand-TrinaIoT.

Trina Solar acquired Spanish tracker company Nclave.

2019

Trina Solar was recognized as National Center for Enterprise Technology by the fiveministries and commissions.

2020

On June 10th, 2020, Trina Solar announced on its initial public offering of A Share on Sci-Tech innovation board, became the first solar intelligent energy enterprise on SSE STAR market.

600W+ ultra-high power new modules, setting benchmark for PV 6.0 era.

2021

50GW+ company-wide production capacity.

40GW+ production capacity for industry-leading 210 Vertex module.

2022

Cumulative module shipment exceeded 100GW.

Globalization

Globalization is regarded as Trina Solar's main corporate strategy. Trina Solar began to build up its global presence from its inception. The Company was founded in Changzhou, Jiangsu Province, China, where its global headquarters is based. In 2022, Trina Solar established its international headquarters in Shanghai. It actively strengthened the building of global teams. In recent years, the Company has recruited international high-level management and R&D talents from more than thirty countries and regions. It has set up regional headquarters in Zurich, Fremont (USA Silicon Valley), Miami, Tokyo, Singapore, Dubai, offices or branches in Madrid, Mexico, Sydney, Rome, etc., as well as manufacturing bases in Thailand and Vietnam with operations in more than 100 countries and regions around the world.

Global and Regional Headquarters

- Changzhou, China (Global Headquarters)
- Shanghai, China (International Headquarters)
- Miami, USA
- Fremont (Silicon Valley), USA
- Dubai, UAE
- Switzerland
- Japan
- Singapore

Sales and Operations Agencies Worldwide

- Beijing, China
- Abu Dhabi, UAE
- India
- Republic of Korea
- South Africa
- Germany
- UK
- Spain
- Italy
- Mexico
- Colombia
- Brazil
- Chile
- Turkey

Manufacturing Bases Worldwide

- Changzhou, Yancheng, Suqian and Yiwu, China
- Vietnam
- Thailand

Financial Soundness

2021 Operating Income

USD 6.89 billion

2021 Yo Y Growth

51.2%

2021 Net Income Attributable to the Parent

USD 279.66 million

2021 Yo Y Growth

46.77%

Total Assets

USD 9.97 billion

2021 Yo Y Growth

39.36%

2021 Total Module Shipments

24.8 GW

2021 YoY Growth

55.8%

As of April 28 2022, USD/CNY=6.56

Boston Consulting Group Global Tech Challenger Top 100

Global New Energy Company Top 500

United Nations Blue Sky Award for Leading Technology

China Green Factory

China Industry Award

Nation Technological Invention Award

World's Most Bankable Module Brand

China's Private Company Top 500

China's Manufacturing Industry Top 500

Hurun China Top 500

World IoT Convention Top 500

PV Module Reliability Scorecaed Top Preformer

Top 100 innovator For Energy Transit

Brand Reputation

Trina Solar consistently adheres to six key strategies: innovation, branding, globalization, platform development, smart technologies, and synergy between the financial and industrial sectors. The company is driving industry growth in terms of standards of innovation, economic returns, product quality and environmental safety. Thanks to its outstanding technical innovation capabilities, the unparalleled extent of its global expansion, and its contribution to the healthy development of the industry, Trina has built a peerless brand reputation and collected numerous domestic and international awards.

State Key Laboratory of PV Science & Technology

National Enterprise Technology Centre

National Model Enterprise for Technological Innovation

Innovation Platform

Innovation is the fundamental driving force of PV towards price parity. More importantly, innovation is regarded as Trina Solar's core development strategy. Trina Solar is home to one of China's first "State Key Laboratories of Photovoltaic Science and Technology" accredited by the Chinese Ministry of Science and Technology; "New Energy Internet of Things Industry Innovation Center", an open innovation platform for research in the field of new energy Internet of Things; and "National Enterprise Technology Center" accredited by five ministries and commissions in China including the National Development and Reform Commission (NDRC). It won "the 2020 National Technology Invention Award". The innovation platform represented by "One Laboratory and Two Centers" has continuously helped the company achieve many outstanding results in innovation and promoted its innovative development.

In 2019, Trina Solar was awarded two national qualifications, namely, the "National Enterprise Technology Center" and "National Intellectual Property Rights Demonstration Enterprise". In December 2020, Trina Solar was the only company from the photovoltaic industry to be accredited by the Ministry of Industry and Information Technology as a National Technology Innovation Demonstration Enterprise. In November 2021, Trina Solar was granted the "2020 National Technology Invention Award", which is the first national technology invention award in the field of PV technology in China.

R&D Capabilities

Relying on "One Laboratory and Two Centers" (Key Laboratory of PV Science and Technology, National Enterprise Technology Center and New Energy Internet of Things Industry Innovation Center), Trina Solar has increased its R&D investment, established an efficient and productive R&D innovation management model, and actively promoted the strategy of "going global and bringing in" to attract talents. It has established partnerships with outstanding enterprises and universities both domestically and abroad in an open and cooperative manner, and leveraged the advantages of multiple parties to tackle bottleneck problems in industry technology. To date, Trina Solar has undertaken and participated in more than 60 projects such as National 863 Program, National 973 Program, National Key R&D Projects and Provincial Science and Technology Commercialization, etc. Trina Solar's SKL has set or broken 23 world records in terms of PV cell conversion efficiency and module output power.

By the end of 2021, Trina Solar has owned a total of 988 valid patents and software copyrights, including 326 invention patents, which is far ahead of competing enterprises in the PV industry. Meanwhile, the company has led Chinese PV enterprises to participate in the development of international standards and become the innovation leader and standard setter in the global solar industry.

Solar Energy Research Institute of Singapore | UNSW SYDNEY | NREL | ANU

Formulation of Standards

Industry standards led on or participated in **110**

Standards issued **100**

First to propose and publish **IEC international standards**

Laboratory Accreditations

World's first
TÜV Rheinland IEC certified witness test laboratory

World's first U.S.-accredited
UL 61730 witness test laboratory

R&D Results

Number of patent applications
2300+

Proportion of invention patents
50%

As of April 28 2022

New Leading Technology

210 Vertex Ultra-High Power modules

- 210mm silicon wafer
- Multi-busbar (MBB)
- Innovative arrangement and nondestructive cutting mode
- High-density packing

N-type i-TOPCon large-scale mass production

- New world record for Frontside efficiency **25.5%**
- **National Key R&D Programme projects**
- **20+ patents granted**

Advanced HJT technology reserves

- Actual efficiency of HJT cells in mass production **24.6% or above**
- Working on **863 national projects**
- Patents applied for **23+**
- **TüV certification of HJT products awarded** in first half of 2021

As of April 28 2022

Our Business

PV Products

Vertex 210
Ultra-High Power Modules
TrinaTracker

System Solutions

Utility projects
Distributed PV systems

Smart Energy

Energy storage system
Energy IoT

Vertex 210 Ultra-High Power Modules

Vertex

Ultra-High Power modules significantly reduce project costs

Trina Solar's Vertex modules feature 210mm cells with high power, high efficiency, high reliability and high generating capacity. They are applicable to all scenarios such as large-scale ground-mounted power stations, industrial and commercial distributed applications and residential applications, characterized by a complete supply chain for manufacturing and comprehensive matching for the system. Vertex modules are competitive with non-destructive cutting, high-density interconnection and multi-busbar (MBB) technologies, which lay a solid foundation for their efficiency and reliability. Thanks to their innovative design of low voltage and high string power, Vertex modules can increase string power by up to 41%. With ultra-high system value, they can also help reduce LCOE and BOS cost; N-type Vertex module uses the N type high-efficiency cell technology, on top of advanced 210 Vertex technology, to increase the power and efficiency up to 690W+.

Trina Solar has been named a "TOP PERFORMER" by PVEL (PV Evolution Labs) for eight consecutive years for its excellent product reliability and power generation performance. It is the only company that has received Bloomberg New Energy Finance (BNEF)'s 100% Bankability Rating for six consecutive years.

50GW+
2021 module production capacity

40GW+
Vertex 210 series production capacity

NO.1
World's largest 210mm module production scale

Wide product range for multiple settings

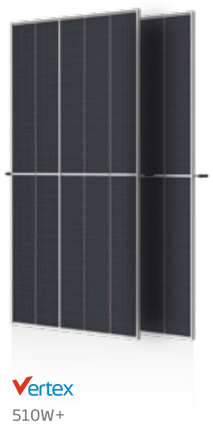
Compared with same-class products on the market
0.01-0.04 USD/W ▼
Lower system costs

Over 16GW
Vertex module orders since marketing including large-scale power stations and distribution business all over the world

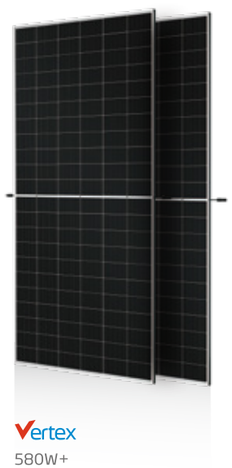
1%-3% ▼
Lower LCOE

Vertex S+
415W+

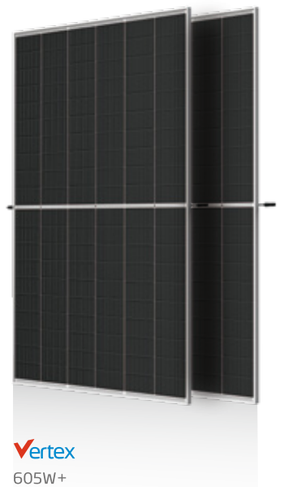
reddot winner 2022
Vertex S
435W+



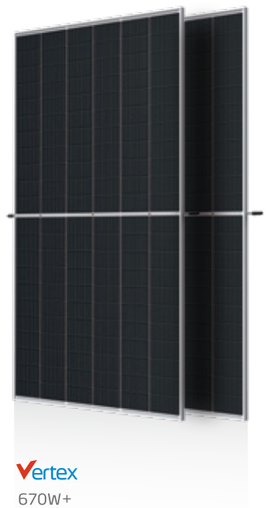
Vertex
510W+



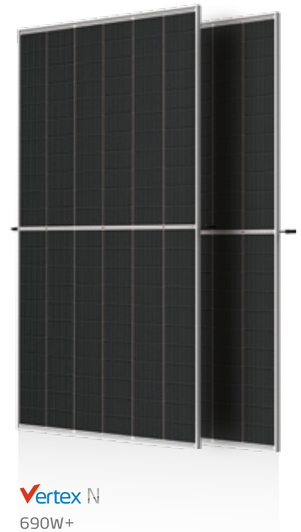
Vertex
580W+



Vertex
605W+



Vertex
670W+



Vertex N
690W+

As of April 28 2022

TrinaTracker

TrinaTracker

Efficiency booster in the era of grid parity

3%-8%
Higher power generation with smart tracking control system

2.4%-4.5%
Lower electricity cost per watt-hour compared with traditional trackers

30%
Adjustable tilt angle enabled by patented spherical bearing

High safety and stability
Wide applications, resilient to extreme weather conditions

Global project design, capacity planning and service

7GW+
Global installations

5GW+
Annual capacity

400+
Tracker projects

As of April 28 2022

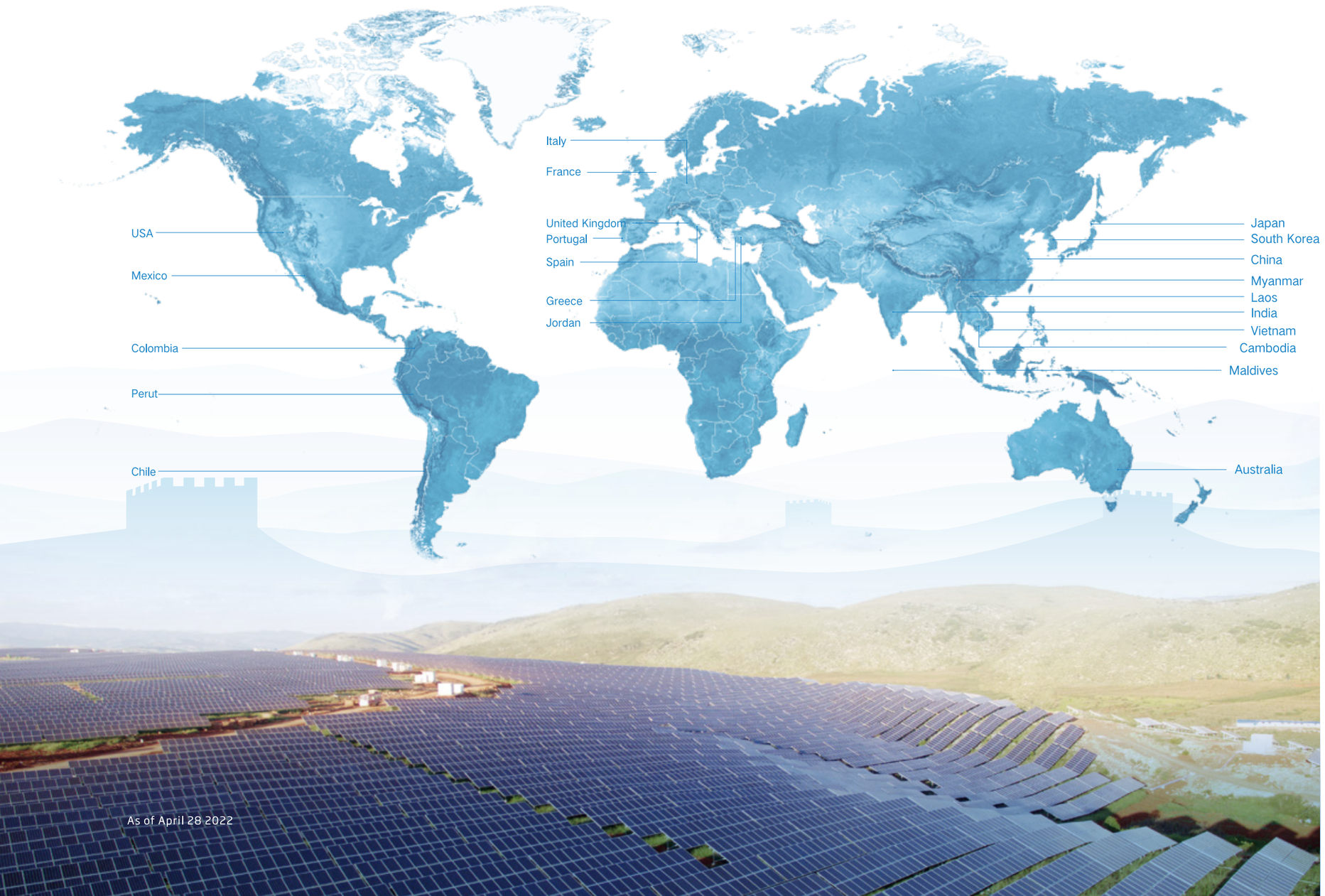
Production Capacity

As one of the founders of the 600 W+ Eco-Alliance for Open PV Innovation, Trina Solar stands firmly on the front line of the new PV era. Trina Solar has built three main “210mm ultra-high power module Super-Factories” in Yiwu (Zhejiang province), Suqian and Yancheng (Jiangsu province).

Utility Projects & EPCM

5.5GW+
Connected Projects Worldwide

7GW+
Global Pipeline



Against the new historical backdrop of price parity, Trina Solar has remained true to its original aspiration and positioned itself as the world's leading PV smart energy solution provider, continuing to strengthen its business system centering on core products such as PV modules and batteries, expanding solutions for the entire PV system, and providing better services to end users. After over two decades of unremitting efforts, Trina Solar has become a world-leading developer of PV power plants, providing clients with development, financing, design, construction, operation and maintenance, and one-stop system integration solutions. As of June 30, 2021, the company's cumulative grid-connected capacity has exceeded 5.5GW, while its reserve of high-quality projects has topped 7GW.

One-stop Power Station Solutions

Development ➤ Financing ➤ Design ➤ EPCM ➤ O&M

TrinaStorage

A Vertically Integrated BESS Solution Provider

LFP Battery Cell
Annual Manufacturing Capacity-3GWh

Battery Module
Up to 10,000 cycles

Fully Integrated
Integration Capacity-5GWh

BMS
Tailored 3-level BMS

All-New Elementa

25% More Cycles
Enhanced system lifetime enabled by improved performance and 25% more cycling lifetime

Optimized Cost
Up to 25% savings on TCO compared to Tier-1 Market Average

Leading the Energy Transition through Storage

Trina Storage is a business unit of Trina Solar, a company with 25 years of solar experience. Trina Storage combines deep technical expertise, quality, safety and agility to meet the unique needs of every customer. We help our clients to build large scale solar+storage and standalone storage projects that are highly bankable, highly flexible, and cost-competitive.

Building a Net-Zero Energy System

Trade of Electricity

EMS

Virtual Grid

Smart Micro-Grid

Charging Points

Micro Grid

City of Smart Energy

BIPV

Charging System

EV

Power Electronics | Energy Cloud | Edge Computing | Intelligent Gateway

PV + Wind + Energy Storage + Hydrogen

Solar Energy for All

million kWh

135,000

Green power generation

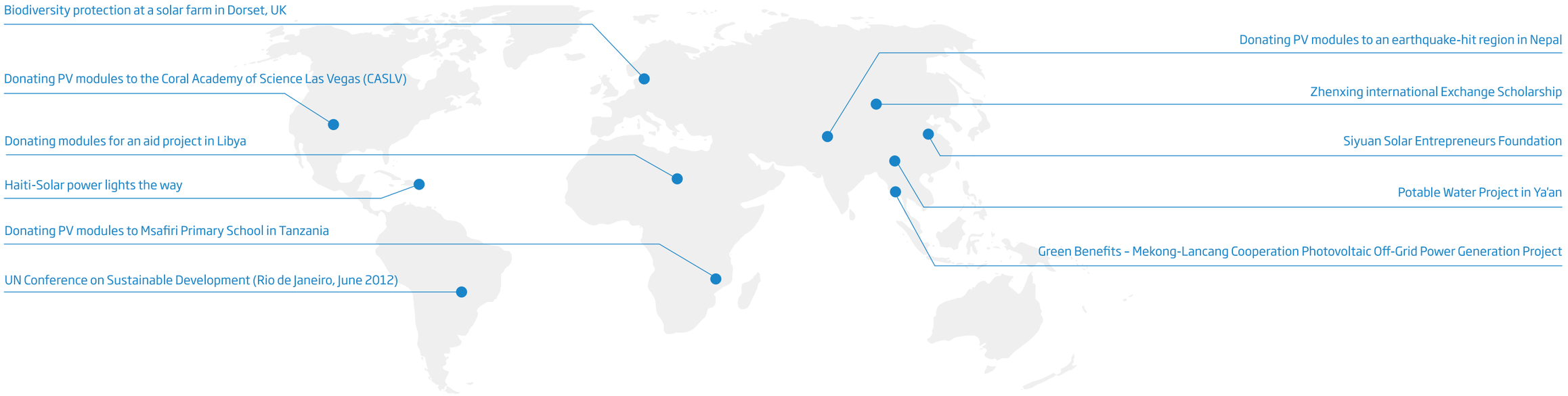
CO_2 emissions reduced by
134.6 million tons

SO_2 emissions reduced by
4.05 million tons

Smoke emissions reduced by
36.72 million tons

Equivalent to planting
7.4 Billion trees

As of April 28 2022



Social Responsibility

While achieving its own development, Trina Solar never forgets to give back to the society, or to undertake the responsibilities and obligations of corporate citizenship around the world. As a result, it won the Gold Award twice consecutively in the global Corporate Social Responsibility (CSR) assessment by EcoVadis.

In February 2020, when COVID-19 broke out in China, Trina Solar, utilized its global presence, mobilized its global resources to purchase medical supplies and donated them to Jiangsu Charity Federation. The medical supplies were offered to the medical teams from Jiangsu Province, Shanghai Fudan Huashan Hospital and the Fifth People's Hospital to support Wuhan's fight against COVID-19. The donated medical supplies were also delivered to designated hospitals for COVID-19 treatment in Nanjing, Changzhou, Yancheng and Suqian. As COVID-19 further evolved overseas, Trina Solar donated masks and other medical supplies to Spain, Japan, Maldives, etc. In March 2022, Trina Solar launched a donation to help prevent and control the epidemic in Changzhou.

The "Green benefits – Mekong-Lancang Cooperation (MLC) photovoltaic off-grid power generation project" undertaken by Trina Solar has been completed, contributing to power development in Myanmar, Cambodia and Laos, fulfilling electricity needs of local schools and Buddhist Institutes. In March 2021, Trina Solar donated 1,050 electrical appliances to 350 households for the project of International Cultural and Tourism Resort in Wu'erhe Town, located in the West of Wu'erhe District, Kelamayi City, Xinjiang, totaling RMB 1.8 million. In August 2021, Trina Solar donated RMB 5 million to assist in the disaster relief and post-disaster reconstruction in Henan Province. In the same year, Trina Solar Siyuan-Sunshine Venture Fund donated RMB 500,000 to Ankang Charity Association for rural revitalization, industrial development and public welfare projects. In March 2022, Trina Solar conducted charitable deeds at the Kalenjin tribe in Kenya, where it worked with local government to employ villagers from five villages nearby and enable them to participate in PV project construction through technical training. Hence, the construction of three photovoltaic power plants, namely, RADIANT, ELDOSOL and KESSES were completed. Trina Solar continues to pay attention to and provide pinpoint assistance to vulnerable groups, delivering health and care to everyone in need.

Awarded the EcoVadis Gold CSR ward for 2 years running

Core Values

Trina People aspire to a mission of "solar for all mankind," which we have distilled into a brand-new set of company core values for the 3.0 era, which we call our CODES: Recognition & Cooperation, Persist in Open Innovation, Persevere through Dedication and Hard work, Strive for Excellence, Share the Responsibility Create and Share Value Together. These are the guidelines all Trina People follow, and the "secret CODE" to our continued development and progress toward the future.

Focus On
The **C**ustomer

Persist In
Open Innovation

Persevere Through
Dedication
And Hard Work

Strive for
Excellence

Share the Responsibility
Create and Share
Value Together

Global Partners

Vertex 210
Ultra-High Power Modules

Qingtian County, Lishui, Zhejiang Province
400kW Vertex industrial/commercial distributed power project

Yulin, Shaanxi Province
100MW Vertex ground-mounted power station project

Lingshou, Hebei Province
50MW Vertex Agriculture-complementary projects

Binh Dinh Province, Vietnam
50.6MW Vertex Dam Tra O floating project

TrinaTracker

Ultra high temperature, large terrain slope

Cobra Solar Park Project, Spain
Ultra high temperature 44℃,
large terrain slope： Terrain Slope Over 12%

Hainan, Qinghai
High altitude of 3200 m, low temperatures reaching -30℃

High-altitude, low-temperature climate

Miraflores Project
Highly corrosive,3km away from the salt mine

Highly corrosive area

Project in Clare, South Australia
Expansive clay soil, hurricane area

Expansive clay soil, high wind pressure

Utility Projects & EPCM

Aguascalientes, Mexico

133 MW ground-mounted power station project

Los Llanos, Colombia

81.7 MW ground-mounted power station project

Ishinomaki, Miyagi Prefecture, Japan

14MW ground-mounted power station project

Phong Phu, Vietnam

42MW ground-mounted power station project

Norfolk, Britain

50MW ground-mounted power station project

Lianghuai, Anhui 170MW floating project

Xiangshui, Jiangsu 170MW photovoltaic agriculture project

Yangquan,Shanxi 50MW pioneer project

Utility Projects & EPCM

Tongchuan, Shanxi Province

250MW pioneer project