



INVESTING IN INDONESIA'S RENEWABLE ENERGY EXPORT OPPORTUNITIES

# Milestones



**1997**

Trina Solar was founded

**2006**

Listed on NYSE

**2014**

Became world's largest PV module supplier

**2016**

Started Thailand factory operations

Started Vietnam factory operations

**2018**

Acquired Spanish tracker company Nclave

**2021**

50GW+ company-wide production capacity

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

**2023**

joined hands with eight industry players to initiate standardisation and lead the standardisation of module sizes

Qinghai Base achieved full integration of crystal pulling, slicing, cells and modules

upgraded to the 700W+ PV Open Innovation Ecological Alliance

**2003**

Built 40 off-grid solar power stations in Tibet, China

**2008**

Built Trina Solar PV Industry Park

**2015**

Started the layout for storage business

**2017**

Launched Million-Roof Plan in China

**2020**

Listed on SSE STAR market

Led 600w+ PV Open Innovation Ecological Alliance Announced

**2022**

A net zero industrial park integrating the source, network, load and storage was established

Joint 62 units to form China's new energy storage industry innovation alliance in Beijing

# Globalization



**No.1**  
210mm module  
shipments

By the end of 2023



**160+**  
Regions/Countries



**40,000+**  
Employees



**65** Countries  
Global employees



# Financial Soundness



First three quarters of  
2023 Operating Income

**USD 11.58 billion**

Y-o-Y growth

**31.22% ▲**



First three quarters of 2023  
Net Income Attributable to  
the Parent

**USD 724.49 million**

Y-o-Y growth

**98.96% ▲**

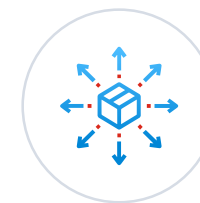


Total Assets

**USD 17.83 billion**

Y-o-Y growth

**38.03% ▲**



First three quarters of 2023  
Total Module Shipments

**45GW+**

Y-o-Y growth

**56.3% ▲**

# Brand Reputation



Boston Consulting Group  
Global Tech Challenger  
Top 100



Fortune China  
Top 500

Forbes (China) Top 50  
MULTINATIONAL COMPANY  
In China

China's Green Factory

China Industry Award

2023 Bloomberg Green  
ESG 50 list Bloomberg  
Green ESG—Enterprises

National Technological  
Invention Award

BloombergNEF

100% bankability  
World's Most Bankable  
Module Brand



China's Industry Top 500



United Nations BlueSky  
Award for  
Leading Technology



Red Dot  
Design Award



PV Module  
Reliability Scorecard  
Top Performer



REUTERS

Top 100 Innovator  
For Energy Transit

# Industry Leadership



Jifan Gao elected as The **honorary chairman** of the CPIA



Jifan Gao elected as **vice-chairman** of the B20 China Business Council



Industry Partner  
of the World Economic  
Forum



Jifan Gao elected as  
**Founding Member** of  
the Private Sector  
Advisory Board for UNDP  
in China



Jifan Gao serves on the  
**CEO Council** for Sustainable  
Urbanization







State Key Laboratory of  
Photovoltaic Science and Technology



National Enterprise  
Technology Centre



National Intellectual Property  
Demonstration Enterprise



# R&D Capabilities



## Formulation of Standards

Industry standards led on or participated in  
**176**

Standards issued  
**125**

First to propose  
**IEC international standards**



## Laboratory Accreditations

World's first  
TÜV Rheinland IEC certified witness test  
laboratory



## R&D Results

Patent and software copyright  
applications  
**4000+**

Granted patents  
**2000+**



# Vertex 210 Modules

Vertex 210 modules  
significantly reduce project costs

95%

210mm module production capacity  
to total capacity

No. 1

World's largest  
210mm module production scale



## Wide product range for multiple settings

Compared with same-class products on the market

0.004-0.014 USD/W▼

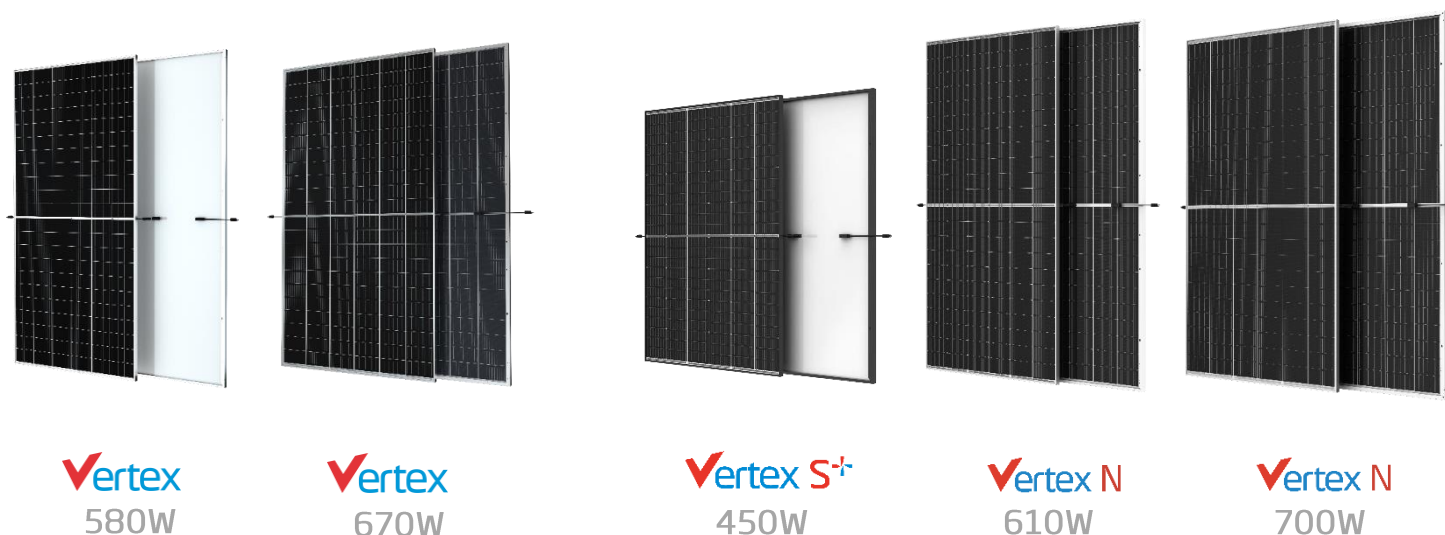
Lower system costs

1%-3% ▼

Lower LCOE

## Over 100GW

By the end of November 2023, 210mm modules had been shipped throughout the world to supply large-scale power stations and all distributed scenarios.





# Solar Projects

## Nangong, Hebei Province

400MW Vertex+Tracker Agriculture-complementary projects



## Luotian, Hubei Province

100MW Vertex stents Agriculture-complementary projects



## Nha Trang, Vietnam

49.3MW Vertex Vinh Long power station project



## Tengeh Reservoir, Singapore

60MW One of the largest inland floating power stations





# Solar Projects

## Jianshui, Yunnan Province

300MW large-scale ground-mounted power station project



## Tongchuan, Shaanxi Province

250MW pioneer project



## Lianghuai, Anhui

170MW floating project



## Xiangshui, Jiangsu

120MW fishery-solar hybrid project





# TrinaTracker

Trina solar

TrinaTracker

## A leading smart tracker solution provider

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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

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12GW+

Global installations

10GW+

Annual capacity

By the third quarter of 2023









# A vertically integrated & bankable BESS solution provider

## Strengths

### Vertical integration

Capabilities set up along the whole industrial chain:

- **R&D capability** with strong talent team, advanced research platforms and testing facilities
- **Manufacturing capability** for comprehensive product range
- **Integration capability** of pack, rack and product

### Bankability

- Top 10 Bankable System Integrators of BNEF Storage providers & integrators bankability survey results 2022

### Key advantages

- Always Customer Orientated
- Excellent Product and fully wrapped System Solution
- Outstanding Project Delivery Capability
- Reliable service offering

## Elements

- 2.2MWhr @ ~1500Vdc, modular design
- Flexible, high-performance, inherently safe utility scale battery system tailored for grid-scale installations in the key storage markets.
- Fully integrated and pre-fabricated with industry-leading LFP batteries, liquid cooling system, BMS and fire suppression system, it is optimized for flexibility, smooth installation, and efficient maintenance.



Enhanced Lifecycle



Advanced Safety Features



Optimized Cost



Rapid Installation





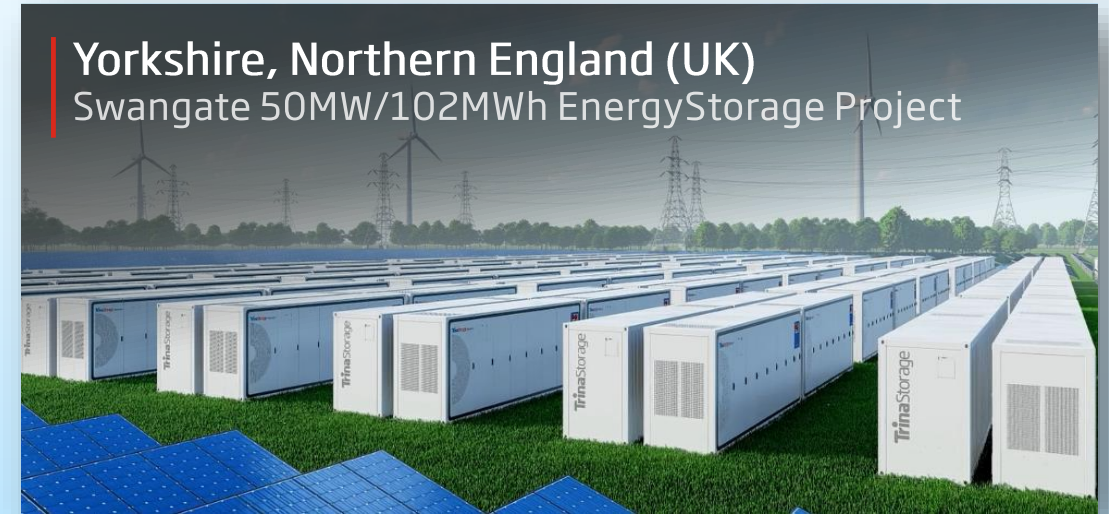
# Energy Storage Solutions



**Burwell, Cambridgeshire (UK)**  
SMS Burwell 50MW/56.2MWh Energy Storage Project

## 50MW / 56.2MWh

- Frequency Response
- Balancing Mechanism
- Wholesale market arbitrage



**Yorkshire, Northern England (UK)**  
Swangate 50MW/102MWh Energy Storage Project

## 50MW/102MWh

- Dynamic Frequency Services;
- Wholesale market arbitrage;
- Capacity market



# Base Information

**UAE** (Polysilicon, silicon wafer, cell and module of the whole industrial chain base, expected to start production in 2025)

**Ordos** (Module Base)

**Suqian** (Silicon Wafer ,Module and Cell Base)

**Huai'an** (Module and Cell Base)

**Chuzhou** (Battery Cell Base)

**Yangzhou** (Module and Cell Base)

**Xining, Qinghai**

(Whole Industrial Chain)

**Deyang** (Crystal pulling Base)

**Yancheng** (Module and Cell Base)

**Changzhou** ( Module Base )

**Yiwu** (Module Base )

**Thailand** (Module and Cell Base)

**Vietnam**

(Silicon Wafer ,Module and Cell Base)

**Indonesia**

( Module and Cell Base, expected to start production in 2024)

**America**

(Module Base, expected to start production in 2024)

2023 Module Capacity

95 GW

2023 Cell Capacity

75 GW

2023 Silicon Wafer Capacity

50 GW

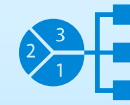
By the end of 2023



# Trina Solar Investment



Location : Kendal Industry Park



Capacity : 1GW N-type Topcon  
Cell & Module



Land Size: 70,000 m2



Investment: Over 86 Million USD



# China-Indonesia

## A Continues and Growing Economic Partnership A Strong Bilateral Trade Relationship

### 1. Long-standing Trade Partnership

- China has been Indonesia's largest trading partner since 2013.

### 2. Trade Volume and Market Share

- Trade volume accounted for 25.72% of Indonesia's total trade volume.

# Indonesia is A Prime Investment Destination in ASEAN

## 1. Attractive Investment Factors

- Vast Market: Access to a large and diverse consumer base.
- Competitive Production Costs: Economic efficiency in manufacturing and services.
- Abundant Raw Materials: Rich in natural resources essential for various industries.

## 2. Economic Growth and Stability

- Sustained rapid economic growth, powered by robust investment and consumption.
- Positive macroeconomic indicators showcasing a stable and growing economy.

## 3. Sound Economic Structure

- A balanced and diversified economic structure.

## 4. Future Outlook

- Continuous improvement in economic conditions.
- Unique comparative advantages positioning Indonesia ahead in the ASEAN region for foreign investments.

# Huge Market Potential For Solar Energy In Indonesia

## 1. National Solar Commitment

- Solar energy identified as the primary source for green, sustainable electricity .

## 2. Governmental Investment in Solar Power

- Ministry of Energy and Mineral Resources investing 210 billion IDR (~14.5 million USD) for rooftop solar panels on 70 government departments.
- Annual savings: 15 million kWh/year, equating to 22 billion IDR in electricity costs.
- Reduction of greenhouse gas emissions.

## 3. Solar Archipelago Initiative

- Aim: Install rooftop solar panels for millions of impoverished households within 4-5 years.

## 4. Expanding Solar Energy Projects

- Constructing large-scale solar plants on former mining sites and unproductive land.
- Developing floating solar farms on dams
- Transitioning steam power plants to solar power.





THANK YOU FOR YOUR TIME AND ATTENTION!