



**Asia-Pacific
Economic Cooperation**

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Session: 1

Power Beyond Solar

Submitted by: Trina Solar



**Workshop on Building Capacity in
Promoting Inclusive and Responsible
Business for Sustainable Growth in Digital
Society
19-20 May 2021**



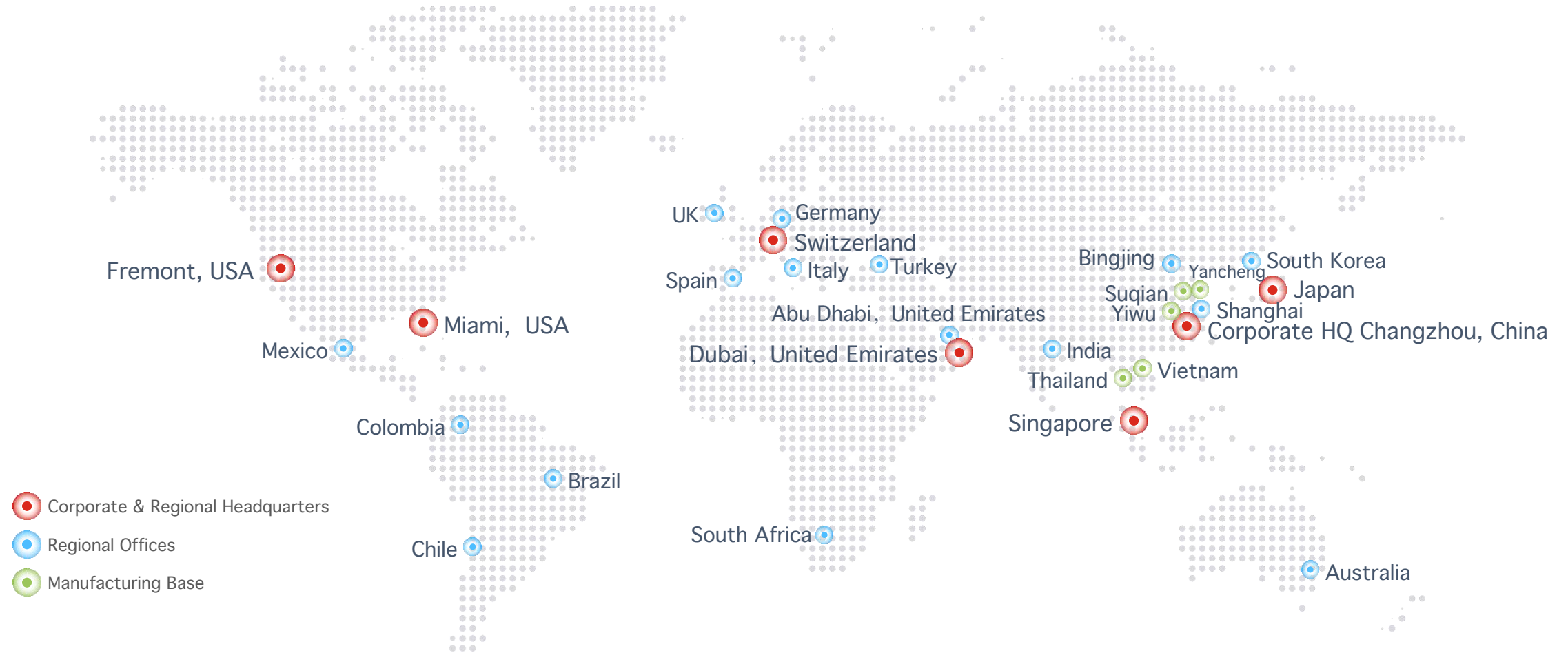
Trinasolar

Power Beyond Solar

Milestones



Globalization



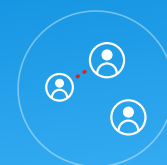
66GW+
Shipments



5GW+
Grid-connected



100+
Regions



14000+
Employees

R&D Capabilities



2011-2020
World records
for PV cell efficiency & module output

20



Formulation of Standards

Industry standards led on or participated in
105

Standards issued
92

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
2000+

Proportion of invention patents
50%+

Cumulative R&D investment
USD 1.6 bn+
(2011-2020)

Building a Carbon-free Energy System

TrinaSolar

Smart
Micro-Grid

EMS

Trade of
Electricity

Charging
Points

Virtual
Grid

City of Smart Energy

Micro Grid

BIPV

Charging System

EV

Power Electronics

Energy Cloud

Edge Computing

Intelligent Gateway

PV + Wind + Energy Storage + Hydrogen



Sustainability



In the year of 2002, Trina Solar partnership with the Chinese government to install 39 solar power systems for residents in Tibet's non-powered areas. From then on, people in Tibetan poverty-stricken areas got access to electricity. After that project, I have strengthened my belief in "Solar Energy benefit all"

Chairman Jifan Gao

—The



Case Study – Maldives 27 Islands Microgrid Project



PROJECT OVERVIEW

Location: 27 islands, Maldives

Completed: Jan. 2019

Owner: Maldives Ministry of Environment and Energy

Project Designer and Installer: TrinaBESS

System Size: PV 4.6 MW + BESS 4.97 MWh + Diesel 6MW

Annual Electricity Saved: 8 GWh

Estimated Annual Diesel Saving: 2,600,000 L

BENEFITS

Lower down the cost of electricity

Improve the quality of power safety and stability

Reduce the blackout and instability impact of diesel generators on household electricity consumption

One of the largest Micro-grid projects in the Maldives

Maldives, a well-known island country with golden sunlight and beaches, also is the largest coral island country in the world. However, such a beautiful island country, is becoming one of the first victims due to the climate change. The oceanographer predicts that global sea levels will rise 1.4 meters by 2100 if global countries still discharge CO₂ at current rates and quantities. If so, the vast majority of Maldives islands are expected to be submerged in the Indian Ocean bottom in less than 80 years.

Maldives is made up of more than 1,200 small coral islands and unable to build large power stations to unified power supply. During the peak, 81% of the country's electricity are generated from burning diesel. In order to prevent the sea level from rising rapidly, the Maldives government announced that it will vigorously develop renewable energy and become the world's first country to achieve "carbon neutral" by 2020.

TrinaBESS, together with the Maldives Ministry of Environment and Energy, are working to provide microgrid solutions for 27 islands of the Maldives. The project will become the main power grid on the island and the main source of electricity for residents, hospitals, kindergartens, docks and schools. The solution is poised to solve the problem of living electricity consumption for about 11,000 residents.



Empowering communities

Sustainability



Empowering communities

Trina Solar donated 10 million RMB to set up the Siyuan Sunshine Entrepreneurship Fund, which aims at empowering the college students in the underdeveloped communities through PV-related education and entrepreneurship trainings.



Empowering communities



- ▶ 2014 Trina Solar donated 4 kilowatts of PV modules to the Sun Star hybrid power system in Cape Town, South Africa. The construction was later dismantled and all the modules were donated to support a local low-income community.



- ▶ Trina Solar donated modules to earthquake-stricken area in Nepal, and British Prince Harry participated in reconstruction.



- ▶ In 2014 Trina Solar, together with its partners SunPlan and MaxSolar, donated 9.5 kilowatts of PV modules to Tanzania Msafiri English primary school, supporting the education of 170 students.