

Sunport Power

INNOVATION CHANGES THE WORLD



Forward-looking Statements



This presentation contains forward-looking statements. These statements relate to future events or to future financial performance and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by these forward-looking statements. In some cases, you can identify forward-looking statements by the use of words such as “may,” “could,” “expect,” “intend,” “plan,” “seek,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” or “continue” or the negative of these terms or other comparable terminology. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors that are, in some cases, beyond our control and that could materially affect actual results, levels of activity, performance, or achievements.

Any forward-looking statement you see or hear during this presentation reflects our current views with respect to future events and is subject to the risks, uncertainties, and assumptions relating to our operations, results of operations, growth strategy, and liquidity. We assume no obligation to publicly update or revise these forward-looking statements for any reason, whether as a result of new information, future events, or otherwise.

WHO IS
SUNPORT POWER

Company Profile



Jiangsu Sunport Power Corp., Ltd. was founded in 2012 in China and dedicated to R&D and manufacturing of solar cells and modules based on advanced MWT (metal wrap through) technology , aiming to create a complete industrial chain of R&D, manufacturing and sales of high-efficiency PV cells and modules.

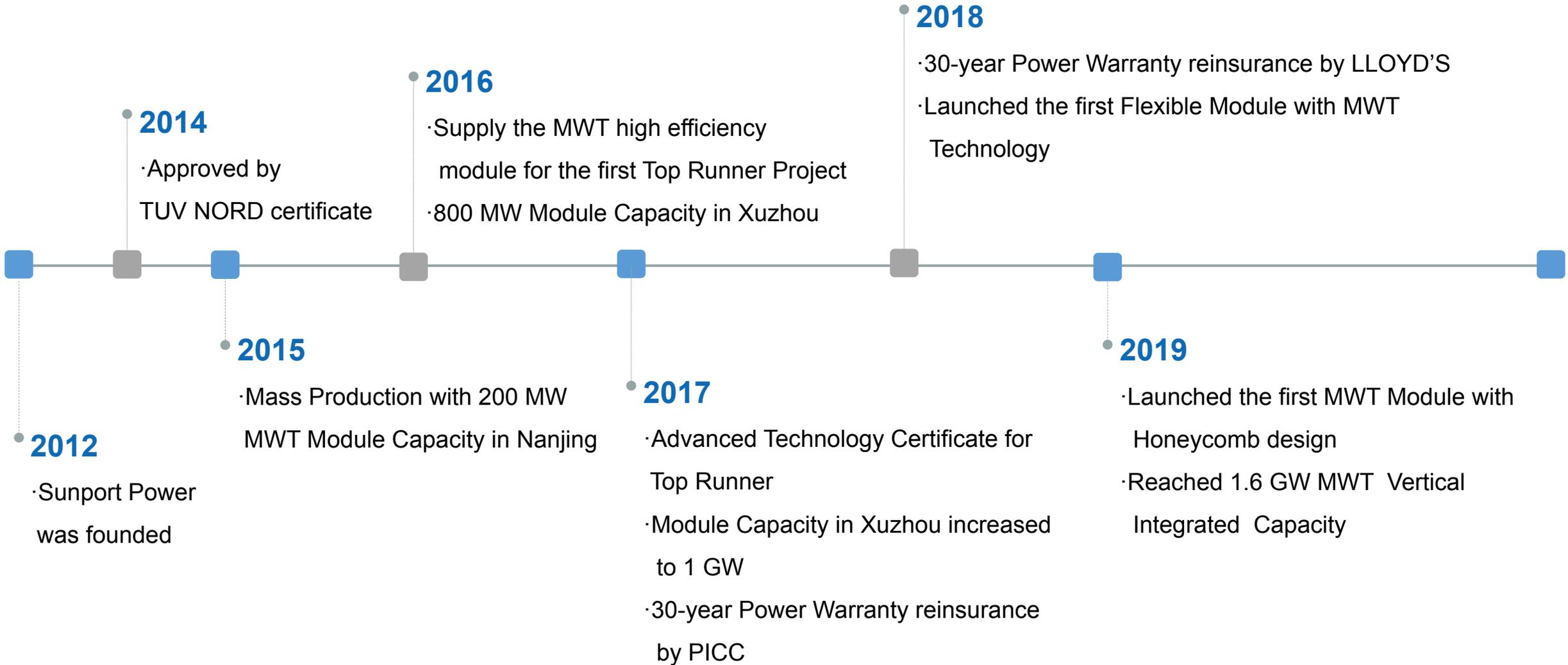


The World's First Manufacturer on
GW-Scale for MWT PV Modules



The only Single-glass Module with 30-year Power
Warranty worldwide

Milestone





Fengming Zhang
CEO of Sunport Power

Professor and Doctoral Supervisor of Nanjing University
UNSW Researcher, PhD of Newcastle University



Prof. Martin Green
Chief Scientist of Sunport Power

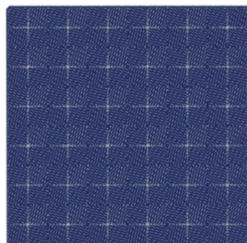
Professor at the University of New South Wales
Fellow of Australian Academy of Science
Director of Australian Centre for Advanced Photovoltaics

200+
Professional R&D talents

20%
of Revenue for R&D
Investment

300+
Patents worldwide

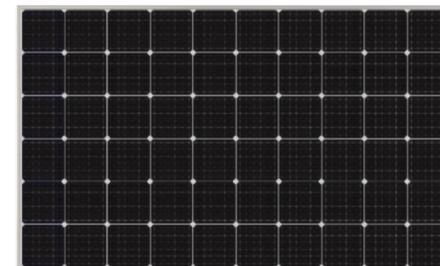
Industry Chain



Solar cells



Core material



PV modules



Manufacturing sites



Manufacturing factories



MWT vertical integrated capacity

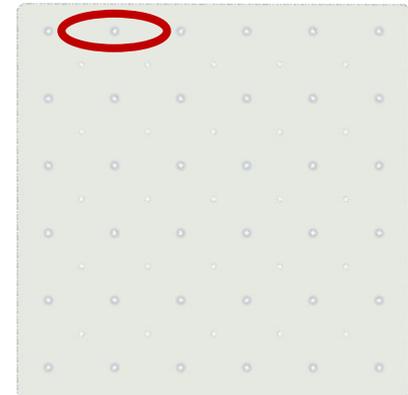
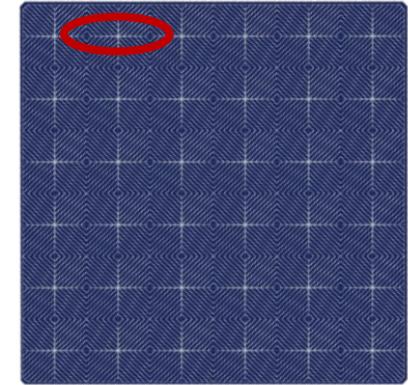
Global Deployment



WHAT IS **MWWT**

Metal Wrap Through(MWT) is a new cell technology to increase the conversion efficiency by reducing the busbar-shaded area on the front side, with positive and negative electrodes on the same rear side.

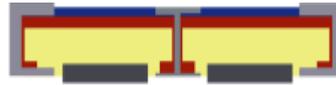
- Without busbars , decreasing shading area by **3%**
- **15W** Module output higher than industry average
- Eliminating the micro crack and degradation caused by string ribbons
- Compatible with most of cell types including **TOPCON, PERC, HIT etc.**



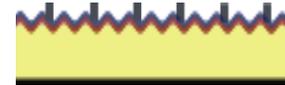
Technology Comparison

MWT technology

Positive and negative electrodes are both on the rear side of solar cell



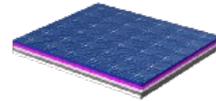
Structural Feature



Conventional technology

Positive and negative electrodes are located on both sides of the cell

Module exhibits higher power output by decreasing shading area up to 3% without busbars on the surface

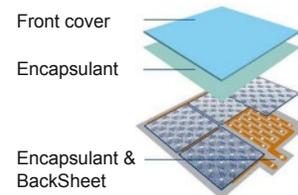


Cell Structure

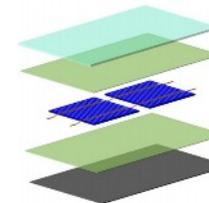


Conventional design covers more cell surface from the main busbars, therefore the power output is limited

Cells connected through conductive foil without soldering, the 2D encapsulation structure reduces the series resistance and module operating temperature, achieving higher reliability



Module Encapsulation



Cells connected by string ribbons will cause strain and micro-crack which result instability and power degradation

Value Proposition



High Efficiency

3 % more light-affected area than conventional module
15 W power output higher than industry average



High ROI (return of investment)

Reducing LCOE
Bringing more long-term return of investment



High Reliability

First year degradation less than 2%
Over 82% output power guaranteed within 30 years



Aesthetic Design

Recognizable busbar-free design
Unique and graceful finger pattern on the surface
Customized pattern design available



Superior Warranty

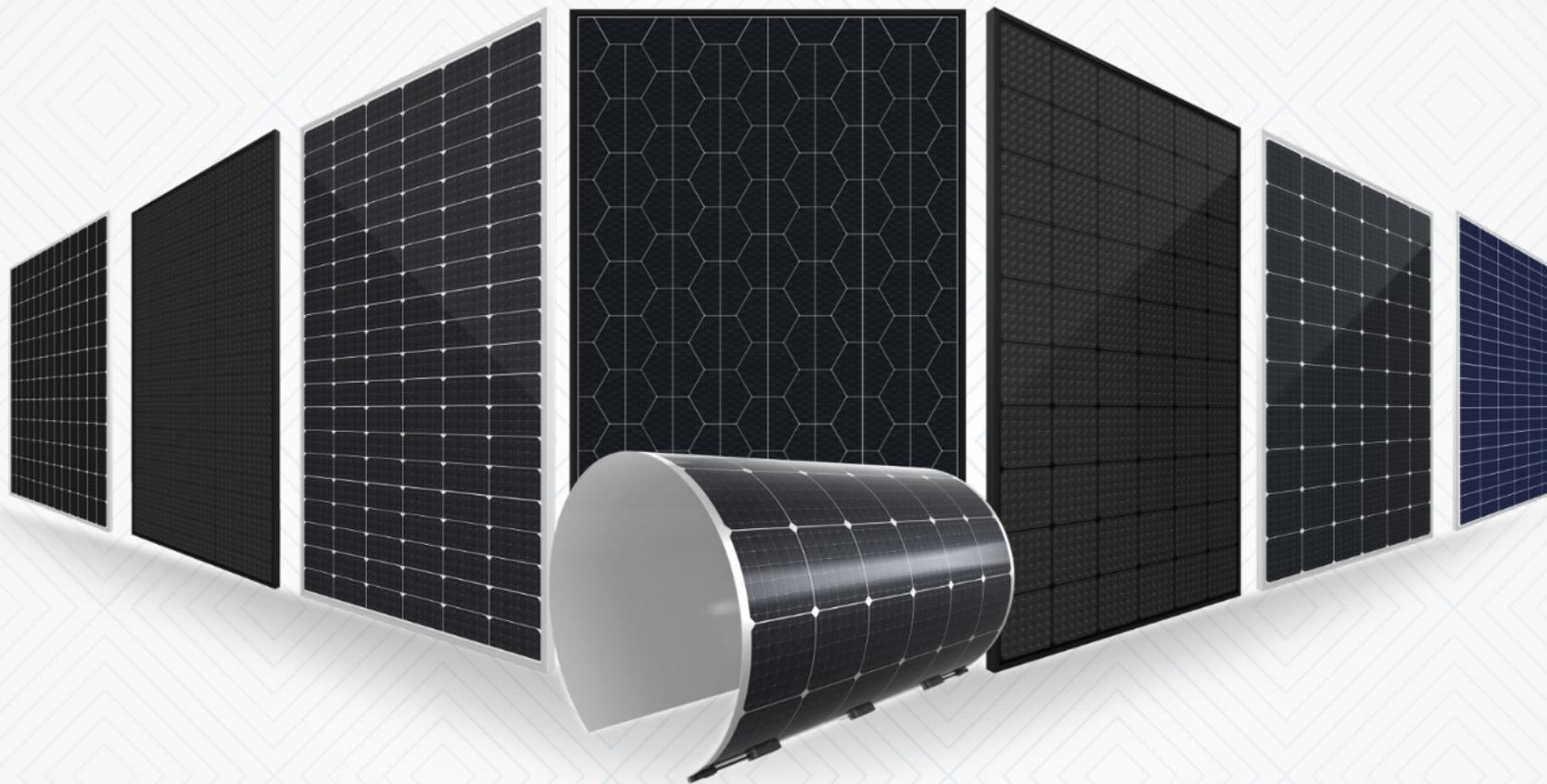
The only single-glass module with 30-year power warranty
reinsurance by LLOYD'S & PICC worldwide



Lead Free

Achieving lead-free by using conductive foil
Eco-friendly by module recycling

Product Overview



C Classic Series

X Honeycomb Series

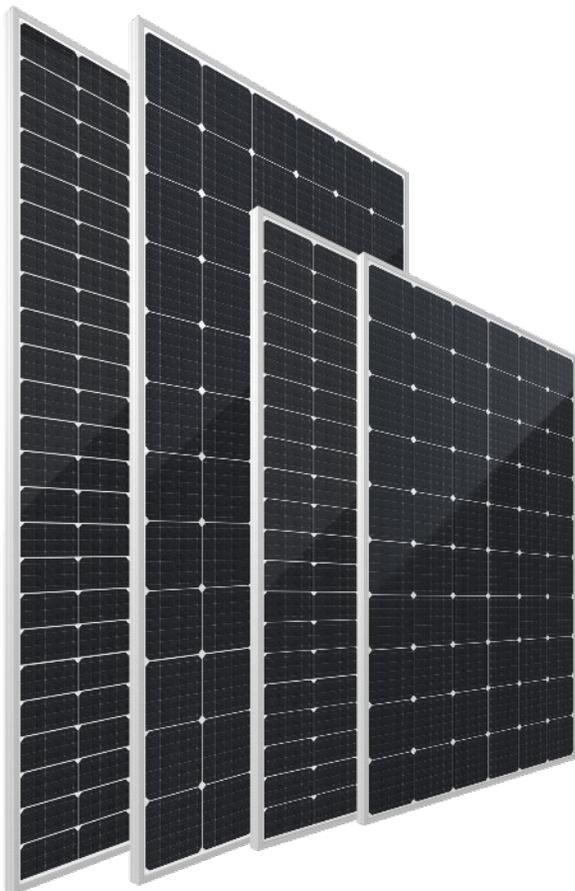
D Full-black Series

S Flex Series

C Series—Classical Module



Up to 455W Eff. 20.51%



High Efficiency



High Reliability



Superior Warranty



High ROI



Aesthetic Design

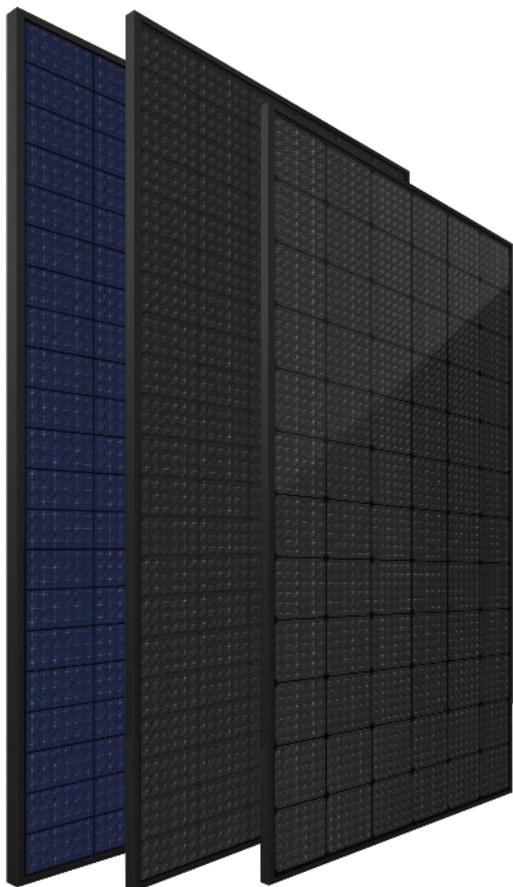


Lead Free

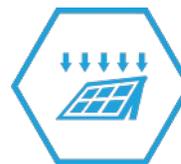
D Series—Full Black Module



Up to 360W Eff. 20.0%



Full Black



High Efficiency



High Reliability



Superior Warranty



High ROI

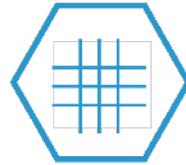


Lead Free

X Series—Honeycomb Module



Up to 420W Eff. 21.0%



Densest Array



High Efficiency



High Reliability



Superior Warranty

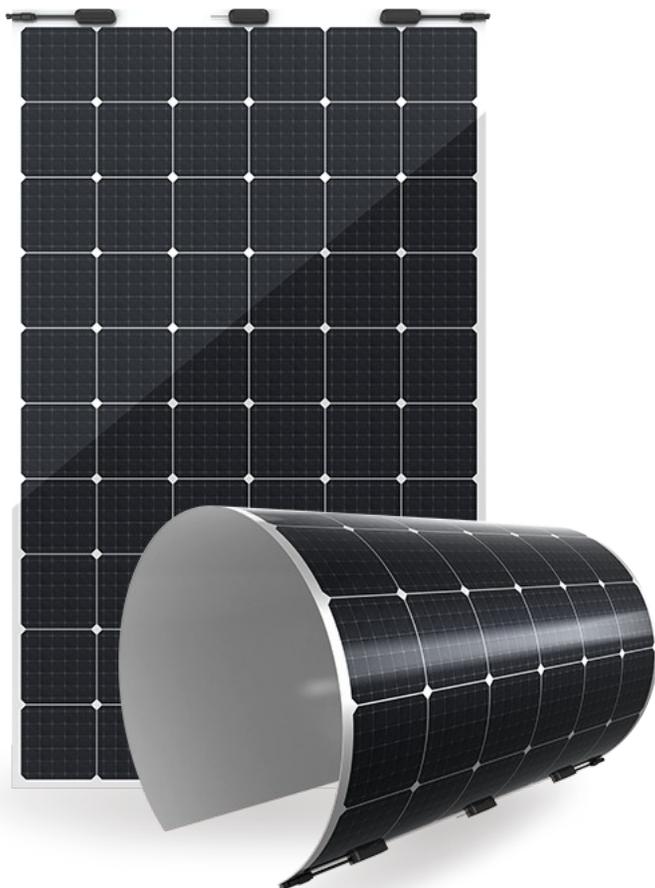


High ROI

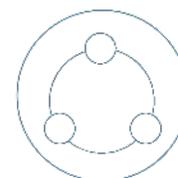


Lead Free

S Series—Flexible Module



Light, Thin Design



Ultra Flexible



BIPV



High Efficiency



High Reliability



Lead Free

WHY CHOOSE **SPP & MWT**

Quality System Certification

ISO 9001 : 2015 Quality Management System Certification

ISO 14001 : 2015 Environmental Management System Certification

ISO 45001 : 2018 Occupational Health and Safety Assessment Series

by UK NQA Quality Certification

Product Certification



هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority





Low-Carbon-Product certificate with 2.83 Kg CO₂e/W by TUV NORD

Statement of Carbon Footprint

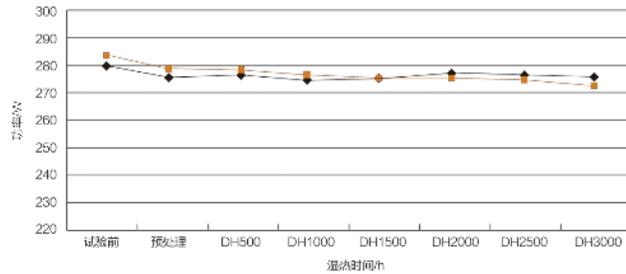
The assessment of carbon footprint refer to following instructions

- PAS 2050
- GHG Protocol: Product Life Cycle Accounting and Reporting Standard
- ISO 14067
- TÜV NORD Energy Project Management Procedure (C-P-EN001)
- CRE4

Product serial	GHG emissions	
	t CO ₂ e/Module	Kg CO ₂ e/W
JC220S-24/Bb	0.8128	2.83

DH3000

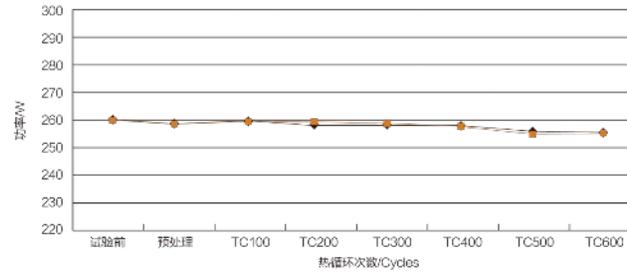
No appearance defected after DH3000h. The maximum output power is $\uparrow 0.21\%$ and $\downarrow 1.22\%$ respectively.



◆ PSPTC PV 20170434
◆ PSPTC PV 20170435

TC600

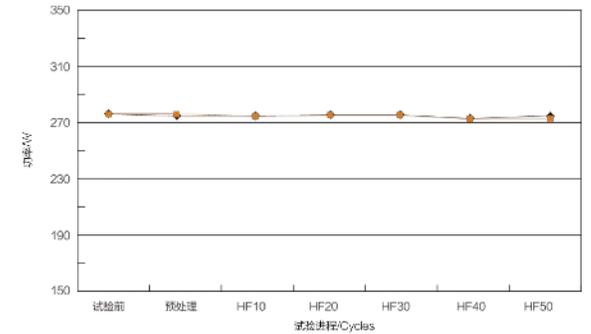
No appearance defected after TC600. The maximum output power is respectively $\downarrow 0.39\%$ and $\downarrow 0.49\%$.



◆ PSPTC PV 20170436
◆ PSPTC PV 20170437

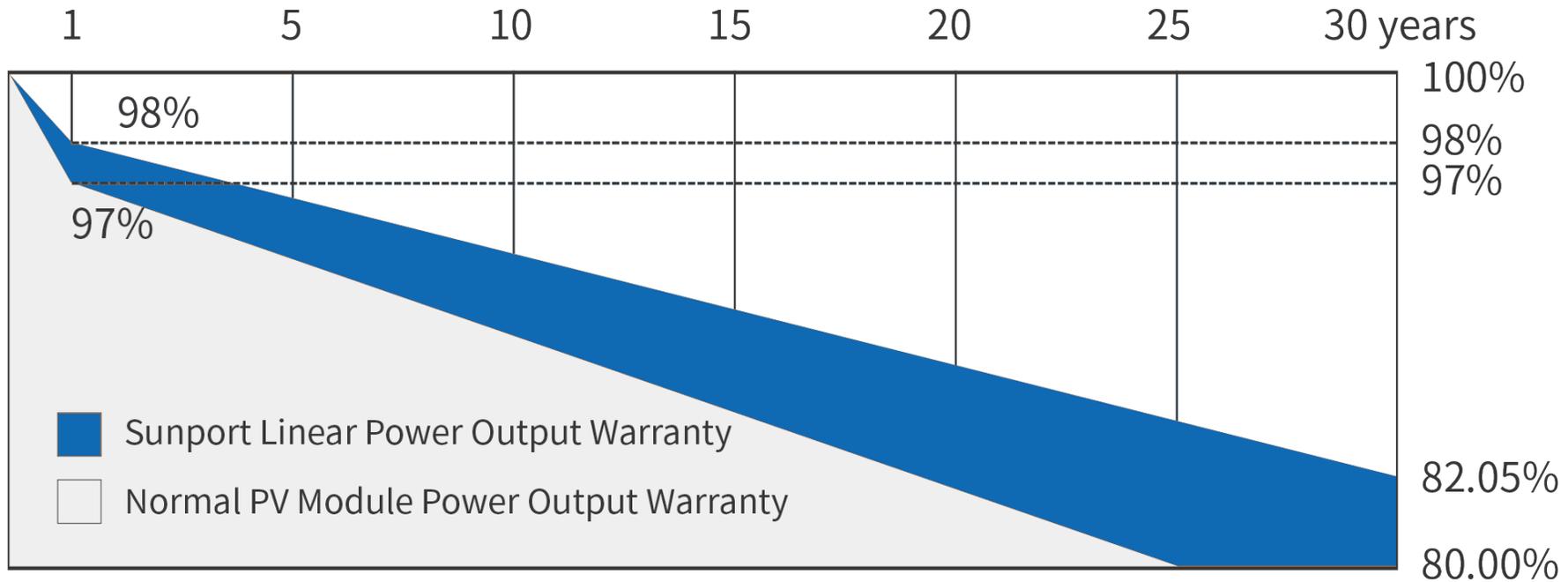
HF50

No appearance defect found after HF50. The maximum output power is respectively $\downarrow 0.22\%$ and $\downarrow 0.47\%$.



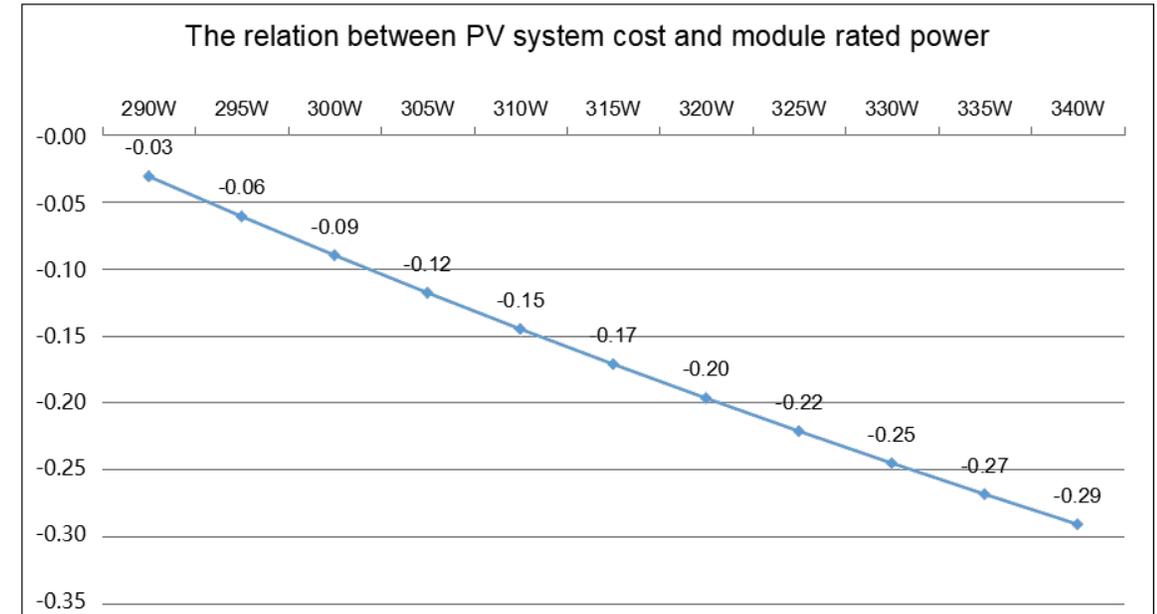
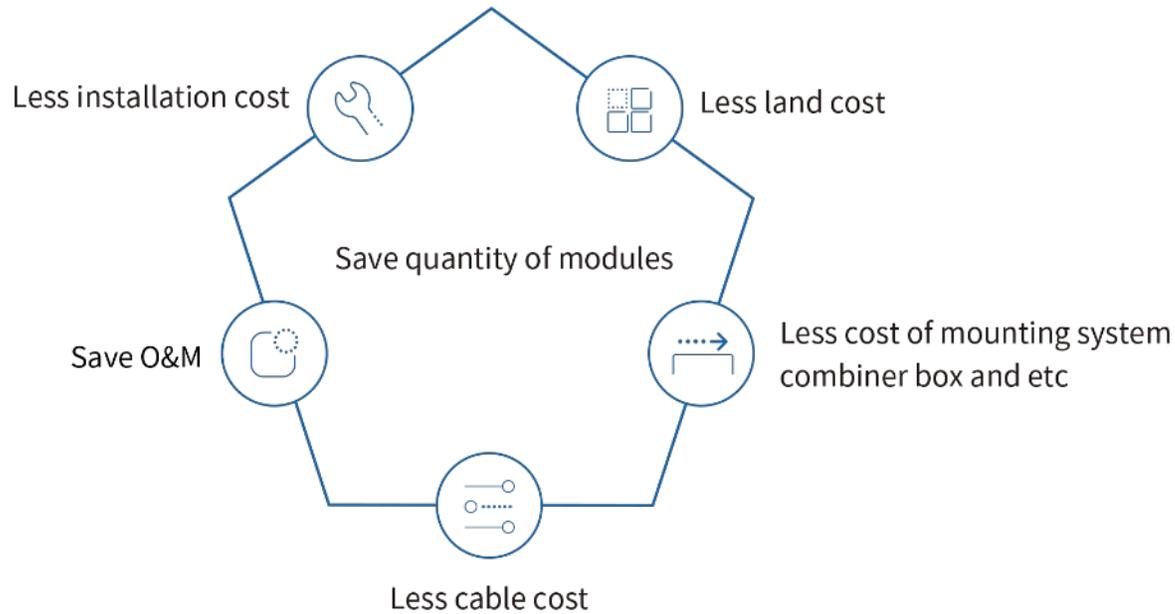
◆ PSPTC PV 20170438
◆ PSPTC PV 20170439

MWT Module Power Degradation

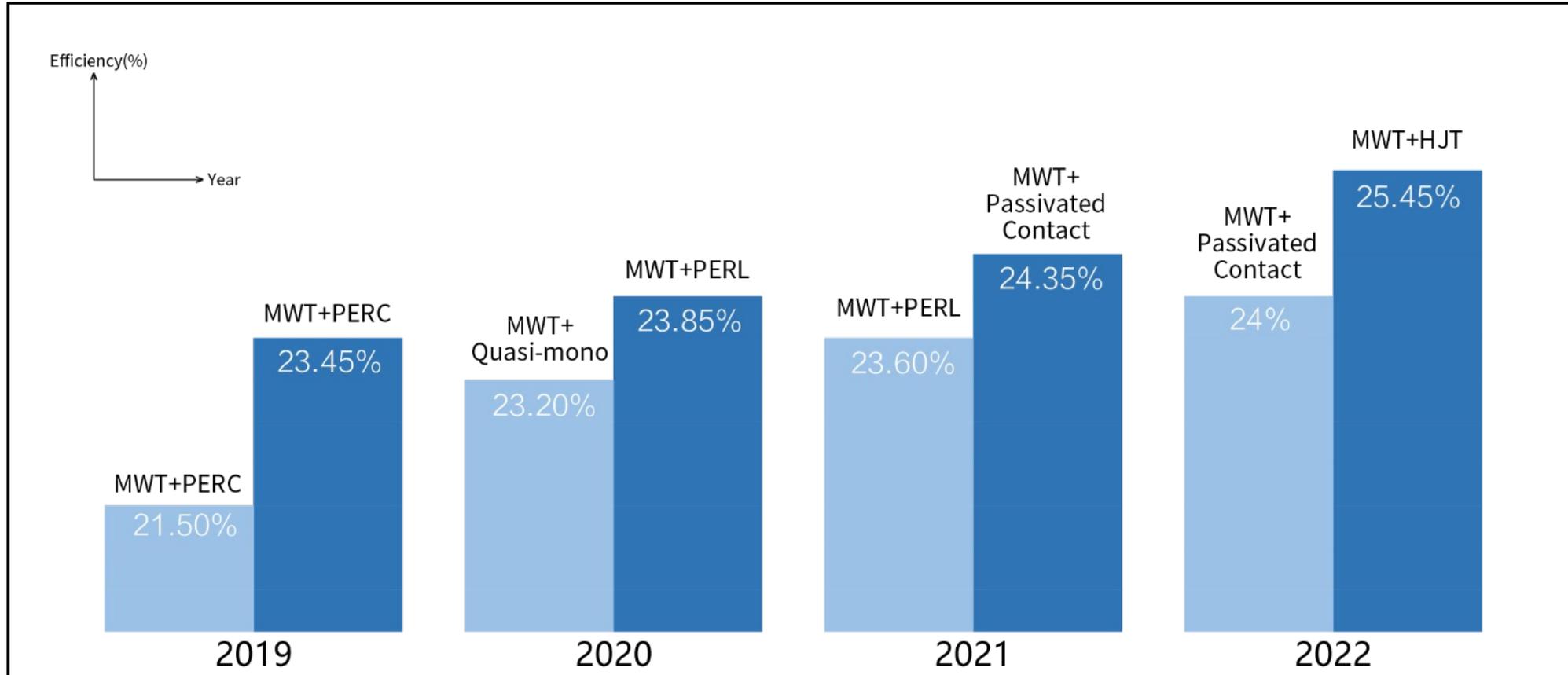


※1st year degradation less than 2%, 30-year linear power output 82% guaranteed.

MWT Modules Benefits



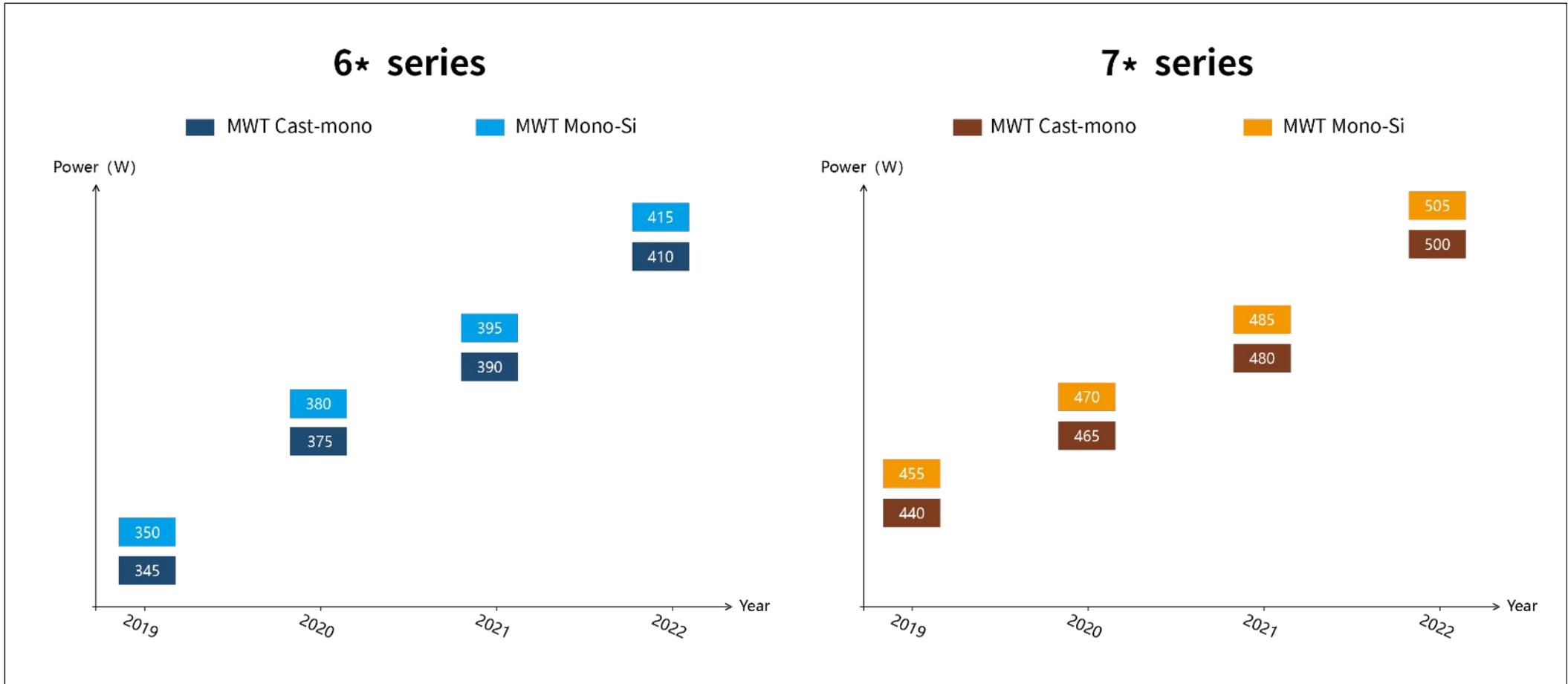
MWT Solar Cell Roadmap



Multi/Quasi-Mono

Mono-Si

MWT Product Roadmap



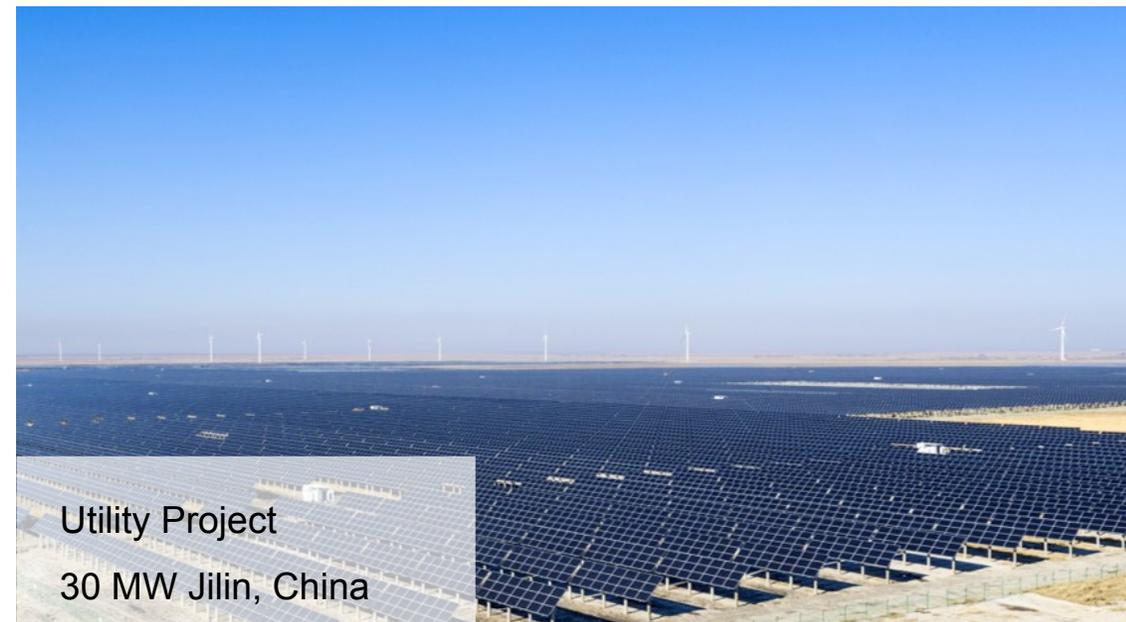
Partners



Case Study - Utility



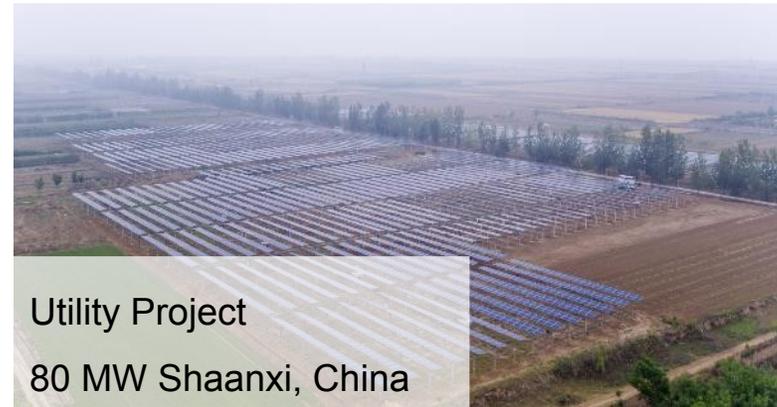
Utility Project
10 MW Shanxi, China



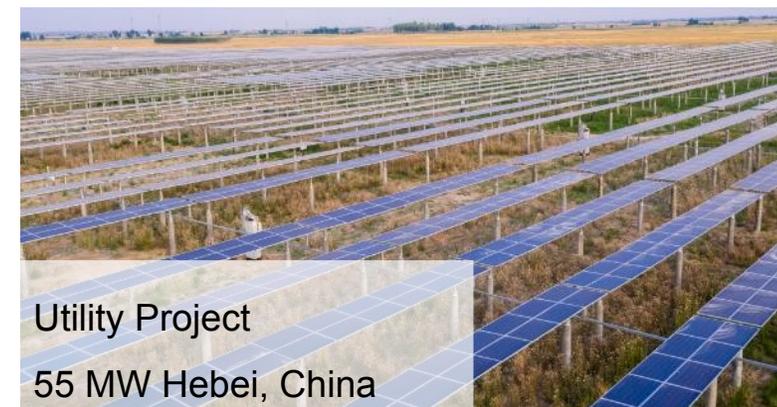
Utility Project
30 MW Jilin, China



Utility Project
15 MW Inner Mongolia, China

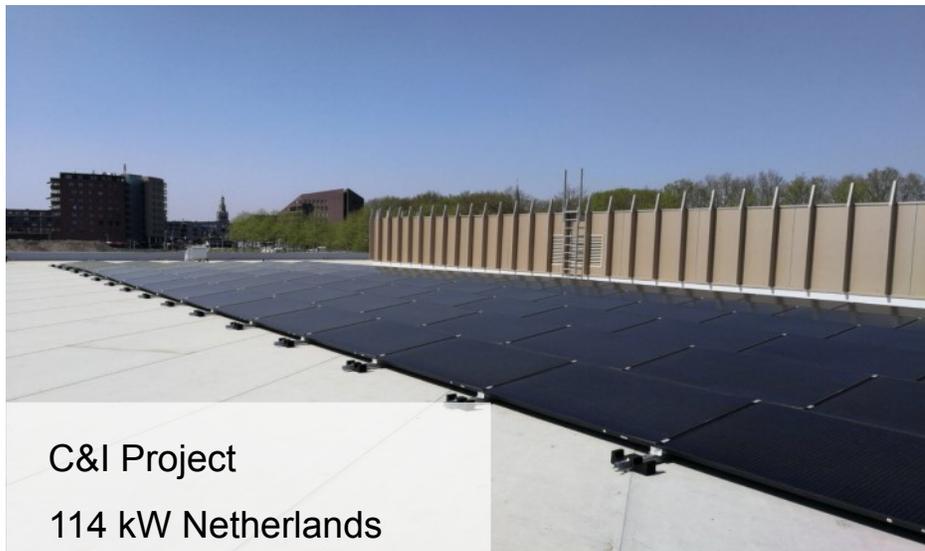


Utility Project
80 MW Shaanxi, China



Utility Project
55 MW Hebei, China

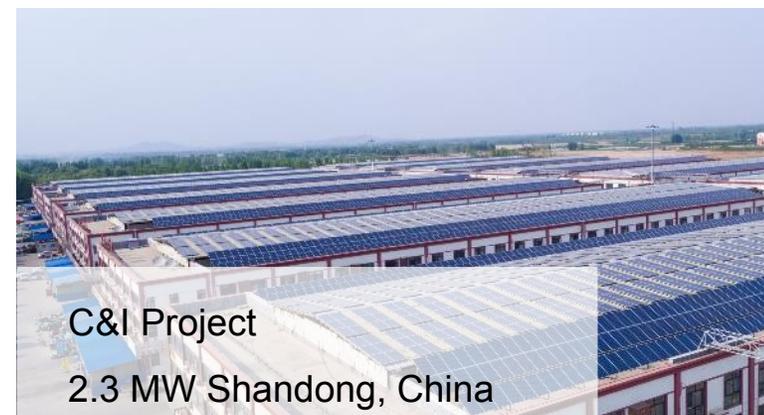
Case Study – C&I



C&I Project
114 kW Netherlands



C&I Project
220 kW Spain



C&I Project
2.3 MW Shandong, China



C&I Project
282 kW Netherlands



C&I Project
36 kW Netherlands



C&I Project
1.5 MW Japan



C&I Project
3.5 MW Hubei, China



Case Study - Residential



Residential Project
25 kW Cyprus

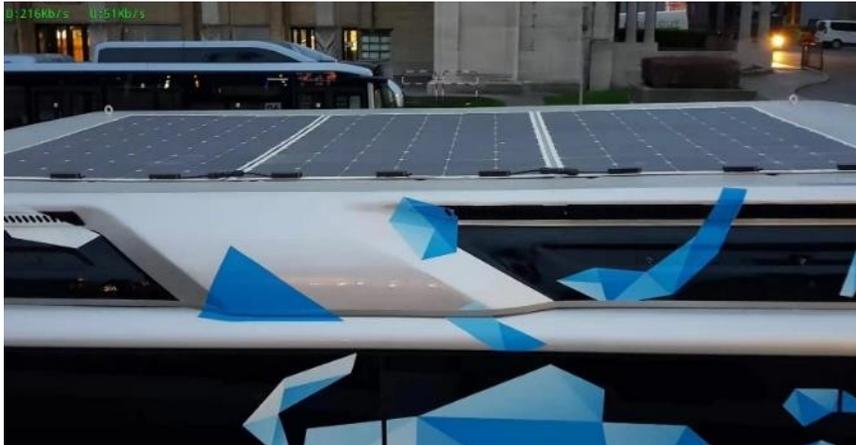


Residential Project
5.5 kW Netherlands

Case Study of S-series



Case Study of S-series



Vehicle Application

1 kW Turkey

Installation Form: Stick



Mission

Improve living environment by providing efficient and clean energy



Vision

To be the leading PV technology innovator

Our target is to make **SUNPORT POWER**
a leading manufacturer in PV industry!

