



# TSEC Corporation (6443) Investor Conference



Date: 2023/08/18



## Safe Harbor Notice

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# Topics

- 1. Company Introduction**
- 2. PV Market Overview**
- 3. Financial Info.**



# Company Profile

<b>Established</b>	<b>Jun 24<sup>th</sup>, 2010</b>
<b>Company Name</b>	<b>TSEC Corporation</b>
<b>Logo</b>	<b>Taiwan Solar Energy Corporation</b>
<b>Paid-in-Capital</b>	<b>NTD 5.38 billion (including Preferred Stock)</b>
<b>Plant Locations</b>	<b>HsinChiu (Cells) / PingTung (Panels)</b>
<b>Products</b>	<b>1.Solar Cell</b>
	<b>2.Solar Panel</b>
	<b>3.PV Project Installation &amp; Development</b>
<b>Annual Capacity</b>	<b>Solar Cell / Panel &gt; 1.5GW</b>
<b>Employees</b>	<b>Appx. 1,745 (2023 July)</b>
<b>Sales Offices</b>	<b>New Taipei / Hsin-Chiu / ChungHwa / Tainan / PingTung</b>
<b>Main Shareholders</b>	<b>WeiJen Investment / National Development Fund / Formosa Rubber / YuSen Energy</b>

Module Plant



Cell Plant



Headquarters





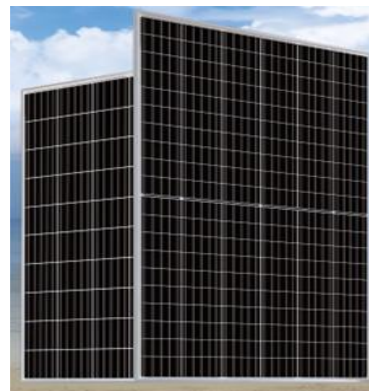
Polysilicon  
結晶矽



Wafer  
矽晶片



Solar Cell  
電池



Solar Module  
模組



Systems  
系統安裝與維運



# Sales & Production

## Production

- G1 and M6 will be discontinued this year, and M10 will be the main product.
- One M10 production line is counted for 400MW, and there are currently three production lines with total capacity of more than 1.2GW.
- The M10 product line is compatible with G12 (larger size) depending on the actual market demands. TSEC's G12 production capacity can reach more than 1.5GW.

## Sales

- Overseas Solar Cell sales is about 5~10MW/Month, accounting for about 10~15% of total monthly sales.
- Company is expanding business in Japan and the United States.
- Looking forward to 2H2023 and 1H2024, TSEC has obtained sizable orders from several large projects in Taiwan, which could occupied half of production capacity of the company.





# TOPCON Solar Cell/Module Implementation

- This advanced production technology of TopCon is aligned with global PV product main stream.
- M10 TopCon will be TSEC's main product in 2H2024.
- TSEC will possess more than 1GW of TopCon capacity, which could meet more than half of domestic needs.
- Lands in Taiwan are quite expensive. This high efficiency TopCon products could be very helpful to maximize the value of PV projects.

Wafer Spec	Length cm	Cell Watt	Cell Efft.	Watt In %	6X10 Module Watt	6X12 Module Watt
PERC M10	18.2	7.62	23%	100%	450	540
TOPCON M10	18.2	8.12	24.50%	107%	475	570



# Taiwan **Cell** Capacity Analysis

Company	(G1)	(M6)	Advanced M10 M6~G12 (Compatible)	MW
TSEC	500		1200	1,700
U	600		400	1,000
SA		300	400	700
H			400	400
A		300		300
M	75	75		150
C	20	80		100
TOTAL	1,195	755	2,400	4,350





# Taiwan **Module** Capacity Analysis

Company	(G1)	(M6)	Advanced M10 M6~G12 (Compatible)	MW
TSEC	300		1,200	1,500
U	600		400	1,000
H			400	400
SA	200	100		300
W	150	100		250
M	175	75		250
AJ	25	75		100
TY	25	75		100
<b>TOTAL</b>	<b>1,475</b>	<b>425</b>	<b>2,000</b>	<b>3,900</b>

Taiwan production capacity is self sufficient.

## 2. PV Market Overview

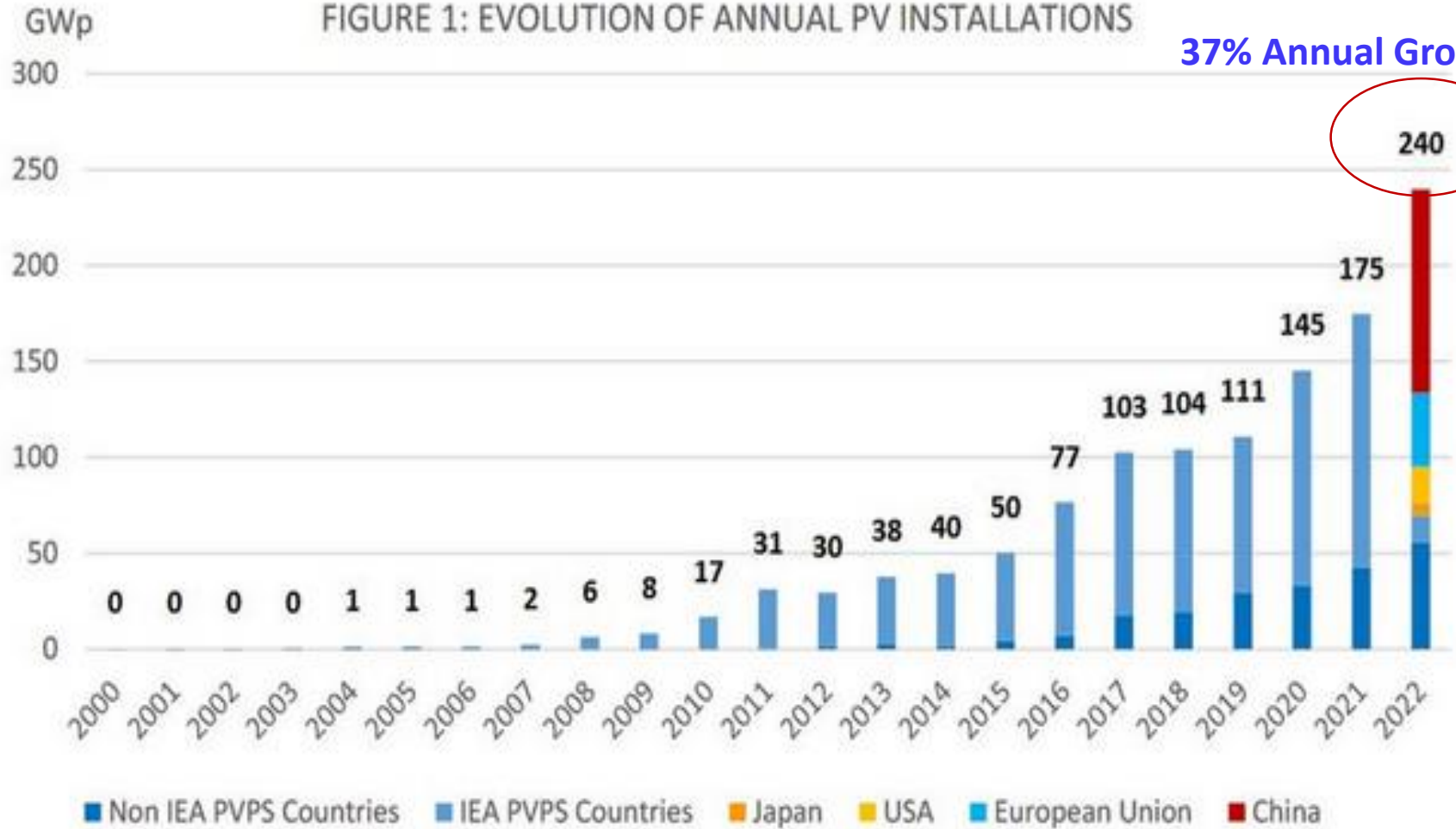


挑戰今日 創造未來

# Global PV Installation

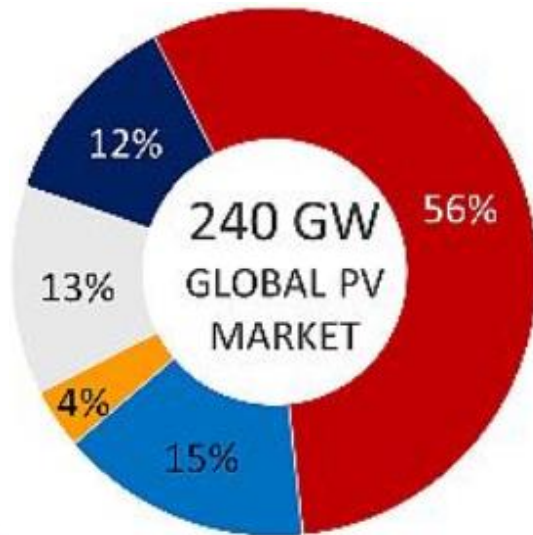
FIGURE 1: EVOLUTION OF ANNUAL PV INSTALLATIONS

37% Annual Growth



Source: IEA-PVPS

# 2022 Regional PV Installation



 CHINA 106 GW

 EU 38,7 GW

 USA 18,6 GW

Unit: GW	
America	28.8
Asia	134.4
Europe	36
Africa/Middle East	9.6
Others	31.2
<b>TOTAL</b>	<b>240</b>

Source: IEA-PVPS

# 2023 PV Installation Forecasts

- According to Bloomberg, 2023 Total PV installation mid-value is around **319GW** ◦
- **32.9%** Higher than 2022's 240GW ◦

2023 Main Installation Countries/Regions		
Region	市場	GW
Asia	China	148.9
	India	17.2
	Japan	8
Europe	German	11.8
	Holland	6.5
	Span	11.4
America	USA	40.5
	Brazil	14.2
	Mexico	1.7
Africa Middle East	United Arab Emirates	3.2
	Saudi Arabia	2.2
	Israil	1.5

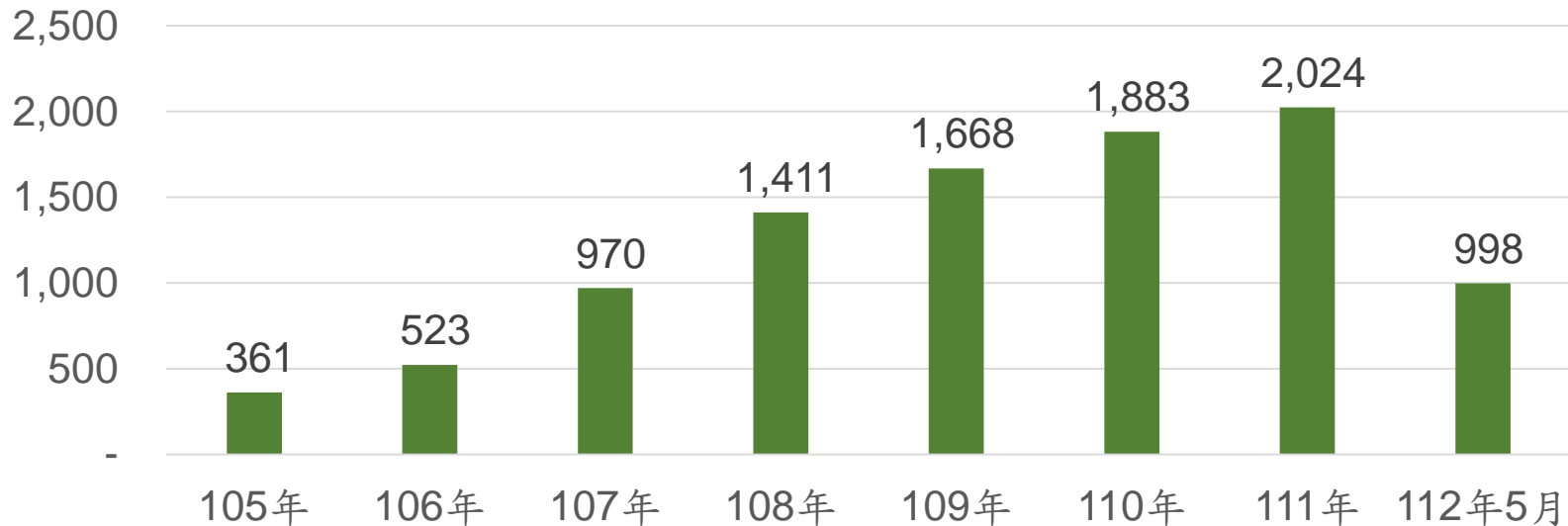
Source: TrendForce Feb 2023



# Taiwan PV Market

## Installation

Unit: MW



1. According to Energy of Bureau, Taiwan completed about 2GW in 2022. The accumulation starting from May this year has come to 998MW. 2023 PV installation is expected to reach 2.4GW.
2. The overall PV installation of Taiwan has reached to 10.7GW. There is still 9.3GW awaited to be installed in order to reach 20GW by 2025 of which at least 4GW to be installed per year from now on.

- Energy of Bureau reported 279.45billion kWh consumed in 2022. 20GW of PV will provide 8~9% of electricity for Taiwan.

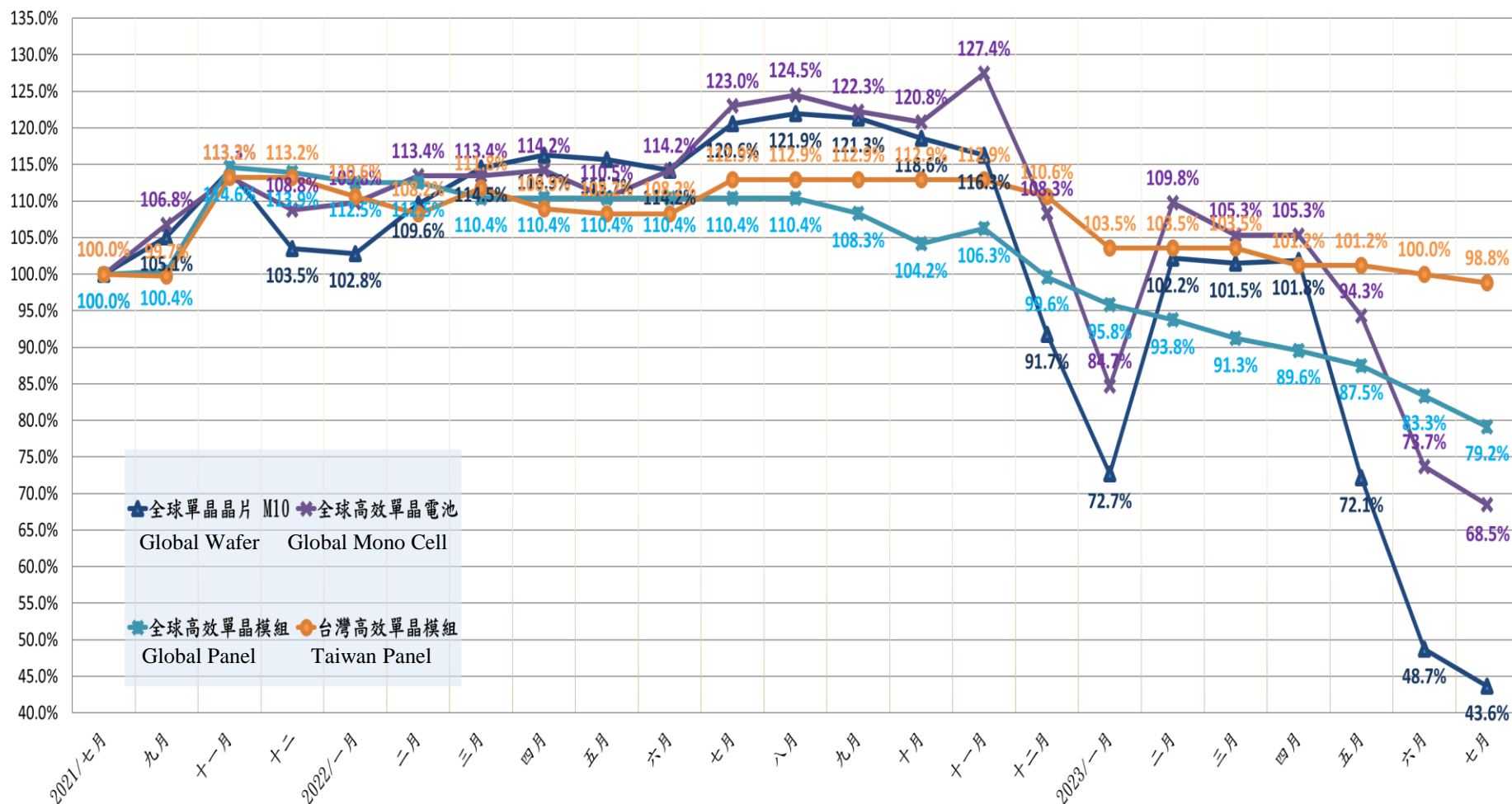
Calculation:  $(20,000,000\text{kW} \times 3.3 \text{ DMY} \times 365\text{Days}) / 279,450,000,000 = 8.6\%$

- The country would require 60% of electricity generated from green energy in order to reach net zero carbon emission by 2025. Meaning that Taiwan PV market will have another 40~50GW period of prosperity to be expected.



# Wafer price tumbles but MIT panel price remains stabled

2021年7月價格為基期 (=100%)



# SWOT ANALYSIS

<p><b>STRENGTH</b></p> <ul style="list-style-type: none"><li>➤ Brand name awareness (TSEC)</li><li>➤ Advanced Production Equipment (M10 PERC / TOPCON)</li></ul>	<p><b>WEAKNESS</b></p> <ul style="list-style-type: none"><li>➤ Various products G1 M6 M10 resulting inventory management difficulties</li></ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"><li>➤ USA will impose anti-circumvention provision tariff on PV products from South East Asia. This provides the opportunities for Taiwan makers to sell in the US.</li></ul>	<p><b>THREAT</b></p> <ul style="list-style-type: none"><li>➤ According to year 2022 Custom report, the import panels has reached to 36%. Low price dumping has increased dramatically.</li></ul>

Taiwan makers are in talks with the government for necessary measures. Despite the overseas low price module, larger Taiwan PV makers will still possess the most market share due to the following issues:

## Quality Issues

- MIT panels are required to be sent for testing in order to get VPC certified. Hence, the overseas panels (mostly from South East Asia) do not need to be tested. Without monitoring, these overseas panels could bring to a greater risk from quality issues.

## Product Guarantee Issues

- The existence of PV manufactures in South East Asia is mainly for the US market. Once the US imposed the anti-circumvention tariff that might result in production/operation shutdowns of PV makers in South East Asia of which could also affect the product guarantee for those projects who use panels from that region while China PV products are prohibited to import into Taiwan.

### 3. Financial Info.





# Consolidated Income Statement

Unit: NT thousand ; EPS is NT

ITEM	Q2 2023	Q2 2022	YoY%	H1 2023	H1 2022	YoY%
Net Revenue	2,368,830	1,891,369	25.2	4,547,803	3,897,088	16.7
Gross Profit	247,516	124,866	98.2	456,202	266,511	71.2
Gross Margin	10.4%	6.6%	3.8%	10.0%	6.8%	3.2%
Operating Expenses	127,257	103,763	22.6	226,173	181,813	24.4
Income from Operations	120,259	21,103	469.9	230,029	84,698	171.6
Non-operating Income & Expenses	14,584	(8,284)	(276.1)	56,493	(48,518)	(216.4)
Income before Income Tax	134,843	12,819	951.9	286,522	36,180	691.9
Net Income	143,112	14,395	894.2	319,214	43,272	637.7
Net profit margin	6.0%	0.8%	5.3%	7.0%	1.1%	5.9%
EPS	0.30	0.03	900.0	0.67	0.10	570.0



# TSEC Corporation

*Taiwan Solar Energy*