

The LONGi logo is displayed in white, uppercase letters on a red rectangular background in the top-left corner of the slide.

# **LONGi Green Energy**

**2023&2024Q1 Results**

**Investor Presentation**

**2024.4.30**





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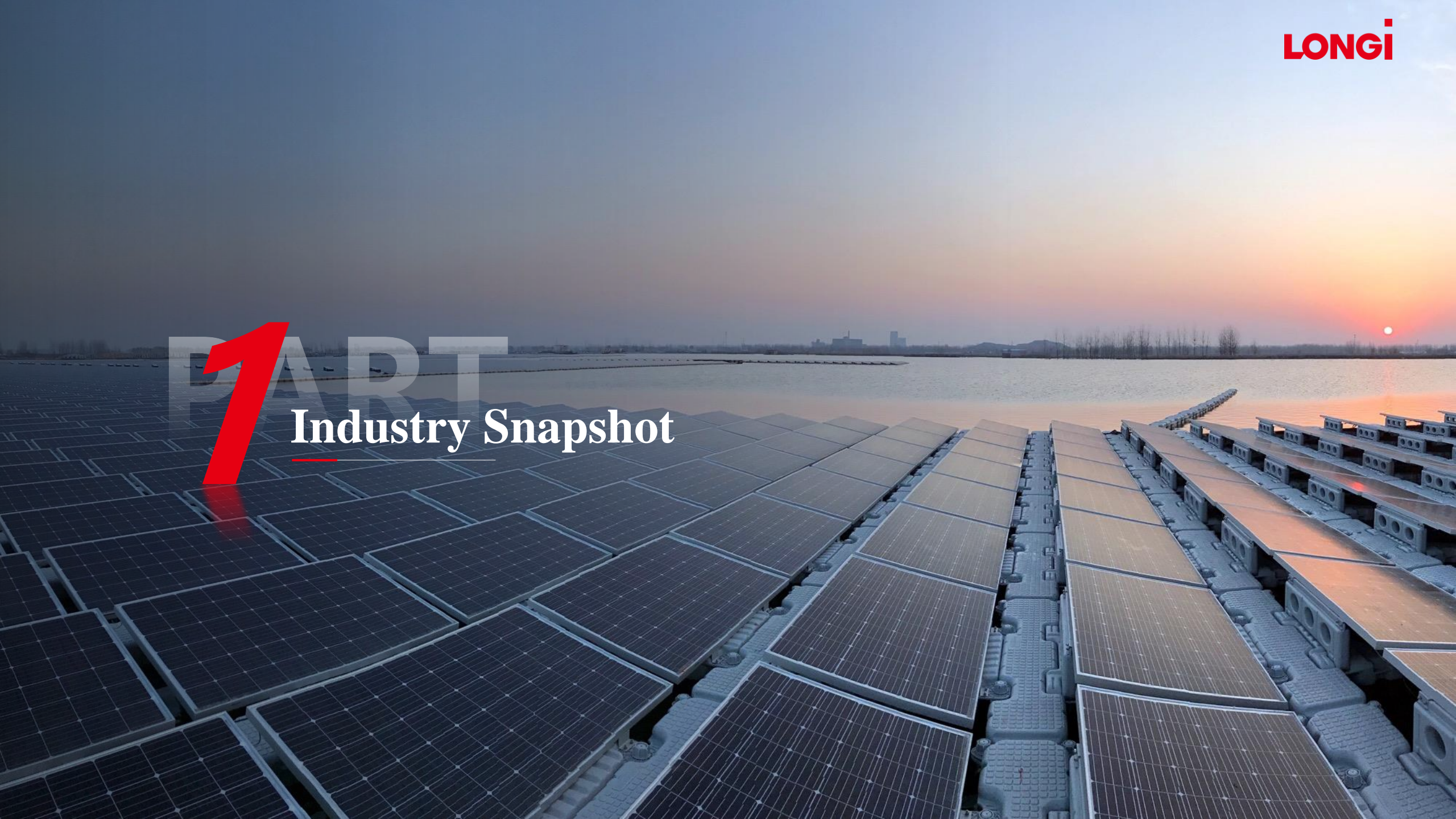
**02**    **Business Review**



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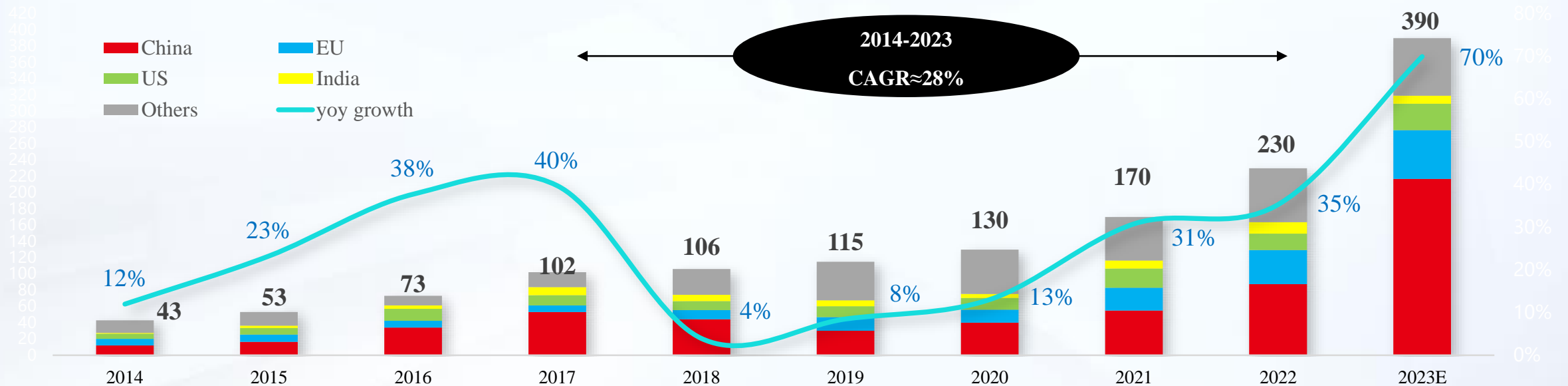
**1** PART  
Industry Snapshot



## Global solar demand saw strong growth and China hit a record high in 2023

- In the context of the global energy transition, coupled with continuous improvement of the solar power economics, the global solar demand continued to exceed expectations with about 390GWac of new installations in 2023, a year-on-year increase of 70%, mainly from China. Chinese solar additions reached a record high of 216.88GW in 2023, a year-on-year increase of 148%.
- Overseas markets continued to boom with a year-on-year increase of more than 20%. Among them, Europe added 56GWac capacity, a year-on-year increase of 40%, the US added 32.4GWdc, a year-on-year increase of 51%, and emerging markets such as Latin America, the Middle East and Africa accelerated their energy transition strategies to further promote the diversified development of the global solar market.

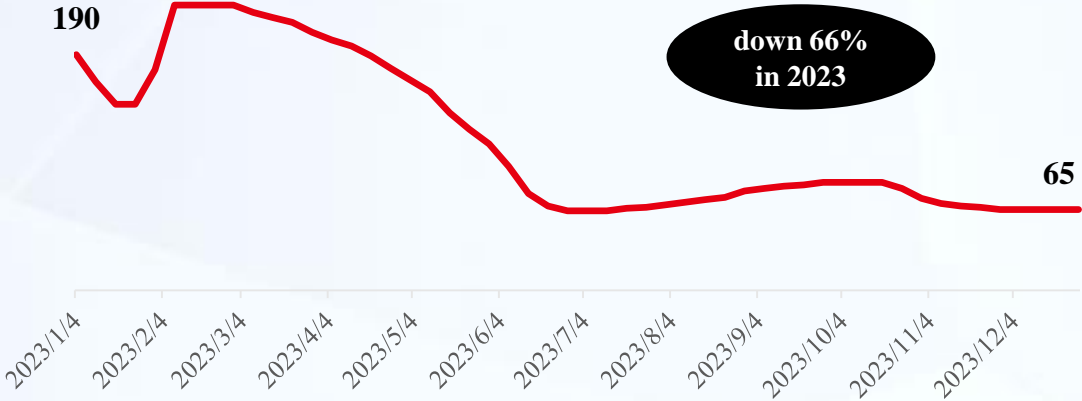
### 2014-2023 Global solar additions (GWac)



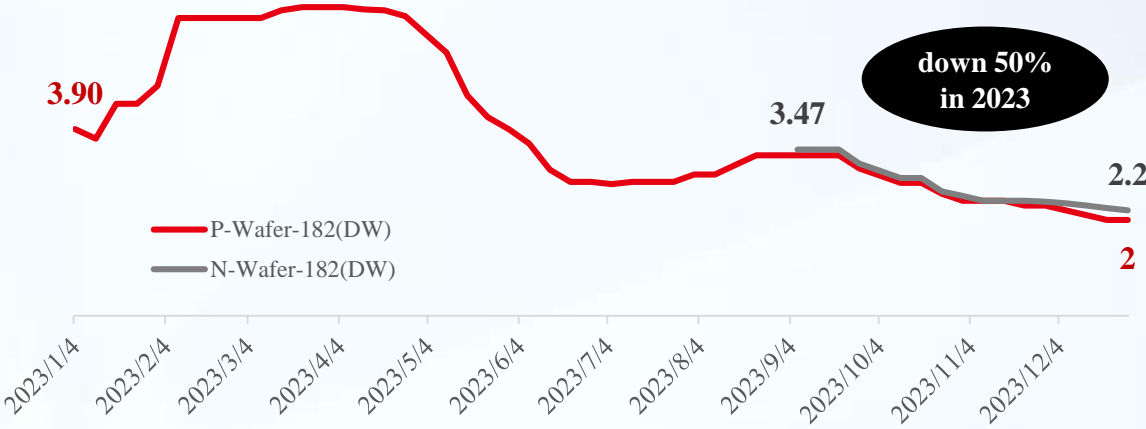
Source: NEA, CPIA, SEIA, SolarPower Europe

# Solar industry faced overcapacity, which resulted in sharp decline of solar prices

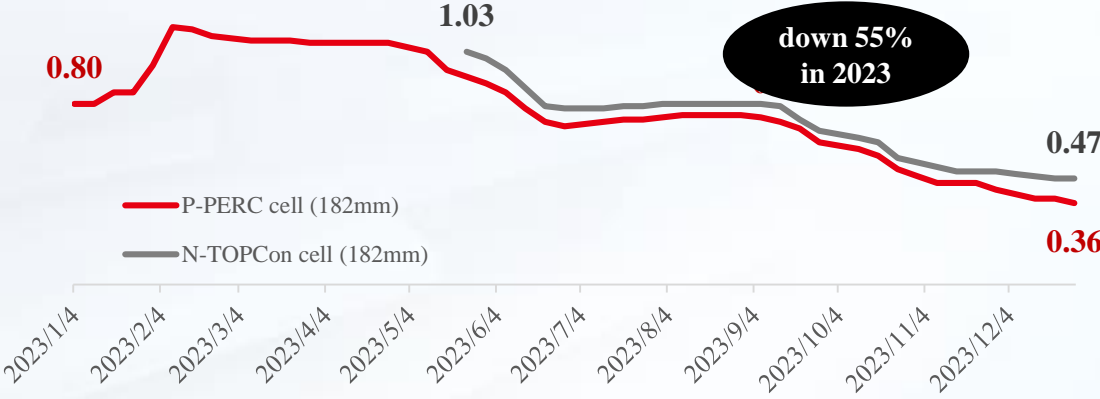
**Polysilicon price change in 2023 (yuan/kg)**



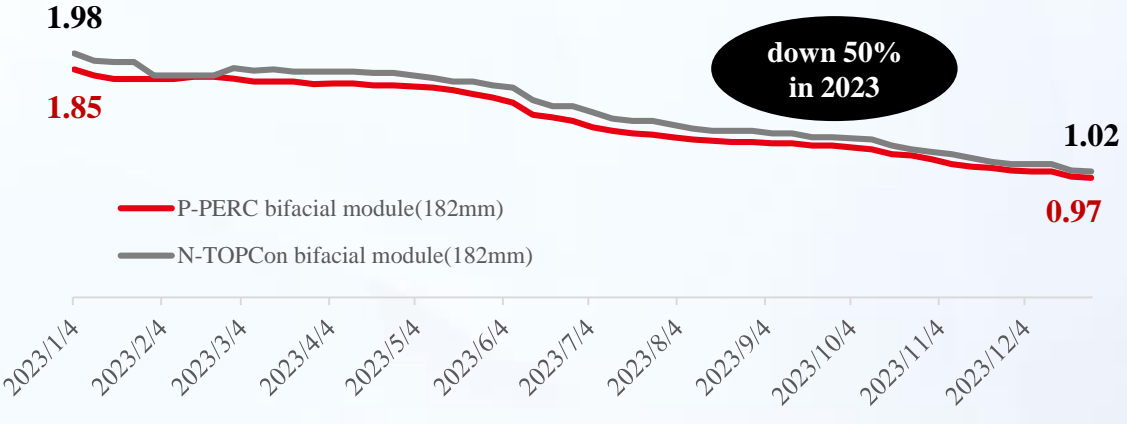
**Mono wafer price change in 2023 (yuan/pc)**



**Mono cell price change in 2023 (yuan/W)**



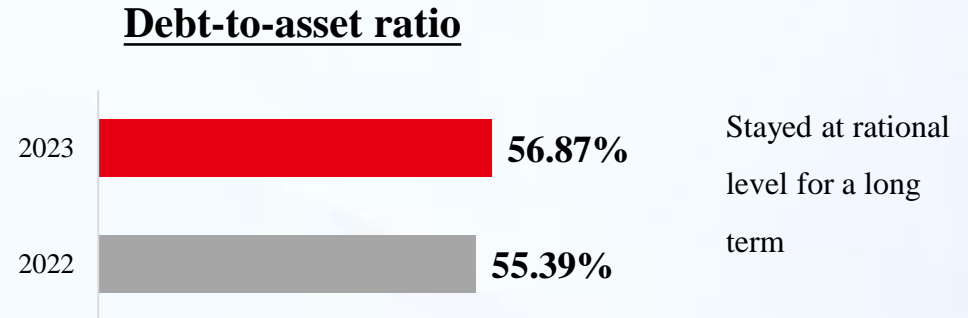
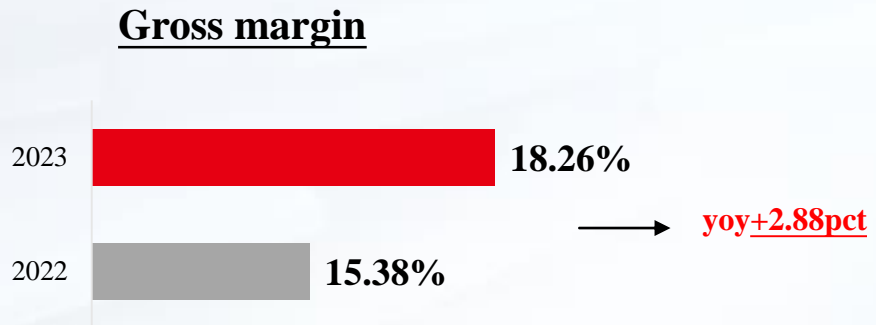
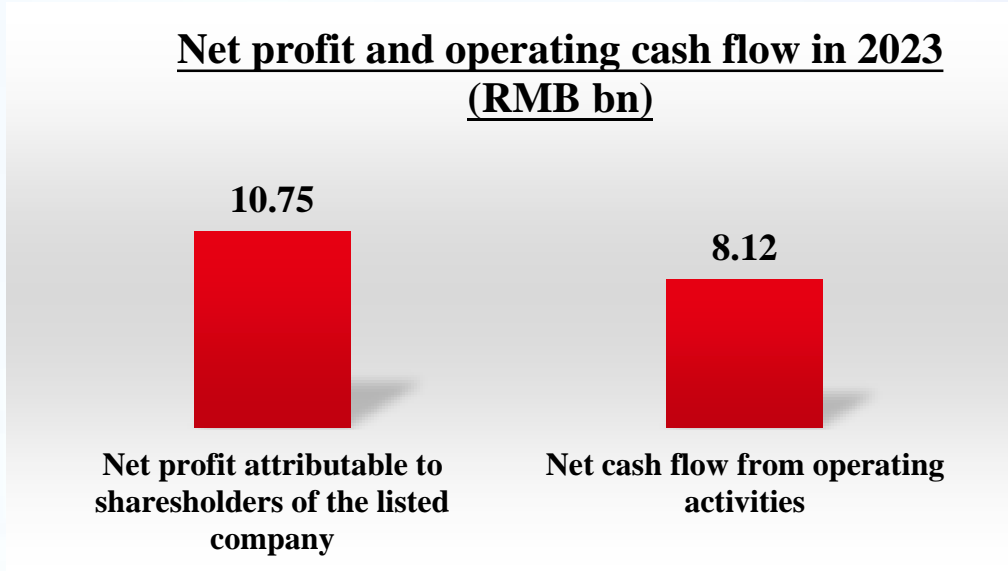
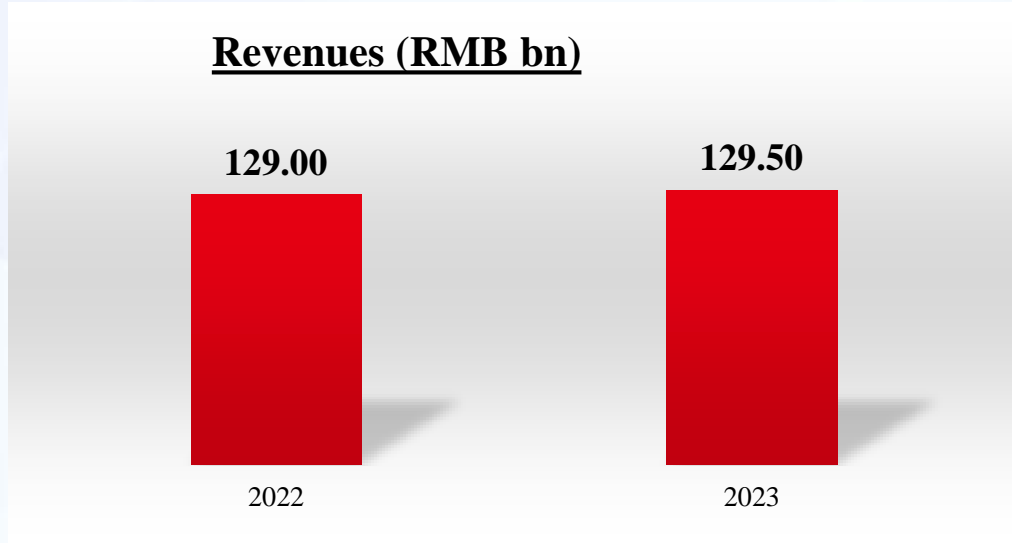
**Mono module price change in 2023 (yuan/W)**





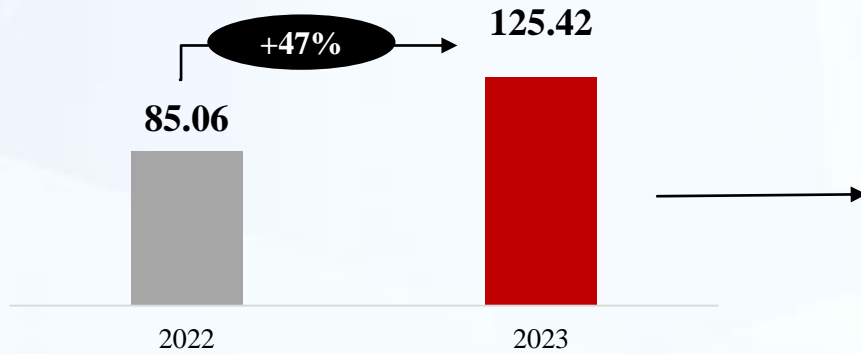
**2** PART  
Business Review

Adhering to steady and sustainable development, the company's operation was generally stable

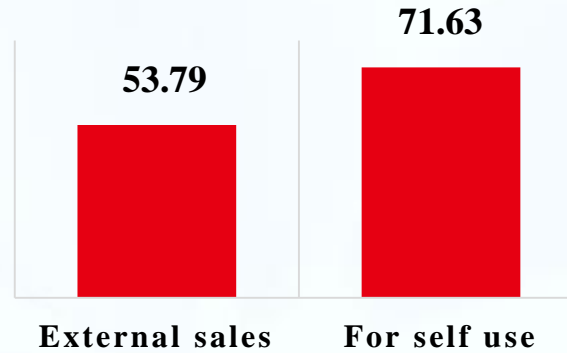


Continued to launch market-leading differentiated products, and the product shipments increased significantly

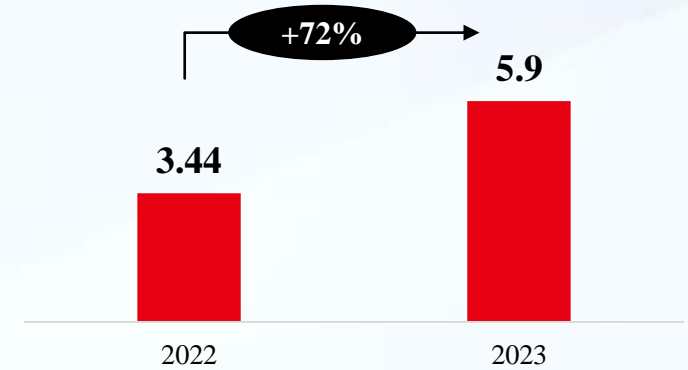
Mono wafer shipments (GW)



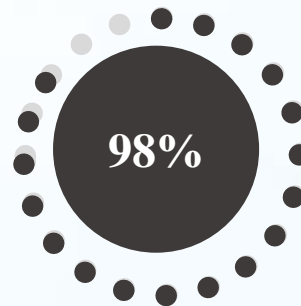
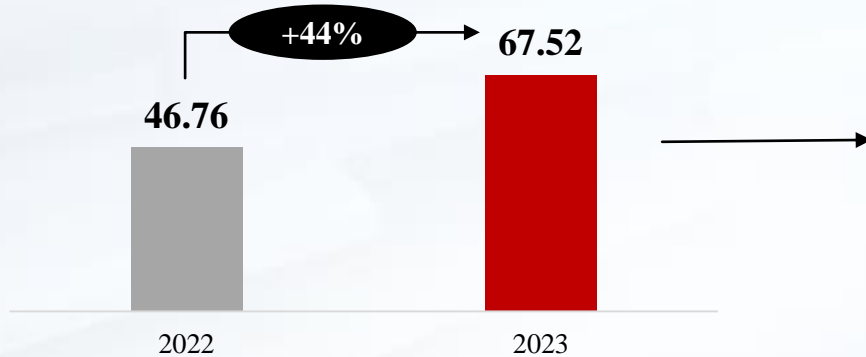
Mono wafer shipment breakdown (GW)



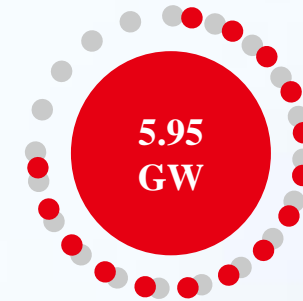
External sales of mono cell (GW)



Mono module shipments (GW)



The percentage of Module external sales



HPBC module shipments



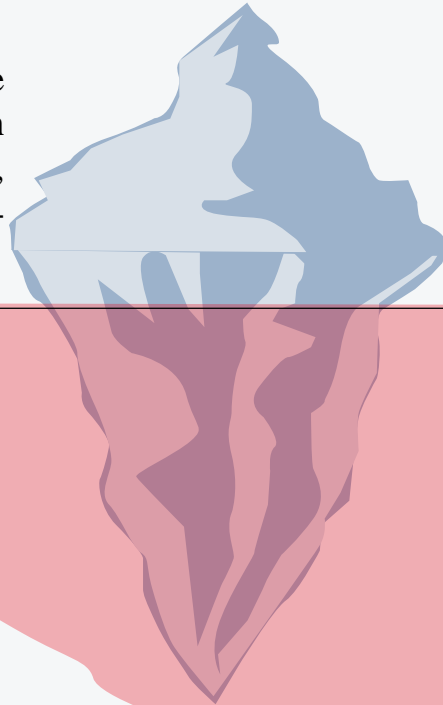
## Maintained high-intensity R&D investment to achieve long-term development with technological innovation

➤ R&D investment in 2023 was RMB 7.71 billion

➤ 2,879 patents obtained as of the end of 2023

### HPBC modules

By the end of 2023, the average efficiency of HPBC modules in mass production was 22.6%-23%, and the output power was 580-595W.



### Tairui Wafers

Compatible with all current crystalline silicon cell technologies, and has the advantages of good resistivity uniformity and impurity absorption, which can effectively reduce costs and increase efficiency in cells and modules. Mass production is scheduled to begin in 2024Q2.

### HBC cells

**Cell efficiency at R&D level reached 27.09%**

Set a new world record for efficiency of single-junction crystalline silicon solar cells, certified by ISFH

### Crystalline silicon-perovskite tandem cells

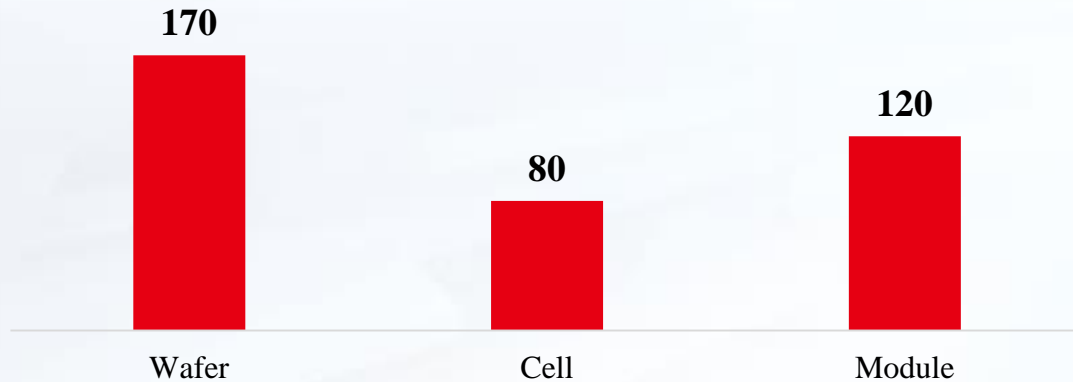
**Cell efficiency at R&D level reached 33.9%**

Set a new world record for efficiency of crystalline silicon-perovskite tandem cells, certified by NREL

## Maintained rational investment in capacity expansion, and global production capacity layout was optimized

➤ In 2023, the company maintained rational investment in capacity expansion adaptable to industry changes, focused on promoting high-efficiency capacity construction such as HPBC and overseas expansion projects, continuously optimized the company's capacity structure, and enhanced the flexibility and resilience of the company's global supply.

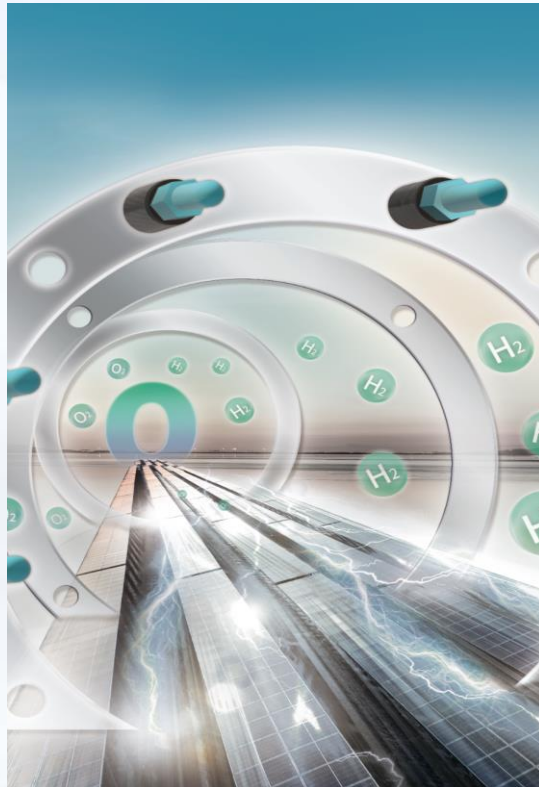
**The company's capacity by the end of 2023 (GW)**



*** Important projects	*** Progress as of 2023/12/31
46GW ingots+wafers in Ordos	Partially commenced production
29GW high-efficiency cells in Xixian	Fully commenced production
4GW high-efficiency cells in Taizhou	Fully commenced production
30GW high-efficiency cells in Ordos	Partially commenced production
10GW modules in Jiaxing	Fully commenced production
10GW modules in Heshan	Estimated gradual production since 2024Q3
6.6GW ingots in Malaysia	Estimated gradual production since 2024Q2
2.8GW modules in Malaysia	Commenced production
3.35GW cells in Vietnam	Fully commenced production
5GW modules in the US	Commenced production since 2024Q1

## The hydrogen energy business was successfully cultivated, and the revenue exceeded 100 million yuan

- In the context of carbon neutrality, the company seized the development opportunity of "green electricity + green hydrogen", continued to strengthen the cultivation of hydrogen energy business, and made phased progress in technology research and development, capacity construction and market expansion. Both technology and capacity are in the leading position of hydrogen energy industry.



**>100 million yuan**

Revenue of electrolyzers in 2023

**2.5GW**

Electrolyzer capacity by the end of 2023, ranking first place in the industry

**4.0kwh/Nm<sup>3</sup>**

DC power consumption for hydrogen production of ALK Hi1 Series electrolyzers

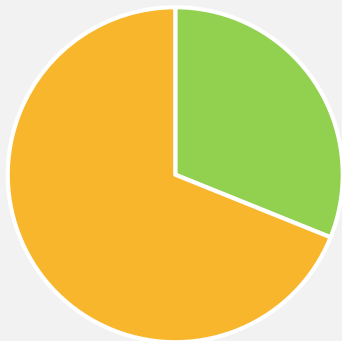
**3000Nm<sup>3</sup>/h**

First company in the industry rolled out electrolyzers with the largest single slot

## Deeply practiced the concept of ESG, and had outstanding performance in sustainable development

- With the mission of promoting sustainable development, the company has fully implemented cleaner production, energy conservation and emission reduction through technological innovation, process optimization, recycling, supply chain management, etc., and the proportion of renewable electricity use reached more than 30% in 2023, and key indicators such as energy production efficiency and electricity consumption have been continuously improved. The company has won ESG authoritative honors with the company's outstanding performance in intelligent manufacturing, energy conservation and consumption reduction, green and low-carbon development.

### Renewable electricity used in 2023



Renewable  
accounted for  
31.1%

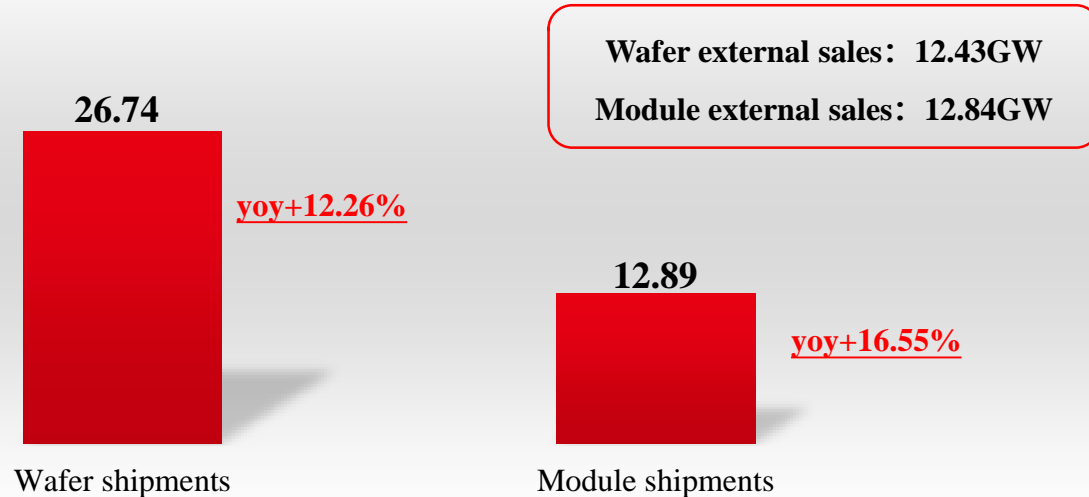
- **Jiaxing production base was the first one in the solar industry to be recognized as “Lighthouse Factory” by WEF, representing the company has reached the industry-leading level in the field of intelligent manufacturing and digitalization.**
- Unit consumption of power use down 18.32% compared with 2020
- Energy production efficiency up 31.2% compared with 2015

- 2023 Bloomberg Green ESG 50 Companies –Environmental**
- 2023 Forbes China ESG Inspiration Case**
- ESG Best Practice for Listed Companies 2023 by China Association For Public Companies**

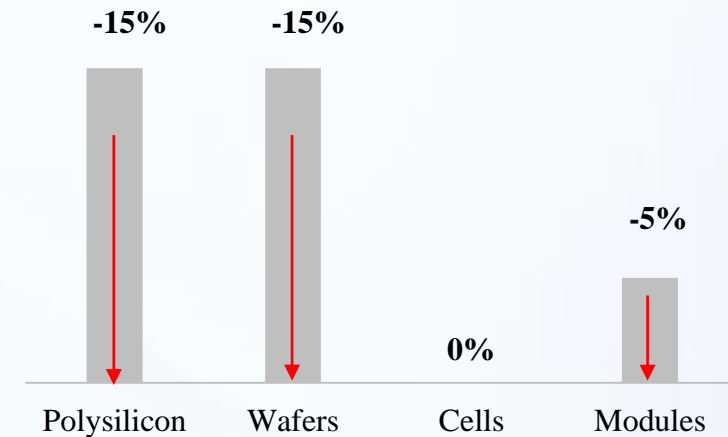
## Continued to promote the differentiated product strategy, and the product shipments grew steadily in 2024Q1

- In the first quarter of 2024, the solar market entered the off-season of demand, and the industry competition intensified further. The solar prices in the main industry chain continued to decline.
- During the reporting period, the company focused on promoting organizational optimization, fully implementing cost control and reduction, and continuously improving risk defense capabilities, while continuing to implement the differentiated product strategy, promoting the year-on-year growth of product shipments. The company's revenue was 17.67 billion yuan, and net profit attributable to shareholders of the listed company was about -2.35 billion yuan, impacted by the inventory impairment.

**LONGi product shipments in 2024Q1(GW)**

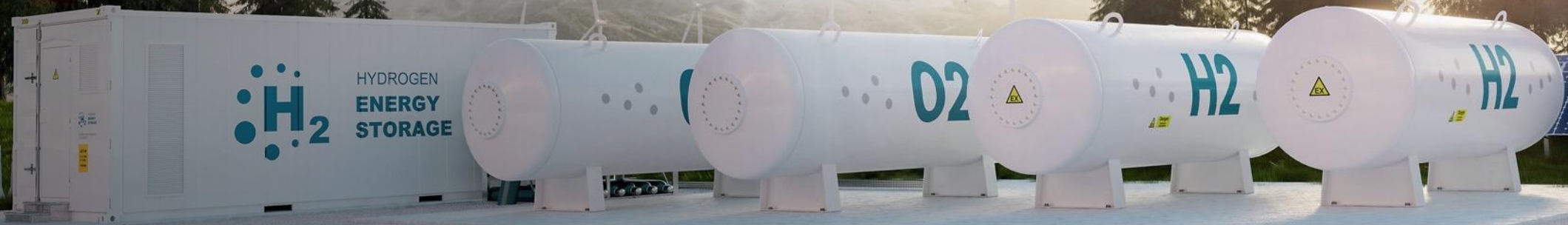


**Solar price decline rates in 2024Q1**



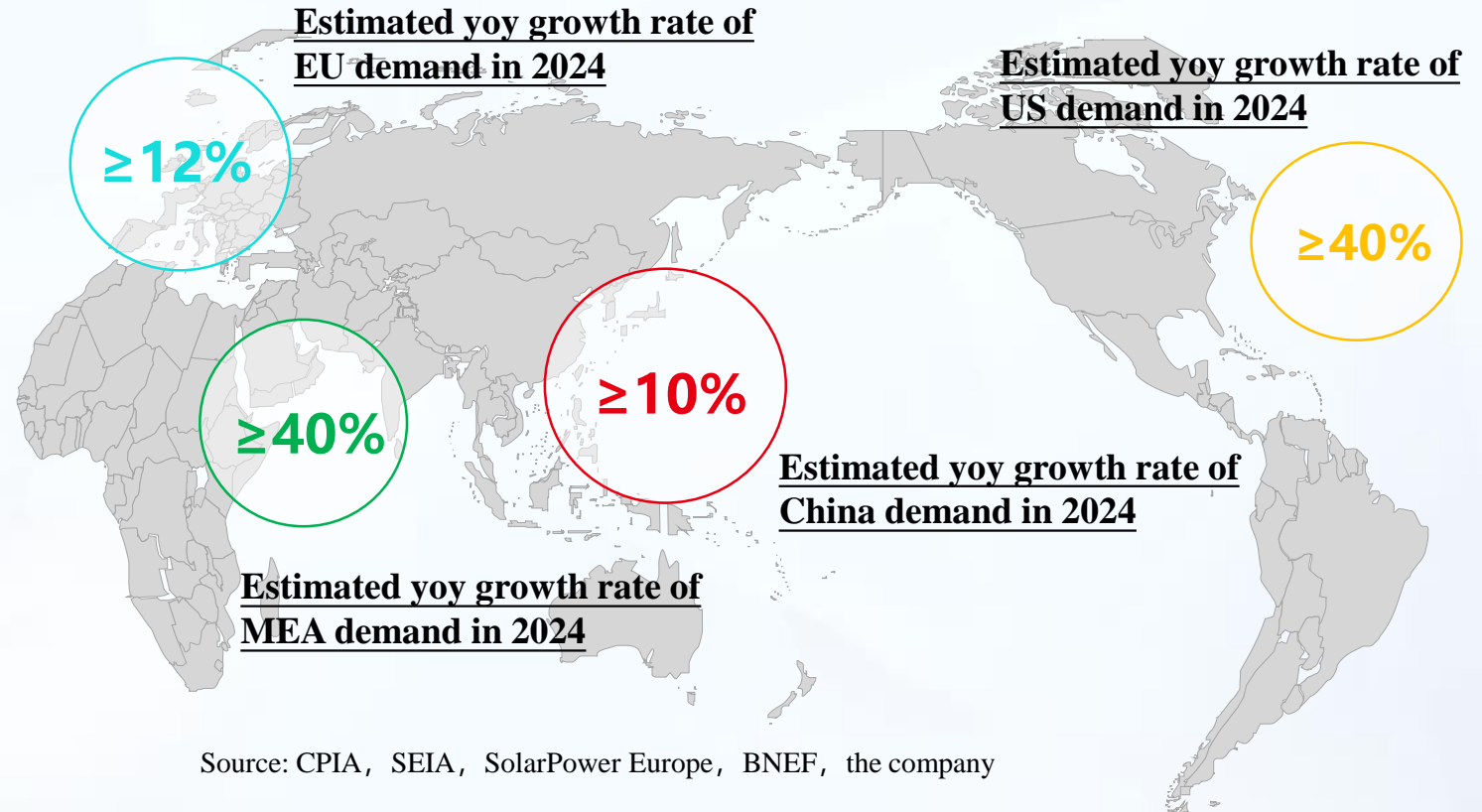
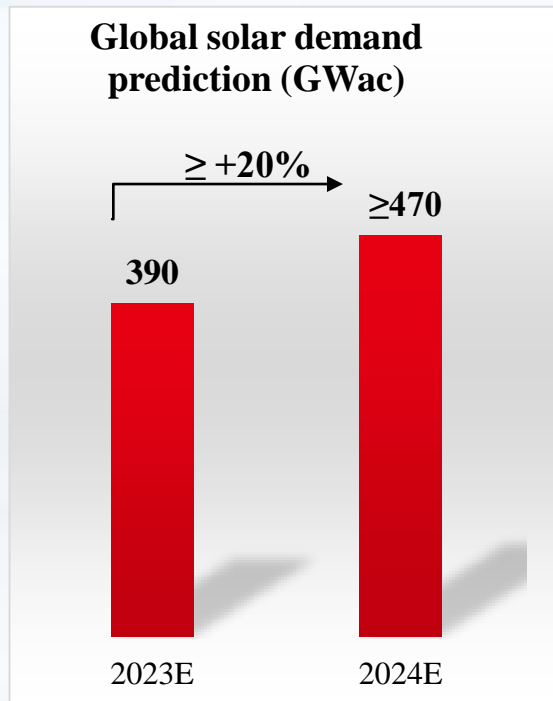
Source: InfoLink

# 3 PART Future Outlook



## Global solar demand will continue to grow in 2024 at a year-on-year increase of >20%

- Driven by energy policy support and the economics of solar power generation, it is expected that the global new solar installation will maintain continuous growth in 2024, which may exceed 20% year-on-year, despite the impact of unfavorable factors such as green trade barriers and grid constraints. The top three markets are still China, Europe and the US. China and Europe will enter a stage of steady growth, and markets such as the US, the Middle East and Africa are expected to continue a rapid growth.

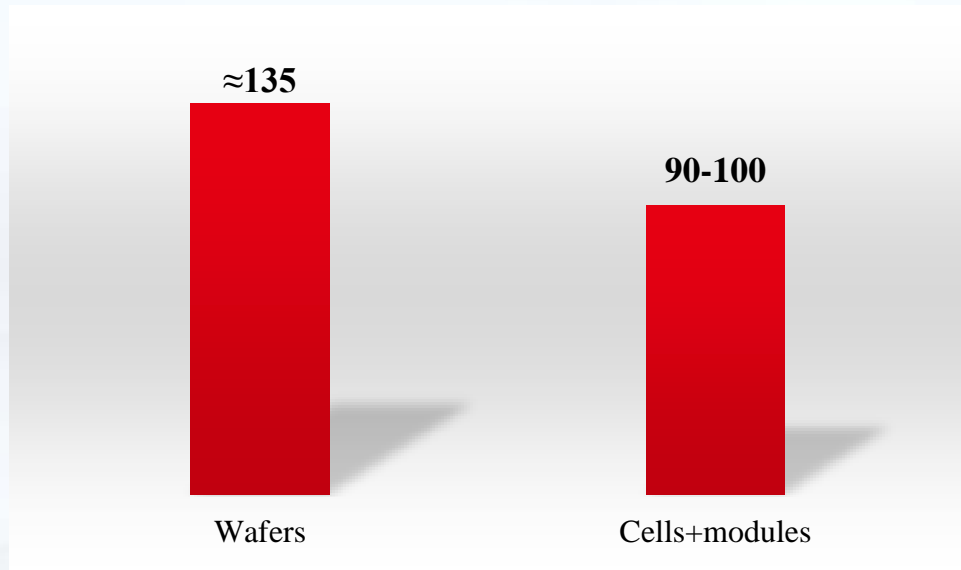


Source: CPIA, SEIA, SolarPower Europe, BNEF, the company

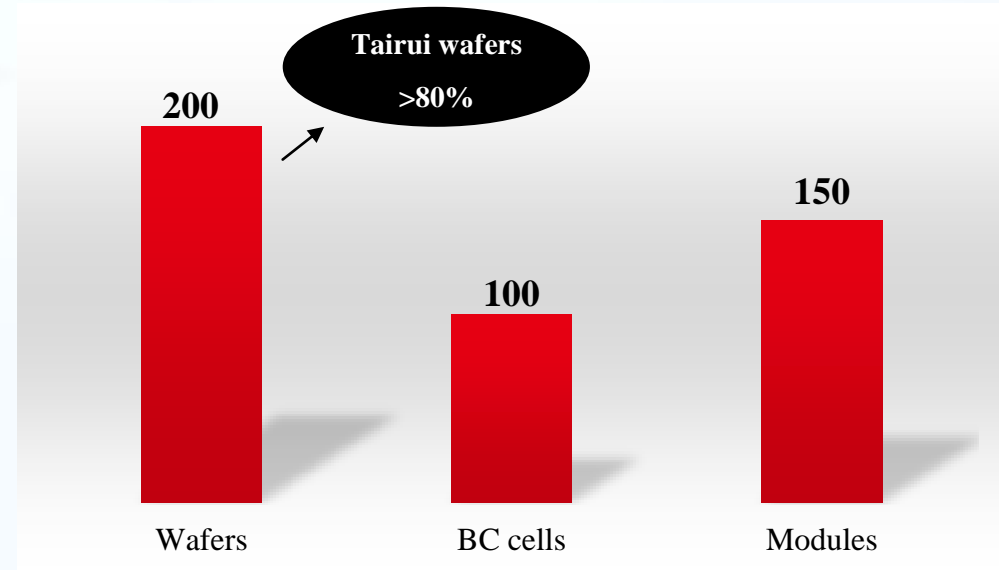
## Business outlook

- In the future, based on the long-term sustainable development goals, the company will lead the technological transformation of the industry with BC technology and accelerate the industrial iteration of BC technology; adhere to customer first, strengthen products and services, increase scenario development, and enhance business value; adhere to global localization operation and serve global customers; based on advanced manufacturing, take the "lighthouse factory" of Jiaxing base as the guide, accelerate the company's digital transformation, improve the level of scientific and technological manufacturing; improve overseas business planning and organizational construction, support global and efficient operation, and achieve sustainable growth.

2024 product shipment target (GW)



Product capacity target for the next 3 years (GW)





A night sky with the Milky Way galaxy visible over a solar farm. The solar panels are arranged in rows on a hillside, and the sky is filled with stars and the bright band of the Milky Way.

**LONGI**

**THANKS**

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