

Oversupply: Winners and Losers

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Company & Speaker - Introduction

PV Tech, Solar Media & Informa

- PV Tech is a well-known brand within Solar Media.
- Solar Media has been part of Informa Markets since 2024, a division within Informa PLC.
- Informa PLC is an events, digital services & academic research group, LON:INF, FTSE 100, market cap. ca. \$12B*
- PV Tech have been covering bankability of suppliers since 2019 in the PV Space and we released the Battery StorageTech Bankability Ratings Report to do a similar thing in the ESS Space.

Moustafa Ramadan, PhD

- Head of Market Research, PV Tech.
- Joined PV Tech in 2025 and worked on the PV Bankability and Manufacturing report.
- Qualified in Energy Engineering (BEng, MEng), Energy Finance (MSc, PhD), Energy Law (LLM).
- Worked in large-scale solar development in the UK and Ireland, consulted on renewable energy projects across Africa and the Middle East.
- Completed Acquisition Due Diligence on over 100 renewable energy projects and portfolios.

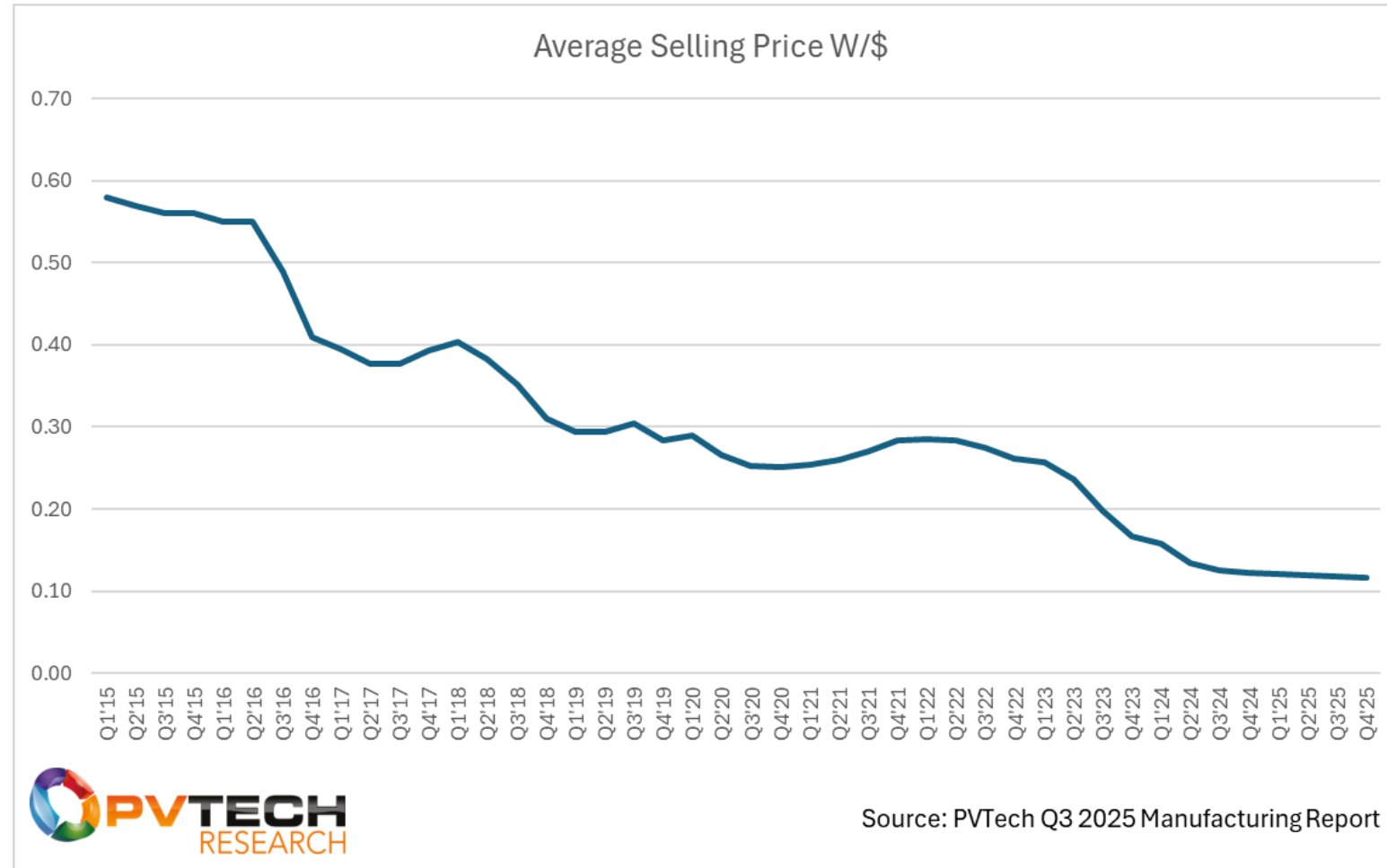
* As of 7 Nov. 2025

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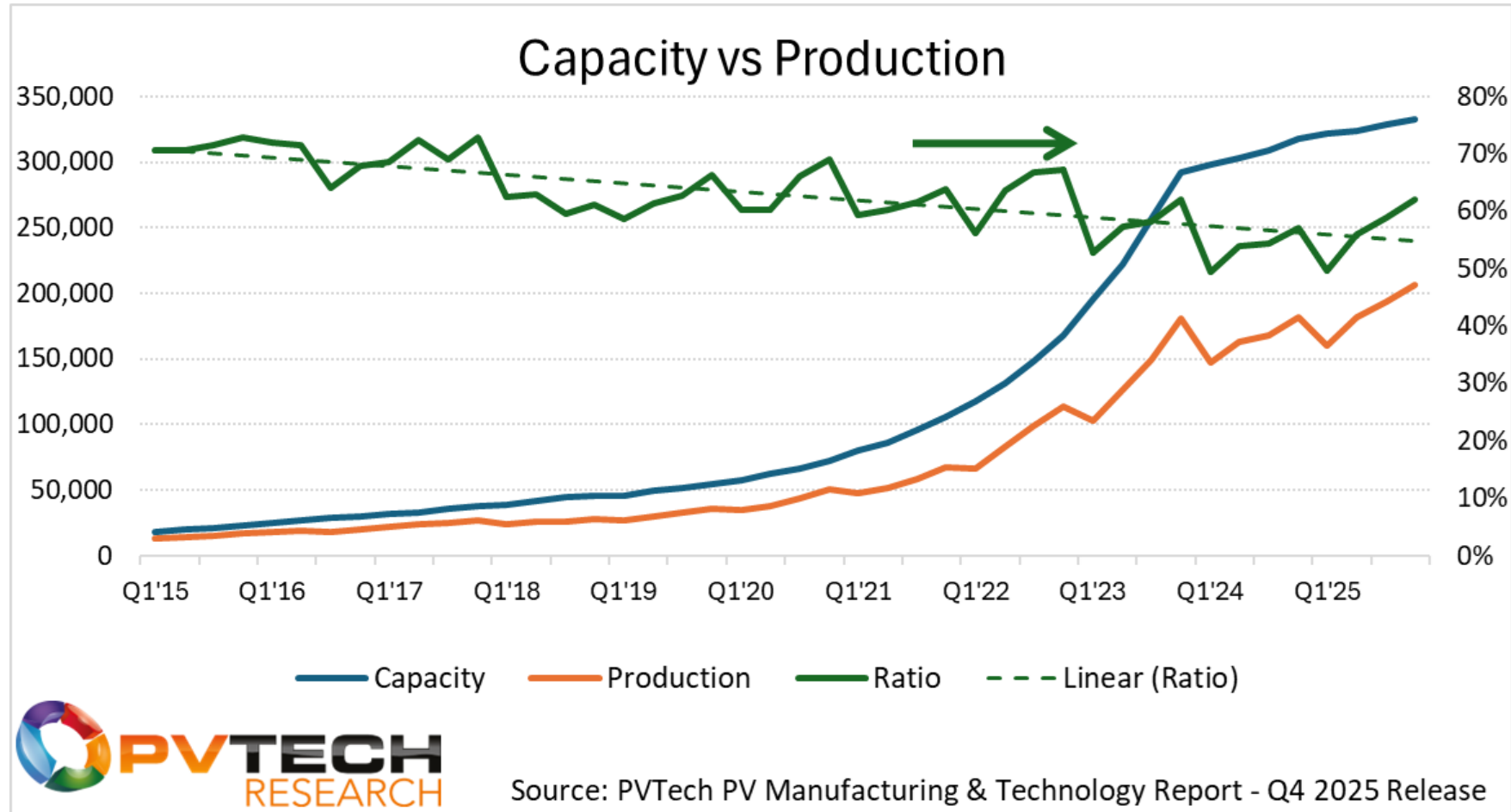
- SECTION I: GLOBAL OVERSUPPLY
 - Global PV Oversupply Crisis
- SECTION II: AREAS OF GROWTH
 - Industry Consolidation Accelerating
 - Geographic Divergence
- SECTION III: CHANGING MARKET
 - Importance of Europe
 - Changing global market
- SECTION IV: OVERSUPPLY PROBLEM
 - Market dynamics
- SECTION V: OUTLOOK AND FORECAST

●● SECTION I: GLOBAL OVERSUPPLY

Global PV Oversupply: Pricing Trends



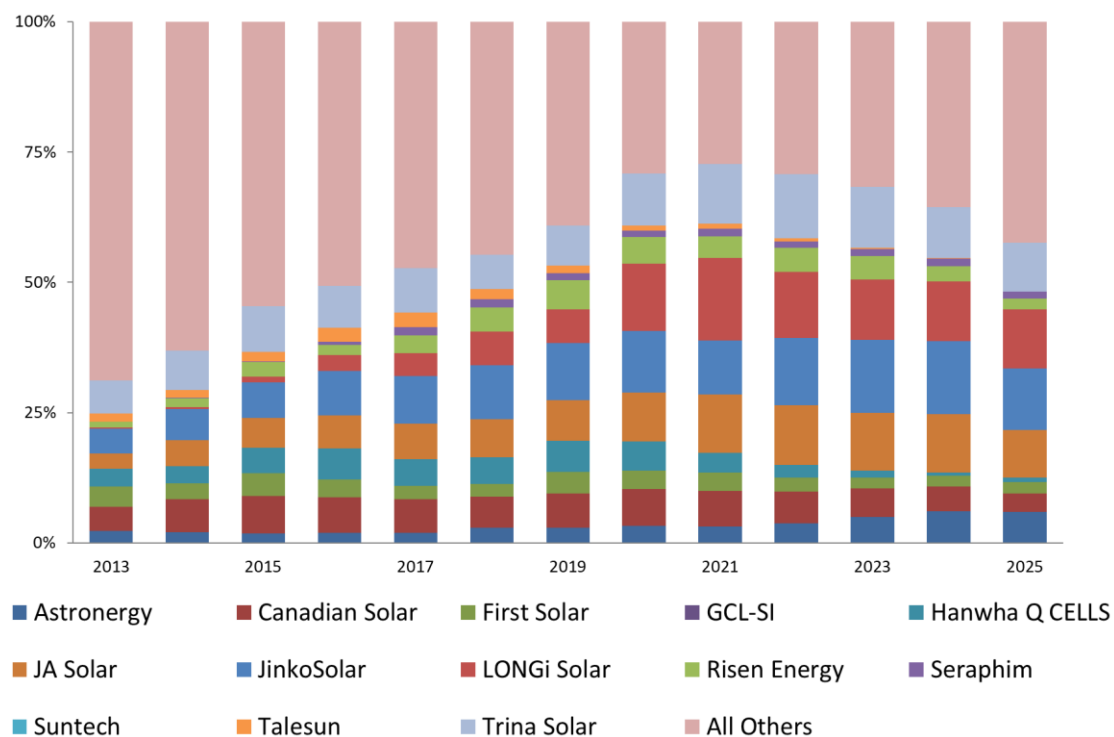
Global PV Oversupply: Capacity and Utilisation (MW)



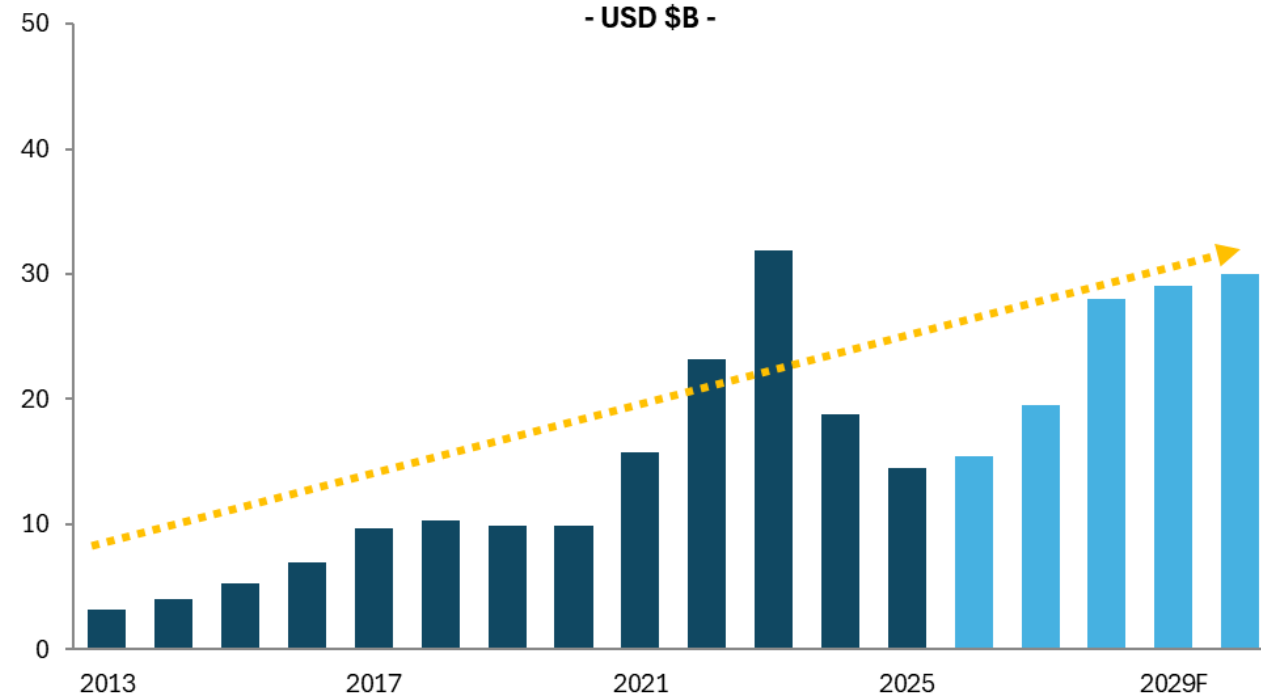
●● SECTION II: AREAS OF GROWTH

Industry Consolidation Trends

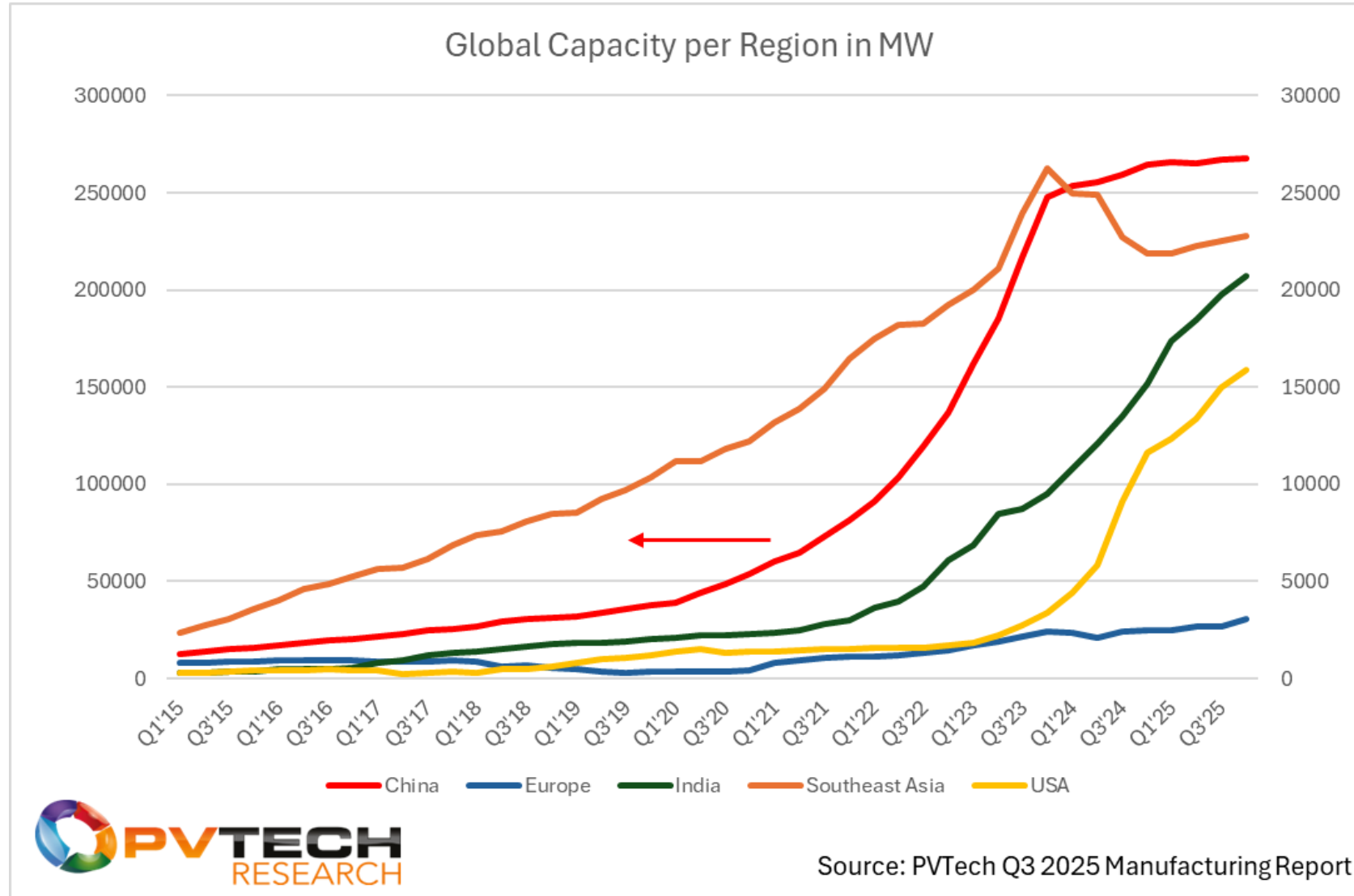
A&B Grade Module Supply (Global)



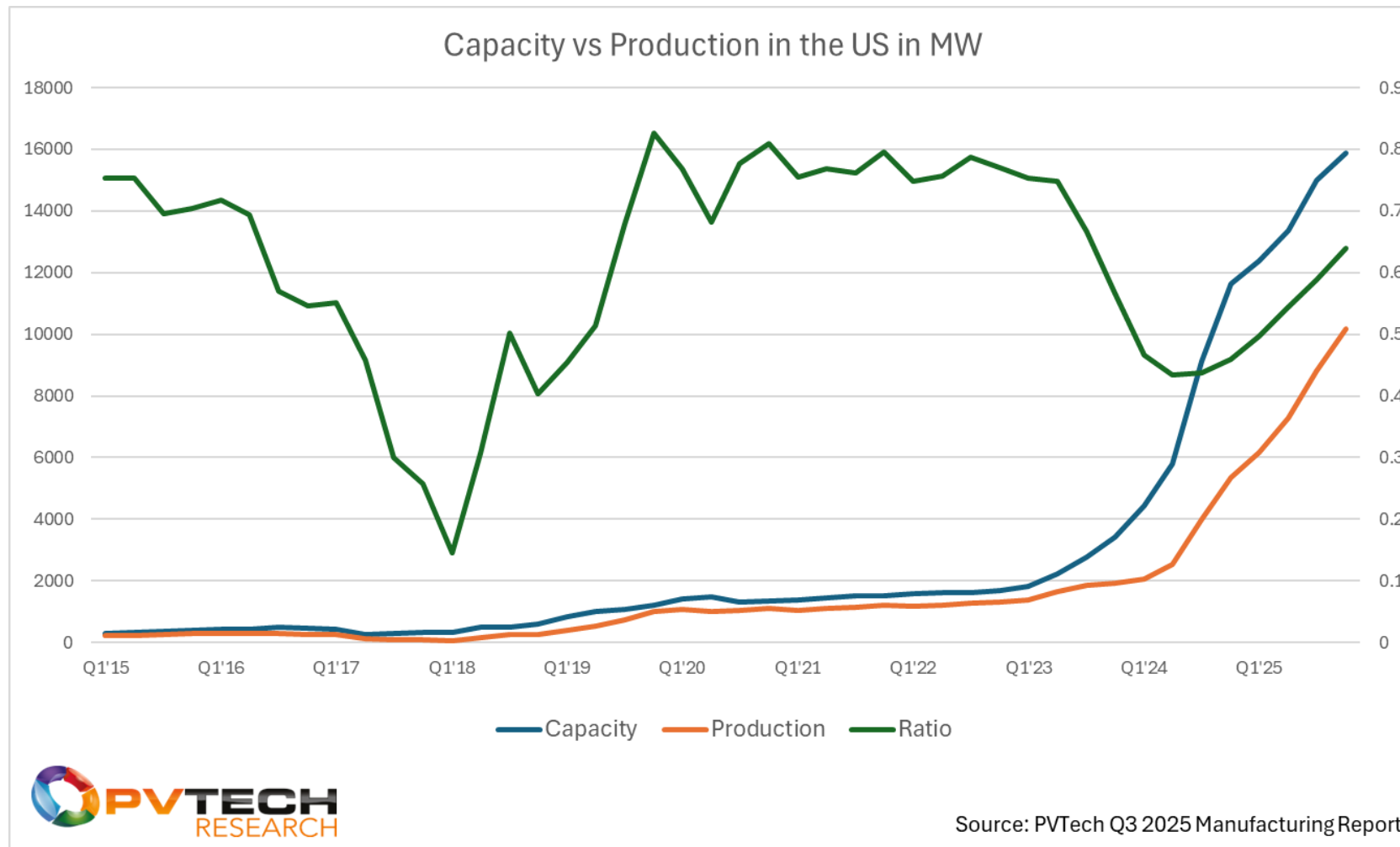
PV Manufacturing Capex
c-Si Ingot-to-Module & TF
- USD \$B -



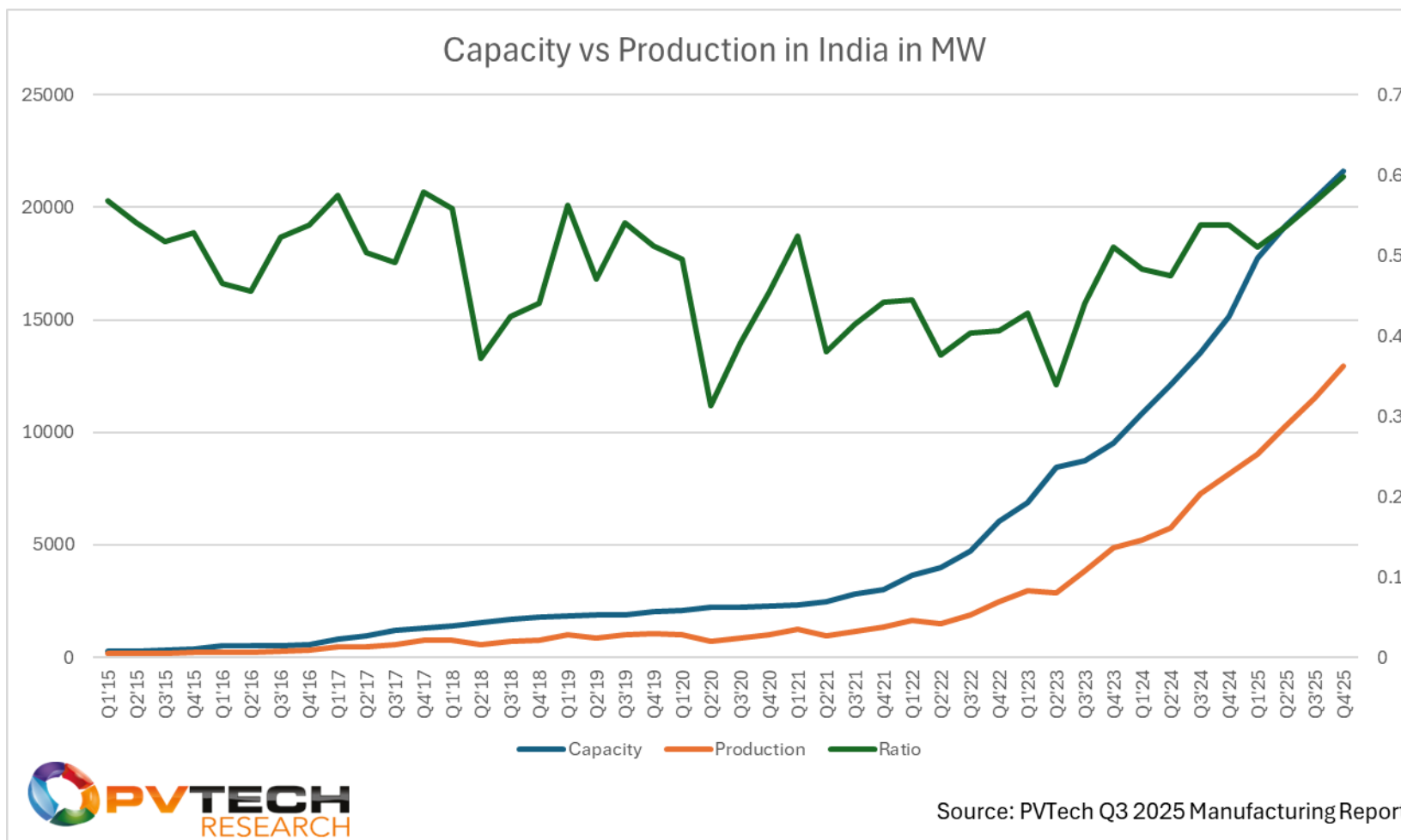
Capacity increase slows – Except US and India



US capacity increase

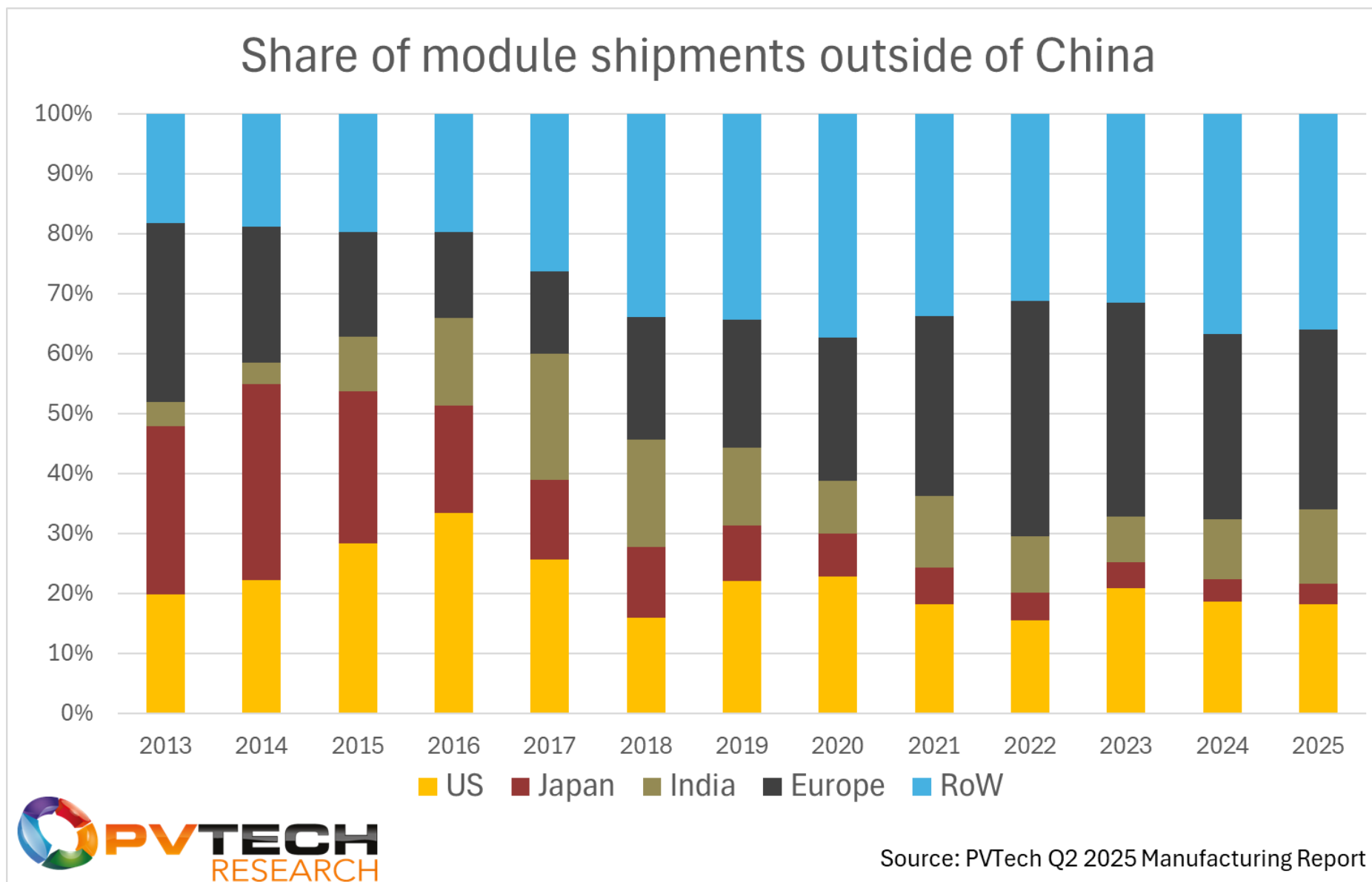


India capacity increase

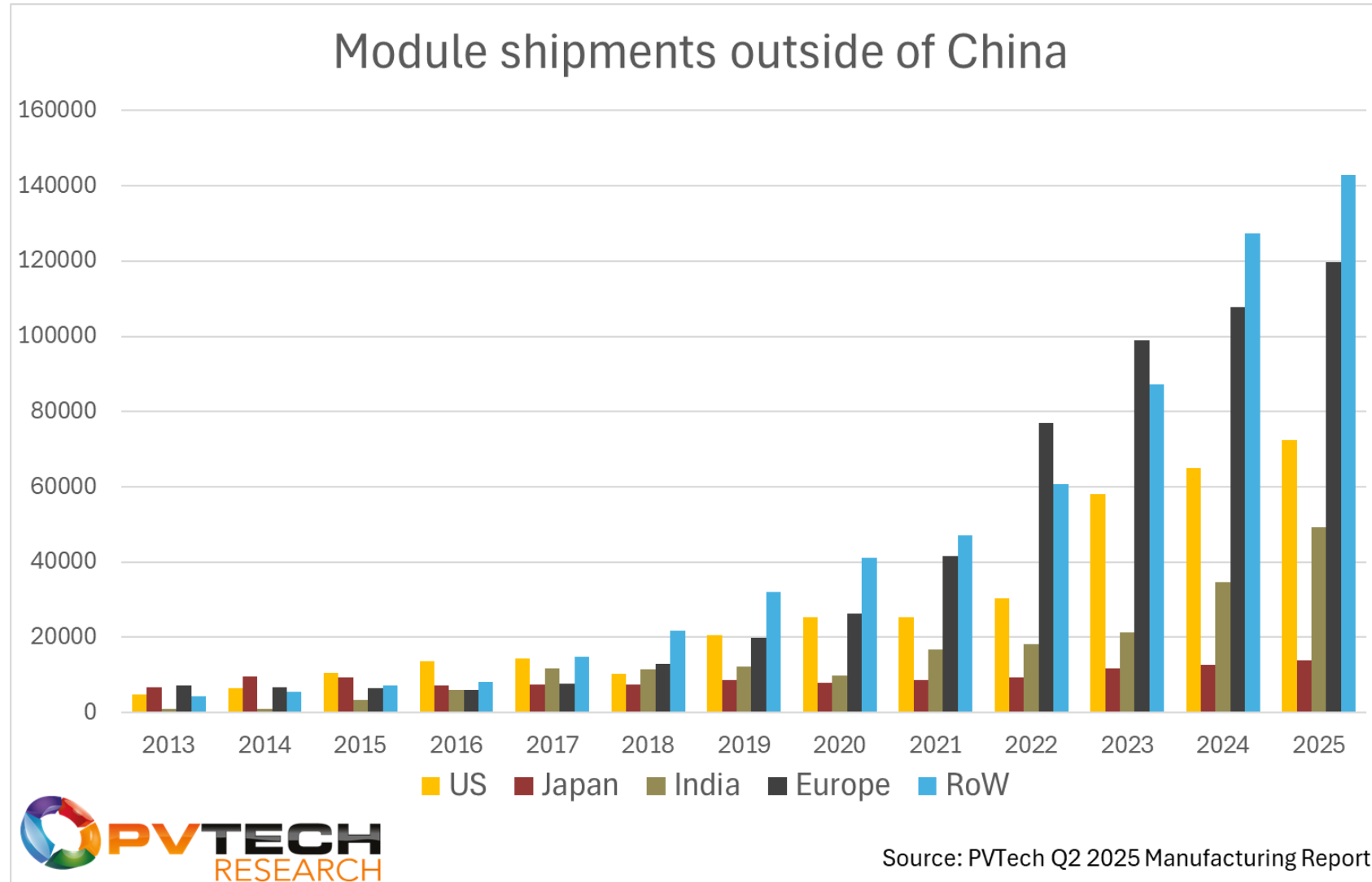


●● SECTION III: CHANGING MARKET

Global Shipment – Importance of Europe

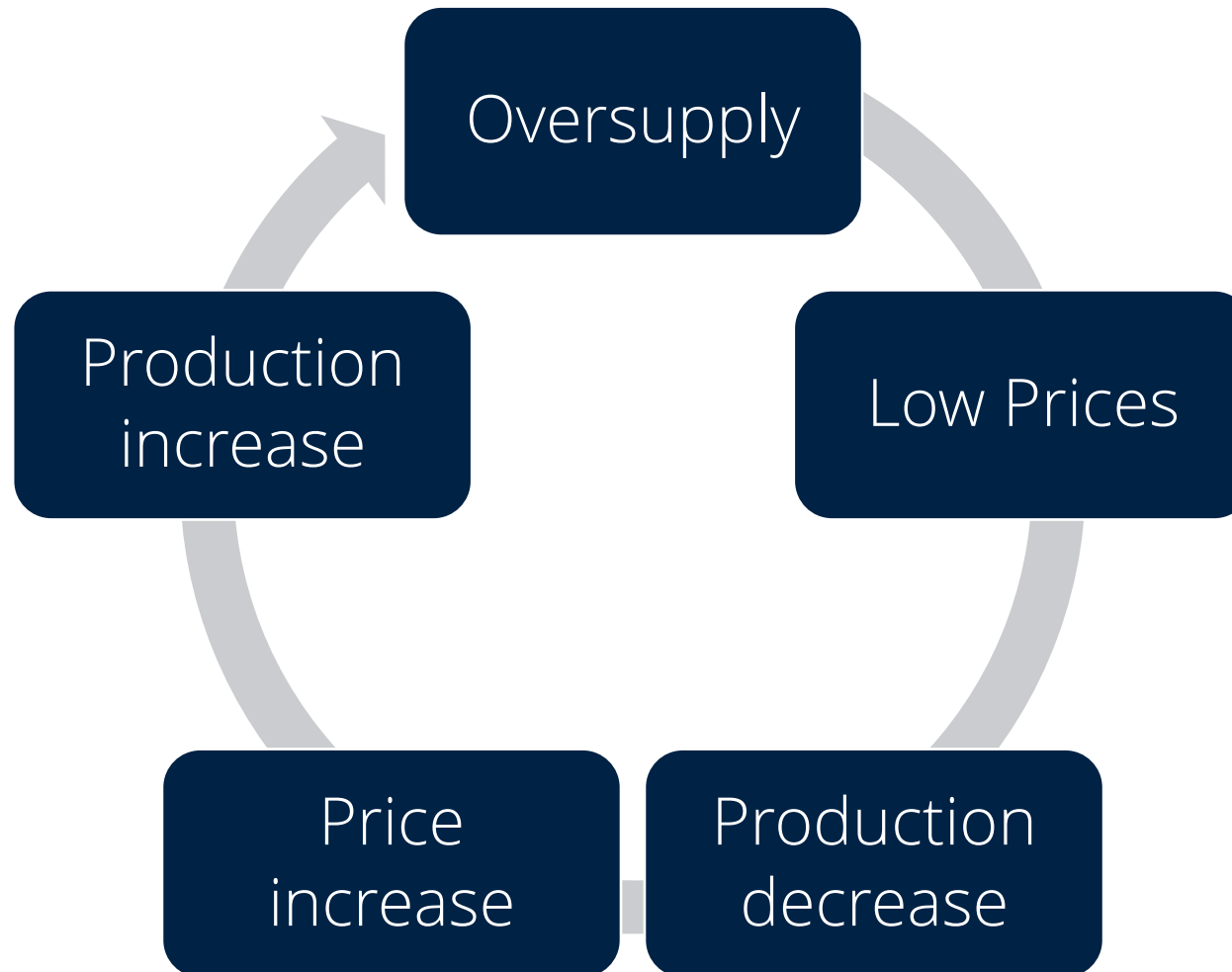


Global Shipment – Changing landscape (MW)



●● SECTION IV: OVERSUPPLY PROBLEM

Negative loop of oversupply



Winners, Losers & Impact

Winners:



- Developers
- End Consumers
- Financial institutions

Losers:



- Manufacturers

Impacts:

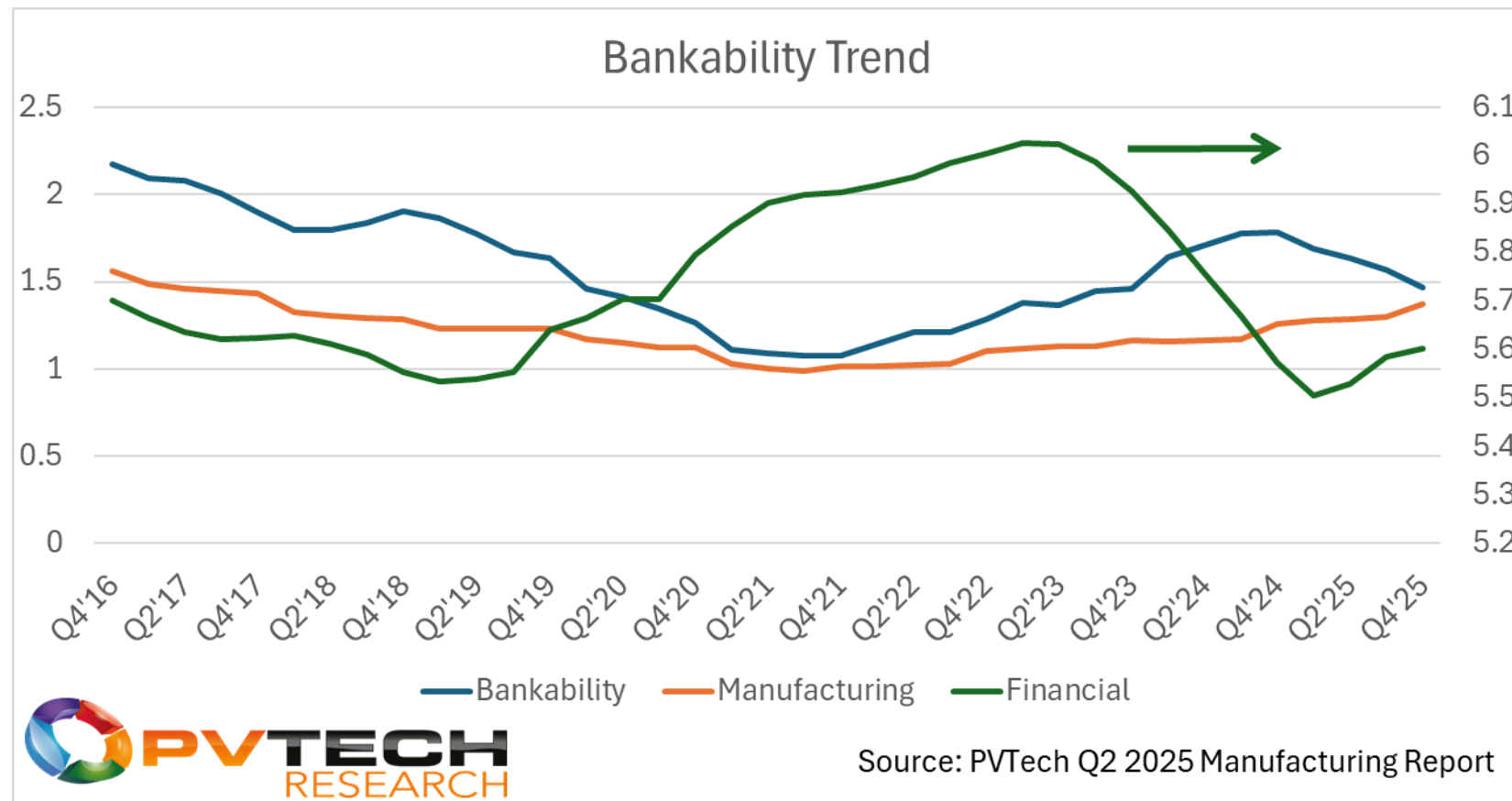
- Warranties have become less relevant.
- Given the razor-thin margins, quality potentially reduced, but cheaper to replace.
- Modules are becoming a less important component in a solar project, with larger priority being given to inverters and batteries.



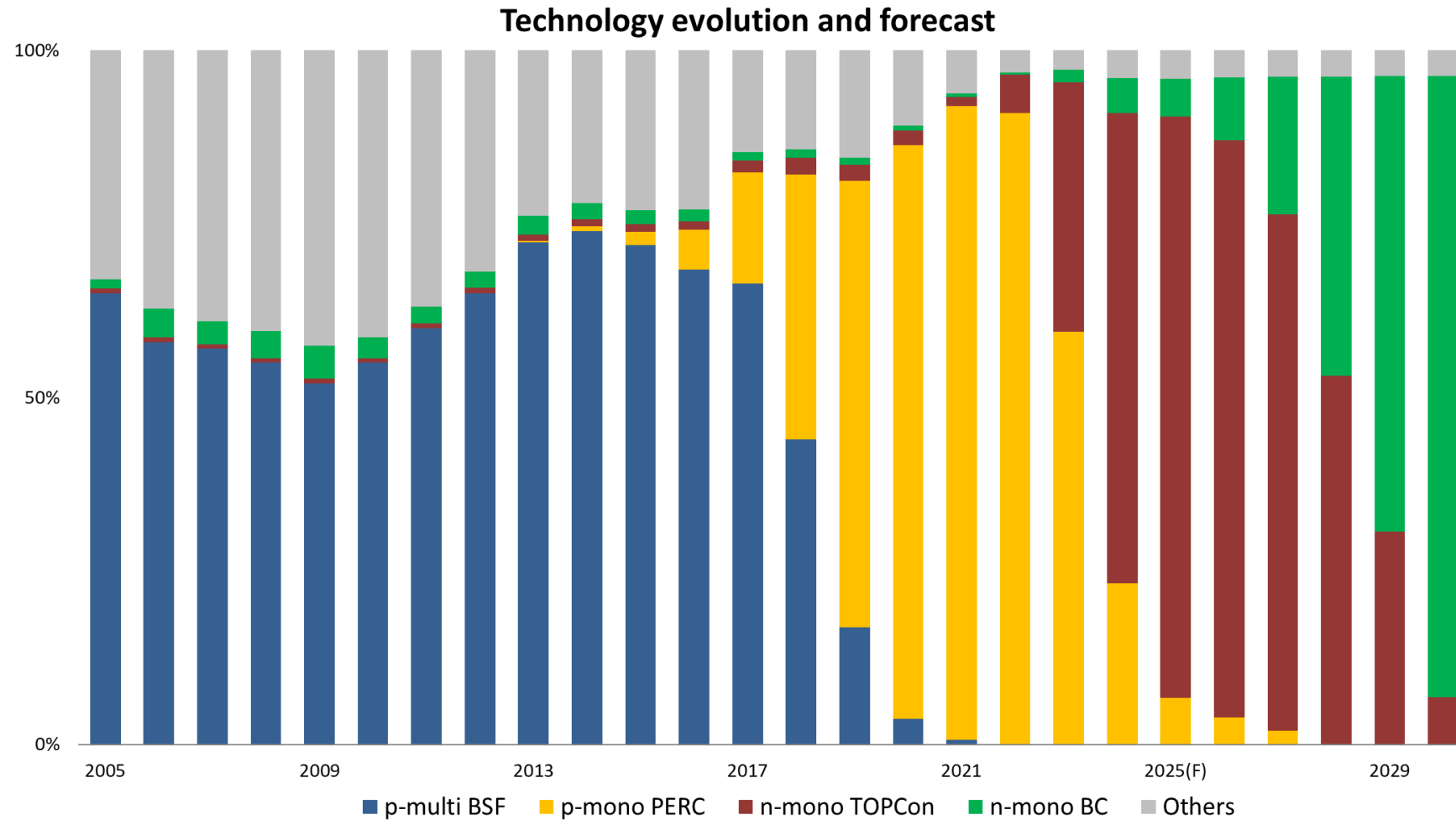
●● SECTION IV: OUTLOOK AND FORECAST

Outlook

- Financial Score depends on an Altman Z Score
- Manufacturing score takes into consideration capacity, production and region of Shipments.
- These scores are arbitrary; however, it is essential to focus on the trends, most notably the financial score.



Technology Forecast



Summary

The challenges:

- Solar has always been a cyclical industry.
- Economic principle dictates that there will be further consolidation in the solar manufacturing space.
- Oversupply is still a systemic problem.

The opportunities:

- More consolidation could lead to better profit margins.
- The rate of technology changes has never been this fast – Perovskite has never been closer.
- Solar is fully commoditised - Batteries are becoming cheaper than ever.
- Energy demand is increasing again – we need more clean production than ever.
- This unlocks Solar's capabilities in the grid-forming space – something considered impossible in the 2010s.

Thank you!

For more information about the
report contact or scan the QR code:

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