How tariffs and policy shifts are reshaping the US solar supply chain

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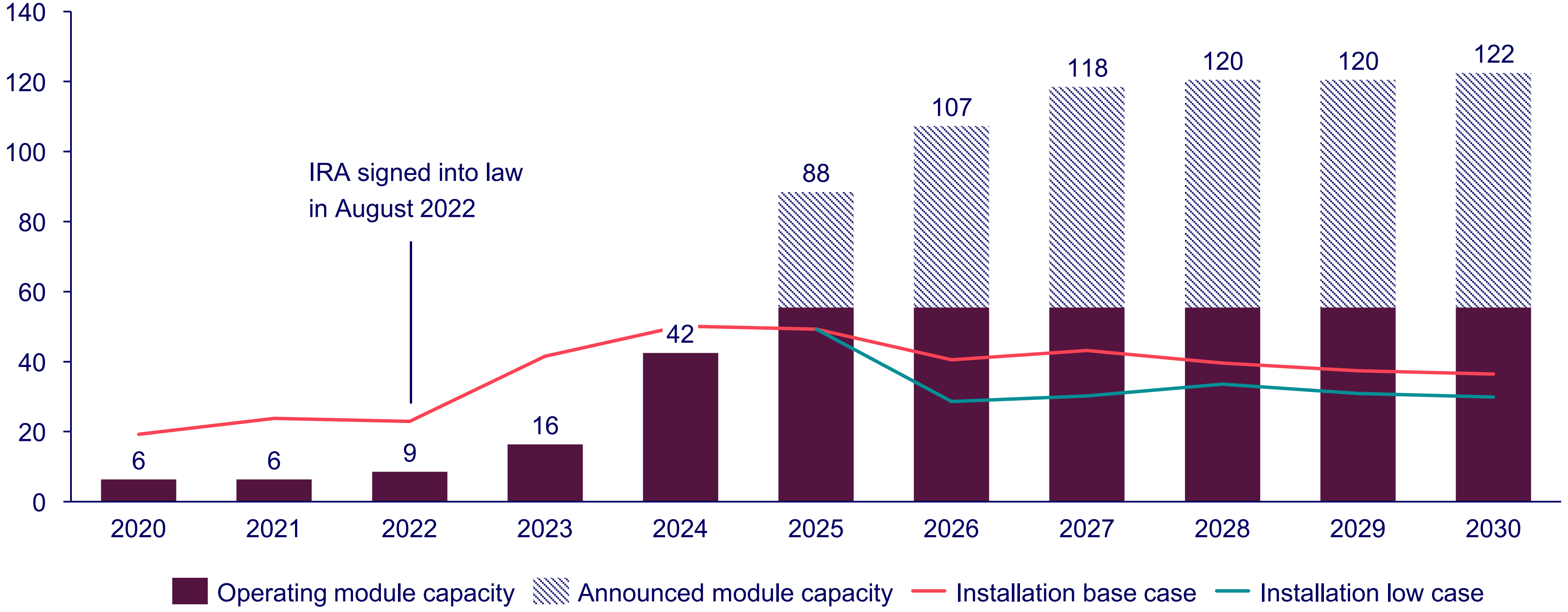
IRA has incentivized US module manufacturing capacity to increase by over sixfold

Domestic manufacturing capacity now exceeds annual installations, suggesting growth will slow down in 2026

US module manufacturing capacity vs. installations, 2020-2030 (GW)

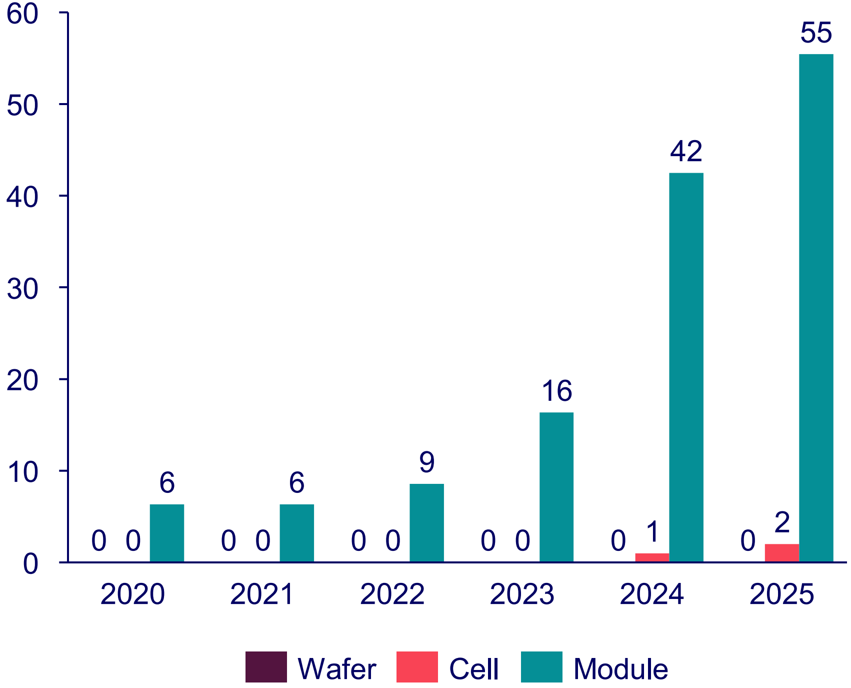


Source: Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025* and *Q3 2025 Solar Market Insight*.

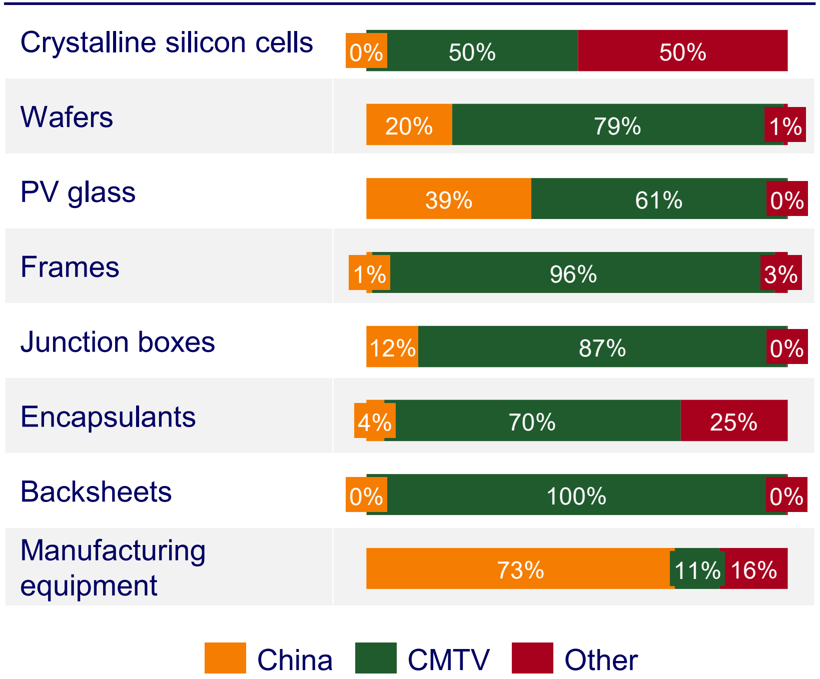
But the buildout of upstream component manufacturing has not kept up the pace

US module manufacturers rely largely on imported components, making them susceptible to tariffs

US wafer, cell, and module manufacturing capacity, 2020-Q2 2025 (GW)



Origin of solar module components imported to the US, 2025 (Jan-Apr)

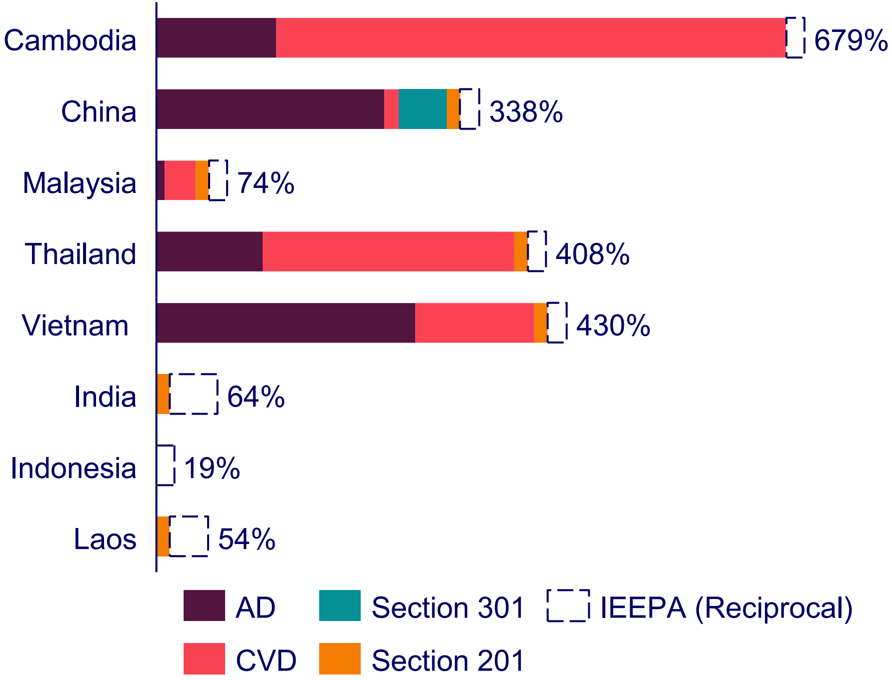


Source: Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025.*

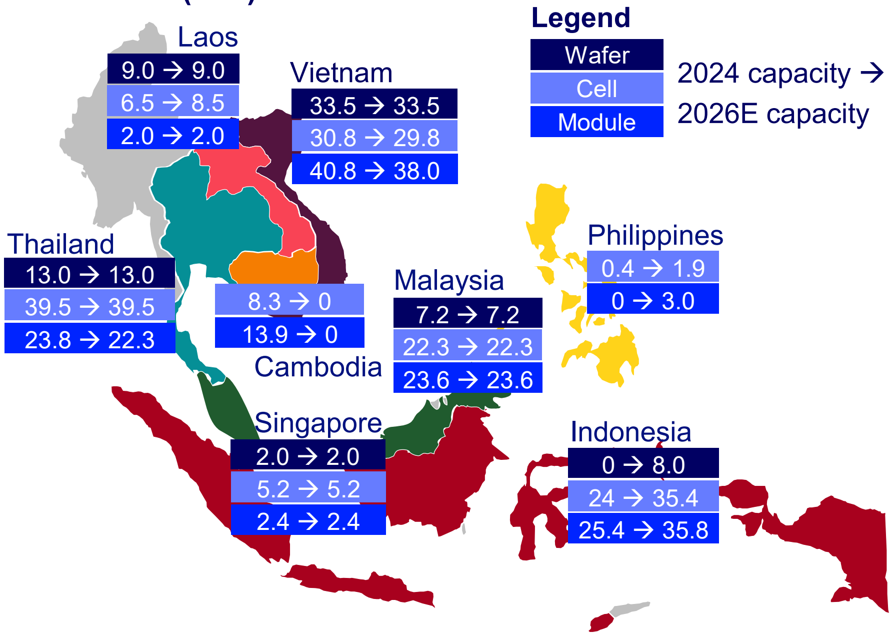
New AD/CVD is forcing manufacturers to relocate capacity outside of CMTV

While factories in these countries are closing, capacity is growing in Indonesia, Laos, and the Philippines

Solar cell and module tariff rates[2] by country, August 2025



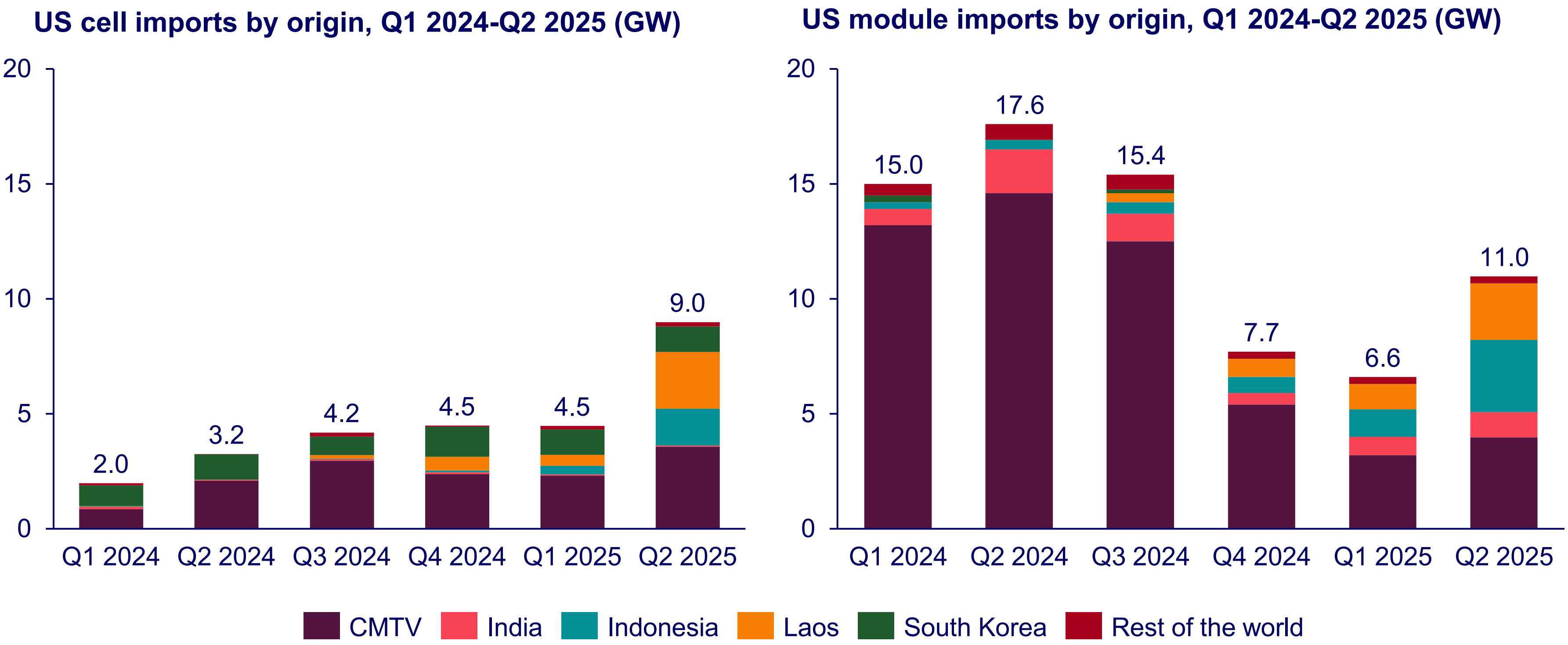
Solar manufacturing capacity in Southeast Asia, 2024-2026 (GW)



Note 1: Only country-wide AD/CVD rates are shown; certain companies have individual rates. IEEPA tariffs are currently being challenged in court.
Source: US Department of Commerce, Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025.*

But the surge in imports from Indonesia and Laos has led to new AD/CVD case

The alleged dumping margins are 123% for India, 94% for Indonesia, and between 123-190% for Laos

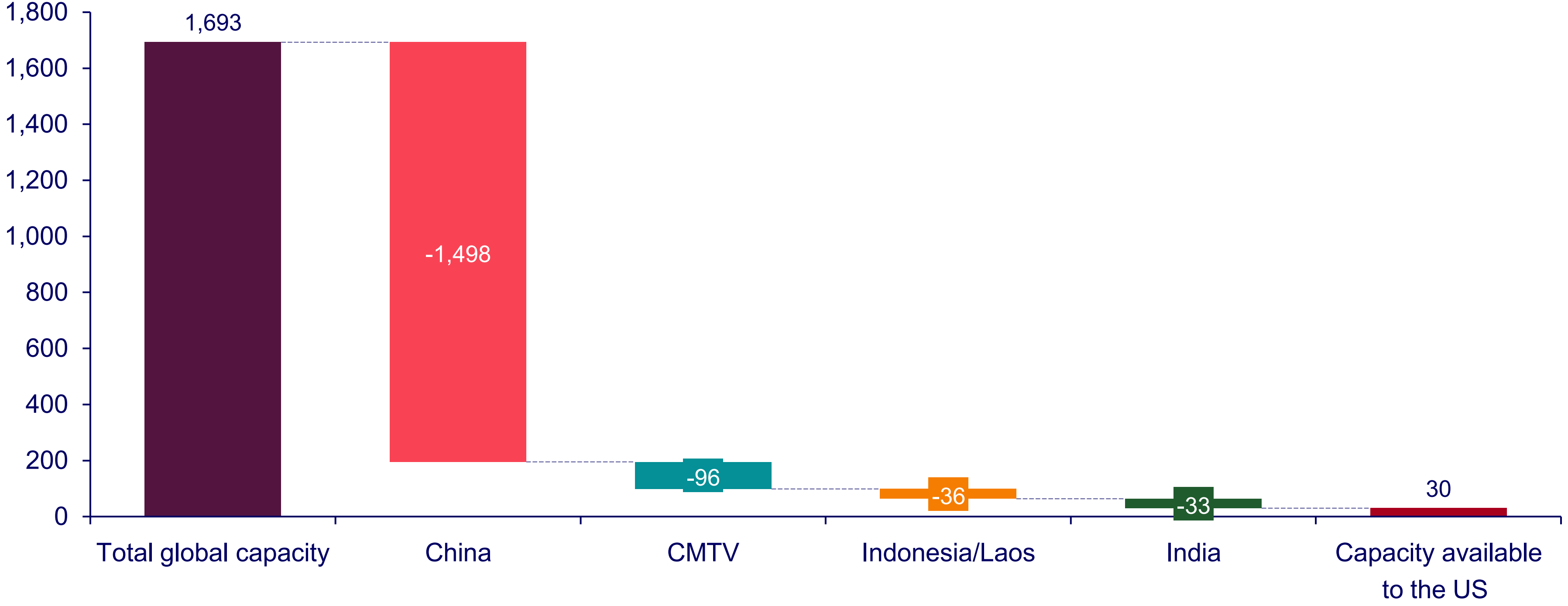


Source: Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025.*

High tariffs on Southeast Asia and India would constrain US cell supply

Remaining operational capacity is spread across globe rather than concentrated in one region

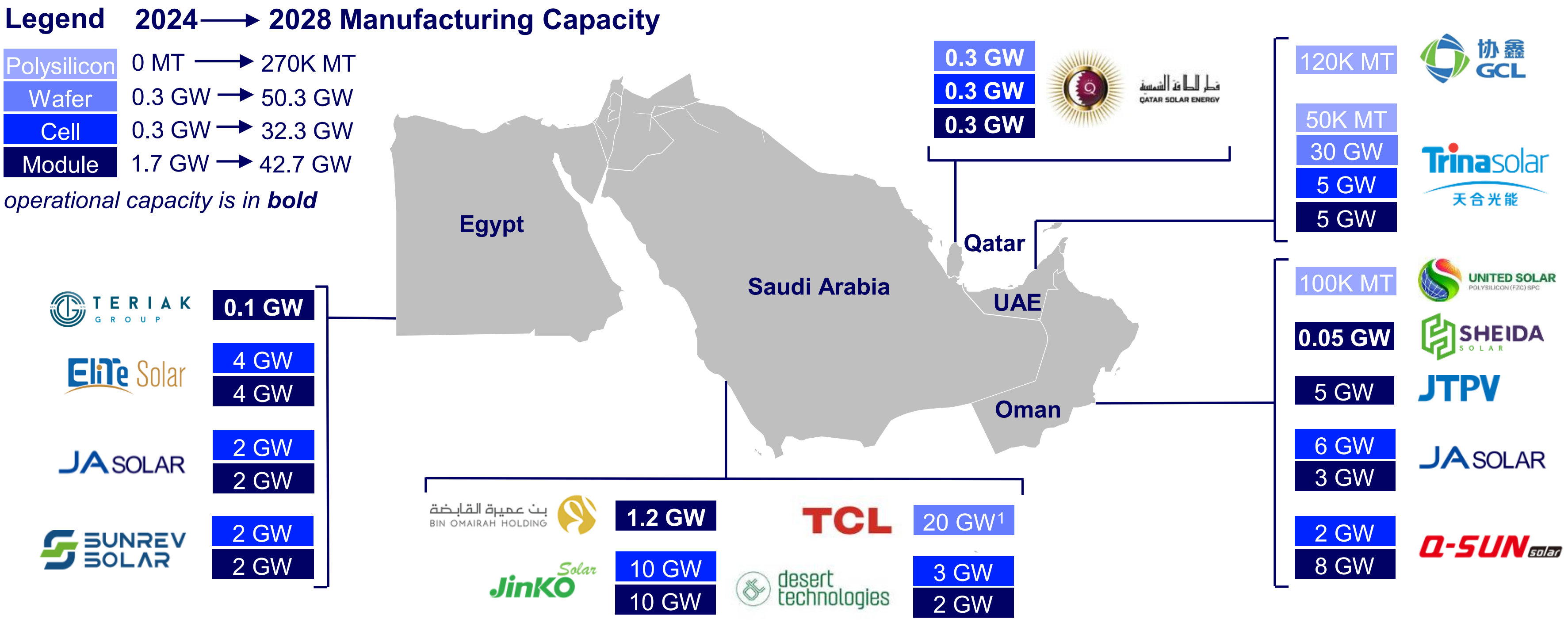
Potential available cell production capacity for the US with AD/CVD on India/Indonesia/Laos, 2025[1] (GW)



Note 1: Chart only includes capacity operational as of Q2 2025, not announced or under construction capacity.
Source: Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025.*

The MENA region could become the US’ next major cell and module supplier

But most factories in this region are not expected to come online until 2026 or later

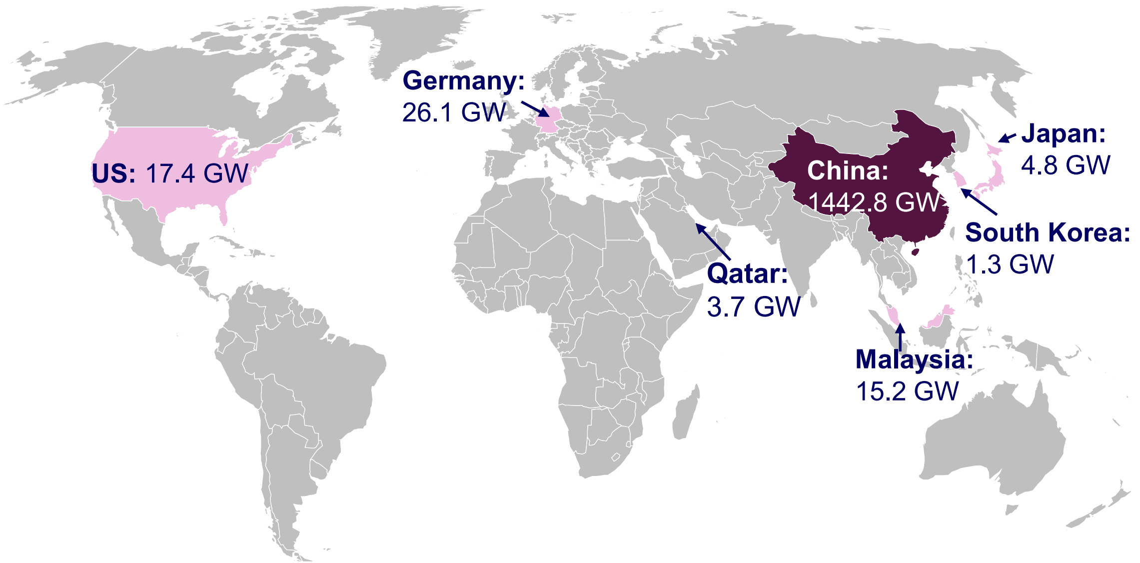


Note 1. Via TCL’s subsidiary Lumetech. Source: Wood Mackenzie’s *Global PV Supply Chain Pulse: August 2025.*

Section 232 investigation on poly and derivatives could cause further disruption

Polysilicon manufacturing is heavily concentrated in China and buildout of other capacity would take years

Global operating polysilicon manufacturing capacity[1] by country, August 2025 (GW)



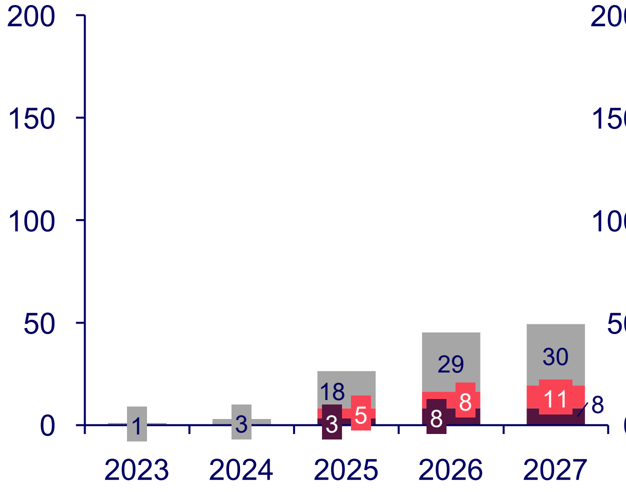
- Many aspiring and active US solar manufacturers, including Highland Materials, NorSun, Suniva, Qcells, and T1 Energy, provided public comments in support of Section 232 tariffs on polysilicon and downstream products. However, some domestic manufacturers were less supportive.
- Most parties in support of trade remedies advocated for restricting the scope to polysilicon from China or China-linked countries, with exclusions for allies such as Germany, South Korea, Japan, and Malaysia.
- Coalition for a Prosperous America (CPA) and Qcells proposed a product specific tariff structure with tariff rate quotas (TRQs) for polysilicon, ingots, wafers, cells, and modules from certain countries.

Note 1. Assumes 2.3g of polysilicon/W. Manufacturing capacity does not reflect actual production. Only factories that produce solar-grade capacity are included. A factory's entire capacity is included even if it produces polysilicon for multiple industries. Source: *Wood Mackenzie's Global PV Supply Chain Pulse: August 2025.*

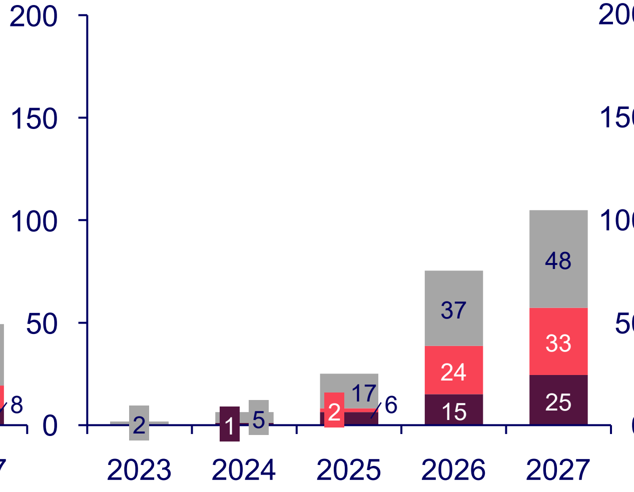
It will take years for the US to build out a self-sufficient module supply chain

The solar manufacturing industry will remain sensitive to tariff increases and policy changes until then

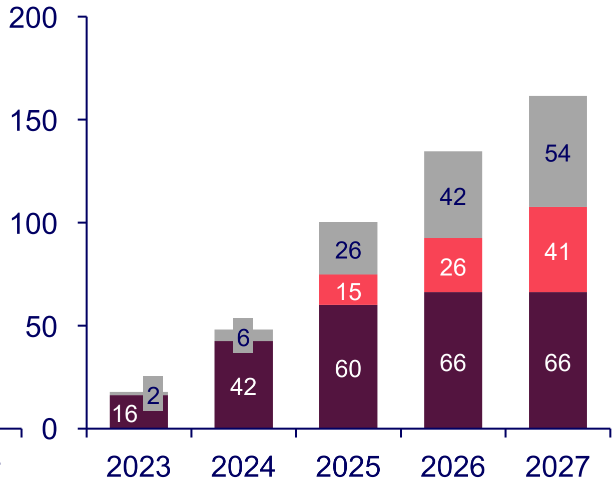
US wafer manufacturing capacity,[1] 2023-2027 (GW)



US cell manufacturing capacity,[1] 2023-2027 (GW)



US module manufacturing capacity,[1] 2023-2027 (GW)



Forecasted capacity · Capacity unlikely to come online · Cancelled/paused capacity

Note 1. Manufacturing capacity does not reflect actual production. Charts do not factories/capacity that have not been publicly announced. Source: Wood Mackenzie's *Global PV Supply Chain Pulse: August 2025.*

Thank you!

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