India’s Solar PV Manufacturing Pivot – 2026 Outlook

Moving from a “build capacity fast” phase to a “win on integration, technology and trade resilience” phase

Asset Manager Overarching Outlook

India’s solar PV manufacturing offers strong long-term growth but faces **severe near-term cyclical pressures**. Module capacity is vastly outstripping domestic demand (~40 GW), risking deep margin compression and inventory build-up. Conversely, cell capacity lags, creating a compliance bottleneck ahead of the **June 2026 ALMM mandate**. Export markets (US) are highly volatile. Investors should target vertically integrated firms with advanced tech (TOPCon/HJT) and diversified markets, avoiding module-only, spot-market dependent players.

~125 GW
Module Capacity (2025E)
Far above ~40 GW domestic demand.

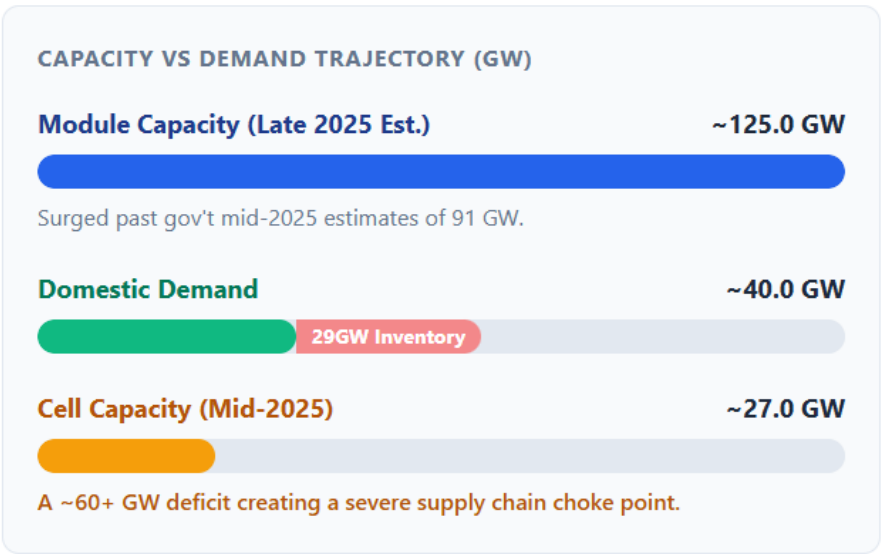
~27 GW
Cell Capacity (Mid-2025)
Versus 91 GW modules (The Missing Middle).

~29 GW
Est. Inventory Build (Q3 '25)
Triggers discounting & working-cap stress.

97%
US Export Concentration
Share of India's PV exports to US (9M 2025).

The Structural Imbalance: Oversupply & Scarcity

India is facing a dual-crisis: **Module Oversupply** coupled with **Cell Scarcity**. While BCD and PLI schemes drove massive capacity, the growth is deeply asymmetric.



The ALMM Choke Point: MNRE maintains June 1, 2026, as the effective date for mandatory ALMM-listed cell usage. Module-only assemblers will face severe compliance risks and potential exclusion from regulated demand.

Source: IEA, Ministry of New and Renewable Energy, Wood Macenzie, Mercom India Research

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The Export Shock & US Concentration Risk

Exports could act as a release valve for module overcapacity, but extreme market concentration makes Indian manufacturers highly vulnerable to US trade policy shifts.

$1.1bn
9M2025 PV Exports
97% routed entirely to the US market.

↘ 13.3%
9M'25 vs 9M'24 Drop
Triggered by US 50% reciprocal tariffs.

The 125.9% CVD Escalation

Preliminary/proposed US countervailing duties (~125.9%) on Indian PV cells mean the tariff risk is hardening. Operating models cannot adjust fast enough to retain competitiveness under these duties.

The Domino Effect

If exports slow sharply, **excess output dumps into the domestic market**. This amplifies oversupply and accelerates margin compression, particularly destroying value for module-only firms.

Global Dynamics: Competing with China on commodity pricing is unfeasible (China controls ~95% of polysilicon/wafer capacity). Export success now requires "China+1" diversification and local overseas footprints.

Backward Integration: From Strategy to Survival

Backward integration is no longer optional. It is a critical risk management tool to defend margins, secure supply, and maintain ALMM eligibility. The transition is happening in three distinct phases.

Fastest Payoff

1

Module-to-Cell

Reduces exposure to imported cell price swings and secures 2026 ALMM compliance. Crucial for guaranteeing delivery schedules.

Trend: Leading firms are using this phase to pivot to next-gen tech (TOPCon dominates, HJT appearing).

2

Cell-to-Wafer/Ingot

Strategically powerful but nascent. Reduces geopolitical upstream risk. The capability gap is process maturity and yield optimization.

Status: The "Missing Link". PLI enabled only ~2.2 GW of capacity by June 30, 2025.

Long-Horizon Option

3

Polysilicon

Highly capital and energy intensive. Extremely difficult to make globally cost-competitive from India currently.

Reality: China controls ~95% of capacity. Feasible only for ultra-capitalized players with cheap power.

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$ Margin Squeeze Mechanics

The Cell Cost Premium

India-made cells vs Chinese imports: **1.5x to 2x Higher**

Even after customs duties. Policy-constrained DCR (Domestic Content Requirement) supply creates massive short-term pricing premia.

Module ASPs Fall

Forced down by 125GW capacity competing for 40GW demand + inventory offloading.

Cell Input Costs Stay High

Scarcity driven by ALMM mandates prevents cell costs from falling proportionately.

Result: Pure module-assemblers get squeezed from both ends, leading to rapid margin destruction and industry consolidation.

Industry Bifurcation: Winners & Losers

Likely Beneficiaries

- **Integrated Manufacturers:** Firms scaling Cell+Module capacity can defend gross margins and secure ALMM compliance.
- **Technology Leaders:** Well-capitalized firms shifting to TOPCon and HJT to command premium pricing.
- **Diversified Exporters:** Bankable suppliers with non-US channels or overseas manufacturing footprints.

Likely Sufferers

- **Module-Only Assemblers:** Dependent on spot cell procurement in a policy-constrained, high-premium market.
- **US-Concentrated Exporters:** Facing severe volume drops and uncompetitive positioning under ~125.9% CVD.
- **Highly Levered Firms:** Vulnerable to working-capital stress during the imminent ~29GW inventory clearance cycle.

Source: IEA, Ministry of New and Renewable Energy, Wood Macenzie, Mercom India Research

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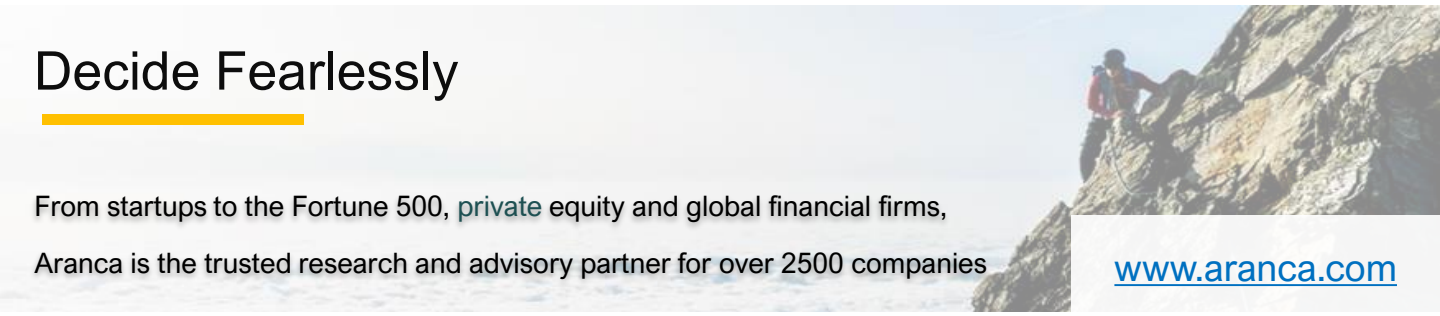

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