

PRESS RELEASE

November 6, 2025

Overcapacity in solar module manufacturing industry to moderate profitability of solar OEMs, spur consolidation of smaller/pureplay module players: ICRA

ICRA expects the solar photovoltaic (PV) module manufacturing capacity in India to increase to over 165 GW by March 2027 from ~109 GW at present, led by strong policy support in the form of the approved list of models and manufacturers (ALMM), which effectively barred the direct import of modules, along with the imposition of basic customs duty on imported cells & modules, and the production-linked incentive (PLI) scheme. The implementation of ALMM List-II for solar PV cells from June 2026 has spurred the ongoing expansion of cell manufacturing capacity by module original equipment manufacturers (OEMs) in India, which is likely to increase to about 100 GW by December 2027 from 17.9 GW currently under ALMM.

The industry is poised to face a potential overcapacity scenario as the annual solar capacity installation is expected at 45-50 gigawatt direct current (GWdc) against an annual solar module production of 60-65 GW. Further, the recent imposition of US tariffs has adversely impacted the export volumes, posing new challenges for the industry as the modules have been redirected from the export market to the domestic market. Hence, the overcapacity in module production is likely to result in a consolidation of the smaller/pureplay module players. However, ICRA anticipates the vertically integrated manufacturers to benefit over the long term due to greater control over the supply chain.

Commenting on the solar OEMs, **Mr. Ankit Jain, Vice President & Co-Group Head - Corporate Ratings, ICRA**, said: *"The operating profitability for ICRA's sample¹ set of domestic solar OEMs, which remained elevated at ~25% in FY2025, is likely to moderate due to competitive pressures and overcapacity build-up. The recent imposition of tariffs by USA and the growing regulatory uncertainty in the USA are likely to dampen export volumes, potentially exerting pricing pressures on domestic OEMs. Given that the ALMM requirement for solar cells is effective from June 2026, a significant scale-up in the cell manufacturing capacity along with its stabilisation in a timely manner remains critical in the near term. Further, the cost of modules using domestic cells is expected to be higher by 3-4 cents/watt compared to the cost of the domestic modules using imported cells."*

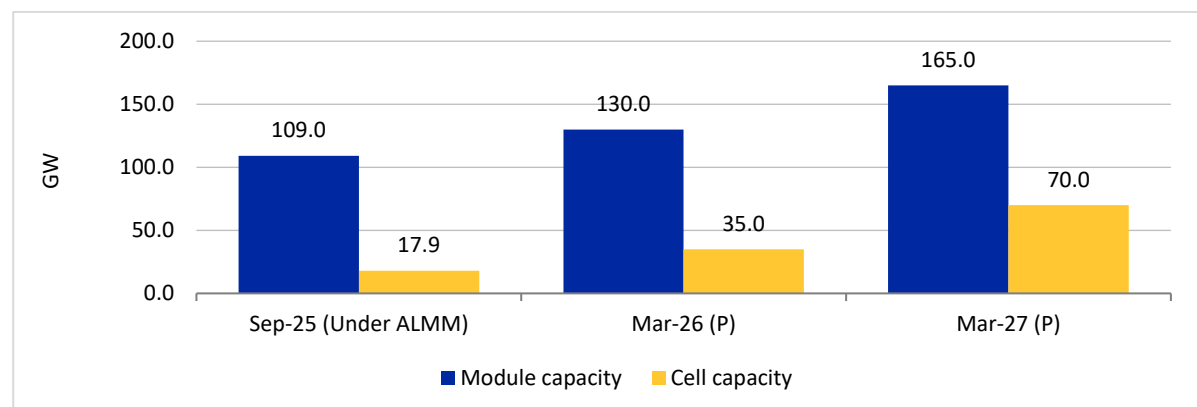
ICRA also notes that all projects wherein the last date of bid submission is prior to September 1, 2025, translating into a solar project pipeline of 45-50 GW, will be exempted from the requirement of using solar PV cells under ALMM List-II even if their date of commissioning is after June 1, 2026. This will support the order book of OEMs without cell manufacturing capacity in the near term. Nevertheless, the bidding activity has slowed down in the last few months, which remains a key monitorable.

The solar PV manufacturing supply chain is dominated by China, with over 90% share in the global manufacturing capacity across polysilicon and wafer, over 85% share in cells and around 80% share in modules. Given the dependence on China for the sourcing of wafers and ingots, any potential geopolitical restrictions on the supply of technology/machinery in setting up backward integration facilities for domestic OEMs over the medium term remains a key monitorable. Moreover, each successive stage in the value chain demands higher technological

¹ Seven large players constituting approximately 50% of the total installed module capacity in India

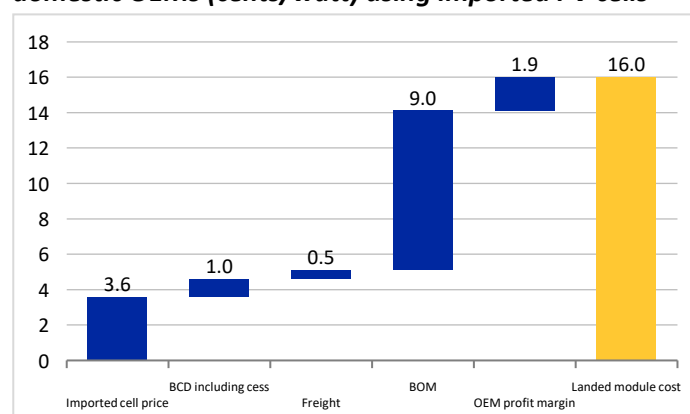
complexity, which not only requires substantial capital investment but also heightens the risks associated with project stabilisation and implementation.

Exhibit 1: Current module and cell manufacturing capacity registered under ALMM and estimated capacity addition



Source: ICRA Research; Ministry of New and Renewable Energy (MNRE); P - ICRA Projections

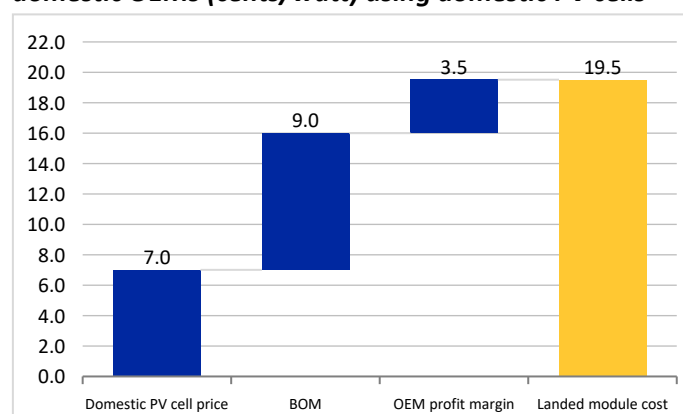
Exhibit 2: Landed cost of solar PV modules sourced from domestic OEMs (cents/watt) using imported PV cells



Source: ICRA Research, Infolink

Click [here](#) to read our previous release.

Exhibit 3: Landed cost of solar PV modules sourced from domestic OEMs (cents/watt) using domestic PV cells



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