

Indian Renewable Energy Sector

Relaxation of ALMM order a near-term positive for solar power developers

MARCH 2023



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Abeyance of the ALMM order provides the developers with the flexibility to source modules at the most cost competitive rates.

This order is a near-term negative for solar OEMs, partly offset by healthy demand from the export markets.



- Given the challenges faced by the solar power developers in sourcing modules from domestic OEMs, the Ministry of New & Renewable Energy (MNRE), vide its order dated March 10, 2023, has put the requirement to source modules from the Approved Models and Manufacturers (ALMM) under abeyance for solar projects to be commissioned till March 31, 2024. This is a near-term positive for the developers and provides them the flexibility to source modules at the most cost competitive rates.



- The cost of sourcing imported modules, including the impact of basic customs duty (BCD), remains competitive in relation to the cost of sourcing modules from domestic OEMs using imported solar PV cells to manufacture them. This is following the sharper decline in module prices over the past six months compared to the decline seen in solar PV cell prices.



- While the abeyance of ALMM requirement could adversely impact the order inflow for the domestic OEMs in the near term, the healthy demand from export markets is likely to partially offset this impact. The module exports witnessed a sharp increase in 10M FY2023 supported by increased demand from the US amid the restrictions imposed on module-sourcing from China as well as the ramp up in the domestic manufacturing capacities.



- While the scale-up in domestic module manufacturing augurs well for the solar power sector, the lack of backward integration and limited capacity for cell manufacturing, keeps the module manufacturers dependent on imports for sourcing solar PV cells. As a result, the profitability of domestic OEMs would remain exposed to the movement in cell / wafer prices and in turn the polysilicon prices internationally, along with the competition from the overseas markets.



- The fully-integrated module facilities awarded under PLI-I scheme are likely to come on stream over the next 18-24 months. Further, the tendering process is under way for PLI-II, which is expected to significantly scale-up the domestic solar module manufacturing capabilities over the next 3-5 years, thereby reducing import dependence of the solar power sector.

MNRE has put the ALMM order in abeyance till March 31, 2024

ALMM order dated March 10, 2021



- The Ministry of New & Renewable Energy (MNRE) notified the first approved list of models and manufacturers for Solar PV modules comprising only domestic solar OEMs.
- As per the said order, developers were required to source the modules from the OEMs under this list for projects bid out from April 10, 2021, thereby effectively restricting the use of imported modules for utility scale projects.

Amendment in Jan'22 and Mar'22



- The amendment to the ALMM order notified in Jan'22 required the open access-based / net metering projects to source modules from the OEMs enlisted in ALMM. This order was applicable for projects applying to open access or net metering from April 1, 2022.
- The timeline for compliance was subsequently extended to October 1, 2022 through an amendment notified in Mar'22.

Amendment dated March 10, 2023

- While there has been a significant scale-up in the domestic module manufacturing capacity over the past two years, the OEMs remain dependent on cell / wafer imports given the lack of backward integration. Also, the jump in module exports, given the higher realisations, impeded the availability of modules in domestic market.
- Given the challenges faced by the developers in sourcing modules from domestic OEMs in a cost competitive manner, **the MNRE has put the ALMM order under abeyance for projects commissioned till March 31, 2024.**

Abeyance of the ALMM order provides the developers with the flexibility to source modules at the most cost competitive rates, including through imports

Imported modules remain competitive against sourcing from domestic OEMs

EXHIBIT 1: Landed cost of Solar PV module from domestic OEM (cents/watt) using imported PV cells

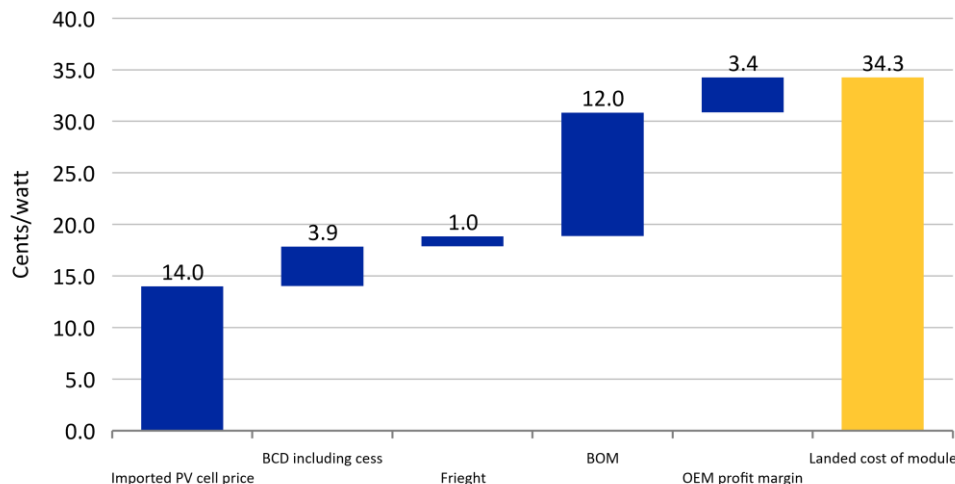
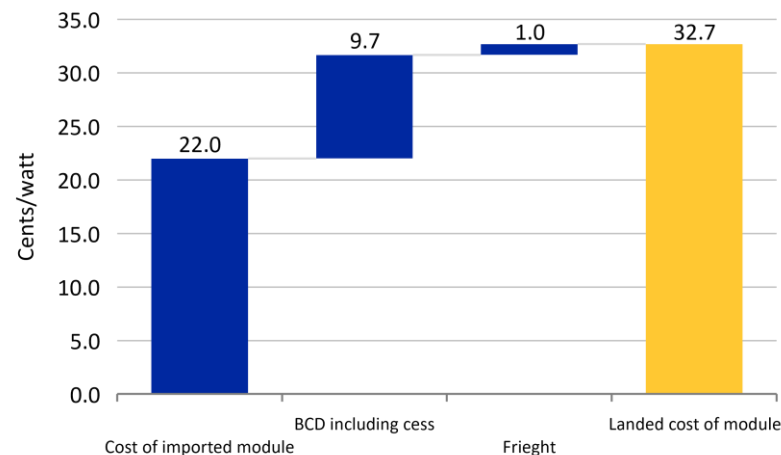


EXHIBIT 2: Landed cost of imported Solar PV module (cents/watt)



- The prices of the mono PERC modules witnessed a moderation over the past five to six months, reducing from the peak level of 27-28 cents per watt to about 23-24 cents per watt in December 2022 and further to 22 cents/watt in March 2023 as per the data from Infolink. On the other hand, while the cell prices declined to 12.0-12.5 cents/watt in December 2022 from 16 cents/watt in September 2022, they increased to 14 cents/watt in March 2023.
- As a result, the cost of sourcing imported modules, including the impact of basic customs duty (BCD), remains competitive in relation to the cost of sourcing modules from domestic OEMs using imported solar PV cells for manufacturing (given the lack of backward integration). For the domestic OEMs to be competitive, the cell prices must remain below 12 cents/watt, assuming the prevailing module prices sustain without any further decline.

ALMM abeyance is a near-term negative for solar OEMs, partly offset by healthy demand from export markets

EXHIBIT 3: Trend in solar cells and modules imports (Rs. Crore)

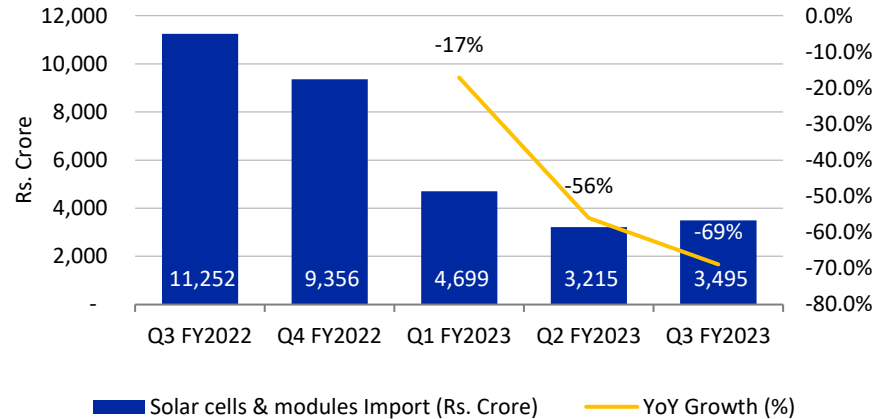
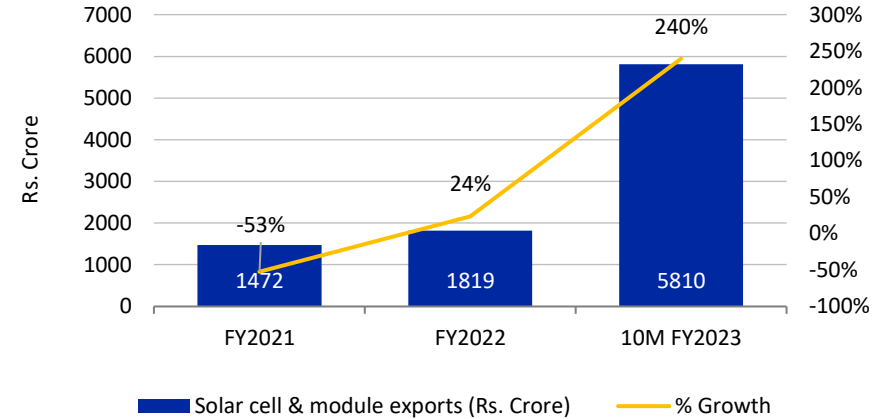


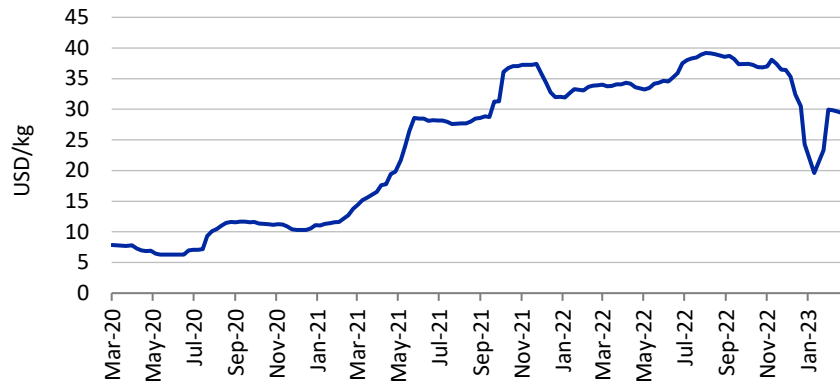
EXHIBIT 4: Trends in module exports by domestic OEMs



- The imports of solar cells and modules witnessed a sharp decline in 10M FY2023, following the imposition of basic customs duty (BCD) on imported modules and cells since April 2022, along with the requirement to use modules manufactured by OEMs in the ALMM list, comprising only domestic module manufacturers.
- On the other hand, exports witnessed a sharp increase in 10M FY2023 i.e., by 240% over the corresponding period of previous year. This was supported by increased demand from the US amid the restrictions imposed on module sourcing from China as well as the ramp up in the domestic manufacturing capacities. The OEMs benefited from the higher realisations in export markets. While the abeyance of ALMM requirement could adversely impact the order inflow for the domestic OEMs in the near-term, the healthy demand from export markets is likely to partially offset this impact.

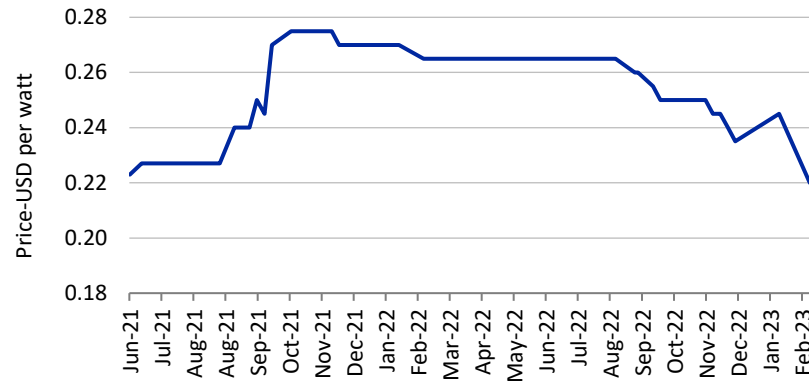
Domestic OEMs remain exposed to movement in imported cell prices and in turn the polysilicon prices

Exhibit 5: Price trend of solar grade polysilicon



Source: ICRA Research, Bloomberg

Exhibit 6: Price trend of mono PERC modules

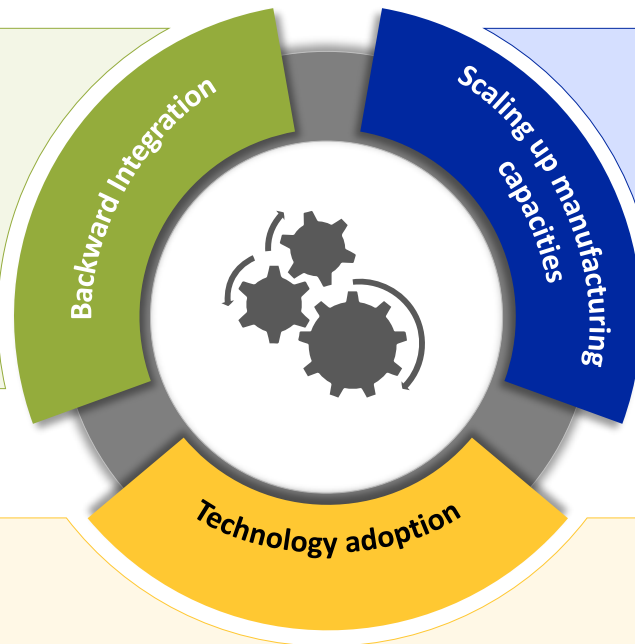


Source: ICRA Research, Infolink

- The module manufacturing capacity approved under the ALMM increased to 22.4 GW as of February 2023 from 11.5 GW in March 2022, comprising only domestic manufacturers. While this augurs well for the solar power sector, the lack of backward integration and limited capacity for cell manufacturing, keeps the module manufacturers dependent on imports for sourcing solar PV cells.
- Even for the OEMs with cell manufacturing units, they remain dependent on overseas suppliers for sourcing wafers, given the lack of full backward integration in India. As a result, the pricing and profitability of domestic OEMs would remain exposed to the movement in cell/wafer prices and in turn the polysilicon prices, internationally (mainly driven by China) along with the competition from module supplies from the overseas markets. As seen above, the polysilicon prices witnessed a sharp increase in CY2021, before moderating in recent months. This trend is also reflected in the module prices.

Backward integration, technology adoption and scaling up key to improve competitiveness of domestic solar OEMs

Fully-integrated module facilities awarded under PLI-I scheme are likely to come on stream over the next 18-24 months. Further, the tendering process is under way for PLI-II, which is expected to significantly scale-up the domestic solar module manufacturing capabilities. Development of integrated facilities to reduce import dependence over the next 3-5 years



Apart from backward integration, scaling up domestic manufacturing capabilities, including for key inputs like glass and other BOMs, would remain important to sustain competitiveness against the global module manufacturers

Timely adoption of new technologies with higher efficiencies remains important to stay competitive in the sector



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