

Indian Renewable Energy Sector

Elevated cell & module prices, along with hardening interest rates, pose cost pressure for IPPs in the near term

JUNE 2022



1 Executive Summary



2 Trends in Module Prices



3 Bid Tariff Trends

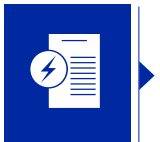
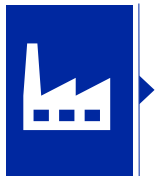


4 Impact on Tariff Viability



Solar PV module & cell prices remain elevated, driven by the increase in polysilicon prices. This, along with BCD impact, is leading to cost pressure for solar IPPs that have won projects over the past 12-18 months

Rise in interest rates is another key cost headwind for the solar IPPs



- The prices of Mono PERC modules have increased by over 40% to 27-28 cents per watt in the last 18 months. This has been mainly driven by a sharp increase in the price of polysilicon and supply chain issues in China amid Covid-19. While the supply chain challenges are showing signs of easing, the prices remain elevated amid the continued higher prices for polysilicon.
- The increase in solar PV cell & module prices is leading to cost pressure for solar power projects awarded in the last 18 months. While the bid tariffs have increased from the lows of Rs. 1.99/ unit in Dec'20 to Rs. 2.2-2.5/ unit, the extent of the increase in bid tariffs remained lower than required to mitigate the increase in module prices, owing to high bid competitive intensity.
- As the modules are required to be sourced from domestic OEMs under ALMM notification and majority of the domestic OEMs do not have backward integration beyond cells, the dependence on cell/wafer imports is likely to continue for the domestic manufacturing value chain over the medium term. As a result, the pricing trend for polysilicon and wafers/cells internationally would remain a key monitorable for IPPs.
- Given the fixed tariffs under the PPAs for solar power projects, the uptrend in interest rates remains a challenge for IPPs and would put an upward pressure on the bid tariffs. An increase of 150 bps in the interest rate scenario is estimated to lead to an increase of ~20-paise increase in the bid tariff, assuming the other factors remain the same.
- Despite the cost headwinds from module prices and the rise in interest rates, the tariff rates in recent bids continue to be below Rs. 2.4 per unit. Thus, from the perspective of the offtakers, that is state discoms, the solar power tariffs remain cost competitive in relation to the marginal cost of procurement from thermal stations who are at the bottom 25% of the merit order dispatch, wherein the variable cost of procurement is more than Rs. 3.0 per unit across key states.



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