

Unlocking the Potential of Component A of PM-KUSUM

Strategies for Empowering Small and Marginal Farmers



The 2019 Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhayan (PM-KUSUM) scheme aims to enhance energy security for farmers, while promoting the use of renewable energy (RE) in the agriculture sector. Of its three components, Component A focuses on the installation of decentralised grid-connected RE-based power plants, with capacities ranging from 500 kW to 2 MW, by farmers on their land. The component can provide an additional, stable stream of income to farmers through the provision of selling the excess electricity generated to the grid. This would remove farmers' sole dependence on income from agricultural produce and offer protection against weather-induced fluctuations in yields and prices of crops.

However, with only about 300 MW of RE-based plants installed, against a target of 10 GW by March 2026, the uptake under this component has not been encouraging. This slow adoption can primarily be attributed to the absence of direct subsidies, which disproportionately affects small and marginal farmers—a significant portion of India's agricultural community. Limited access to capital (mainly loans) for this vulnerable category is another contributing factor.

According to the Agriculture Census of 2015-16, small and marginal farmers (those with a landholding size of less than 2 hectares) constitute 86.1% of Indian farmers, cultivating 46.94% of the total area. With the majority of them in debt, these farmers are under acute financial stress. The lack of financial support under Component A makes it difficult for them to invest in solar power plants that require substantial upfront capital. Moreover, since this category is considered as "high risk", banks are unwilling to lend readily. Consequently, most of the small and marginal farmers (SMFs), though eligible, are unable to benefit from the scheme.

Farmer Producer Organizations (FPOs) and cooperatives can play a significant role here. Collective installation of solar power plants can reduce the individual financial risks, improving the uptake of solar power plants by SMFs. Further, pooling of resources allows these organisations to leverage economies of scale and access funding from institutions like the National Bank for Agriculture and Rural Development (NABARD) and various philanthropic entities, which can ameliorate the financial condition of SMFs. The successful dairy

cooperatives, and initiatives like the "Dhundi Saur Urja Utpadak Sahakari Mandali" in Gujarat's Dhundi village—where the International Water Management Institute supported six farmers to form a first-of-its-kind solar irrigation cooperative—exemplify how collaborative efforts can successfully integrate renewables into agriculture to benefit entire communities.

FPOs and cooperatives must be encouraged to install agrivoltaics, which can serve as a source of dual income (sale of agriproducts and sale of electricity to the grid) for farmers and can help the government in its mission of "doubling of farmers' income". Importantly, this can empower the small and marginalised farmers—who produce 60% of India's foodgrains—and strengthen the country's food security. This approach will also foster community development, create local employment opportunities in rural areas, and instil confidence among lenders. Moreover, the electricity generated through solar plants can be utilised for adding value to the overall agricultural infrastructure (such as for running facilities like cold storage, chaff cutters, flour mills, dryers, etc.), which can stimulate enterprise in rural areas.

Thus, for realising the true potential of PM-KUSUM's Component A for transforming India's agricultural landscape, it is important that the government implements a holistic FPO strategy to remove the financial barriers faced by small and marginal farmers in accessing the benefits under the scheme.



**Suhas
Sathyakiran**

Analyst in the Energy &
Power sector
CSTEP