

## Event Report

### Rajasthan Policy Dialogue on PM-KUSUM Component A and Component C

Hotel Sarovar Premiere, Jaipur

Wednesday, January 18, 2023 | 1130-1615 IST

#### BACKGROUND

The KUSUM Assistance project, steered by a research consortium, consisting of IISD, CUTS and TERI, supported by GIZ, aims to provide technical assistance to state governments in the sustainable implementation of the PM-KUSUM scheme. The research consortium launched a guidebook in 2021 to highlight best practices and provide solutions to the challenges faced by states in scaling up solar pumping schemes (PM KUSUM Component B and C - individual pump solarization). The consortium is working on a new guidebook on PM-KUSUM Component A and C (feeder-level solarisation) and organised a **Rajasthan Policy Dialogue on January 18, 2023**, to discuss Rajasthan's experience implementing decentralised solar plants under Component A and agricultural feeder-level solarization under Component C of the PM-KUSUM scheme. The objective of this roundtable was to bring together stakeholders from state implementing agencies, private developers, research institutions, financial institutions, and farmer producer organisations in Rajasthan to identify the key technical and financial needs in implementing PM-KUSUM component A and Component C. The event was attended by approximately 40 participants from various stakeholder categories.

The recording of the event can be viewed [here](#).

#### KEY SPEAKERS

##### I. Inaugural Session

- **Introductory Remarks:** Sushil Muhnot, Senior Advisor, CUTS International
- **Special Remarks:** Himani Mehta, Assistant Director, Ministry of New & Renewable Energy
- **Keynote Address:** Anil Kumar Dhaka, Managing Director, Rajasthan Renewable Energy Corporation

##### II. Panel Discussion 1: Strategies to overcome challenges in PM-KUSUM scheme

- **Presenter:** Anas Rahman, Policy Advisor, International Institute of Sustainable Development
- **Moderator:** Siddharth Goel, Senior Policy Advisor, International Institute of Sustainable Development

##### Panellists:

- NK Gupta, Technical Manager, Rajasthan Renewable Energy Corporation
- Deepti Mathur, Executive Engineer, Jaipur Vidyut Vitran Nigam
- Kritika Kumar, Energy Advisor, GIZ India
- Banwari Lal Singhoya, Assistant General Manager, State Bank of India

### **III. Panel Discussion 2: Learning by doing: Implementing water incentives, innovative irrigation technologies, and agrivoltaics projects**

- **Presenter:** Akash Sharma, Assistant Policy Analyst, CUTS International
- **Moderator:** Ujjwal Kumar, Associate Director, CUTS International
  
- **Panellists:**
- Om Prakash Pareek, Founder, Hanuman Gram Vikas Samiti (FPO)
- Akash Sharma, Assistant Policy Analyst, CUTS International

### **IV. Concluding Remarks & Vote of Thanks**

- Florian Postel, Advisor, GIZ India

## **SUMMARY OF DISCUSSIONS**

- Mr. Sushil Muhnot in his introductory statement provided a background and purpose for organising the Rajasthan Policy Dialogue by highlighting the relevance of renewable energy in achieving the net-zero targets and its convergence with the PM-KUSUM scheme. He emphasised the scheme's progress, which benefits farmers and distribution companies while also helping to reduce reliance on fossil fuel energy.
- Ms. Himani Mehta, in her welcome remarks, underlined the huge potential of the PM-KUSUM scheme, with farmers across the country showing interest in installing solar power plants, and applauded Rajasthan for being the frontrunner with 63 MW of solar projects under Component A and 1,100 solar-powered pumps under Component C. She further credited Rajasthan for being the first state to have completed the process of identifying farmers for the installation of solar plants on their land in 2021, with the capacity exceeding the central government targets.
- Mr. Anil Kumar Dhaka mentioned in his keynote address that the lack of subsidy in PM-KUSUM Component-A is the primary reason for the scheme not being as successful as anticipated. Owing to lenders' margin money requirements, which are 30 percent of the total cost, the progress has been limited. Many farmers who successfully bid on the projects were unable to follow through on their commitments due to the large share of margin money requirement and inability to secure loans. Mr. Dhaka also mentioned that farmers in Rajasthan have been demanding a 90:10 loan-to-equity ratio to access bank loans; however, the proposition is not yet acceptable to banks. He also stated that in order to bridge financing gaps, National Agriculture Infra Financing Facility could be utilised to finance projects under PM-KUSUM, and that the scheme's fixed tariff structure should be re-evaluated because small scale project developers find these tariffs financially unviable.

### **Panel Discussion 1: Strategies to overcome challenges in PM-KUSUM scheme**

- Mr. Anas Rahman made a presentation on the 'strategies to overcome the implementation and financial challenges of PM-KUSUM Component A&C'. He illustrated the benefits to states under both components of the scheme through a cost-benefit analysis study done for the state of Karnataka. The results showed that for a period of 25 years with a feed-in tariff of INR 2.4/kWh, a distribution company (in this case, Karnataka) can save INR 0.86/kWh on power purchased from projects under the PM-KUSUM scheme.

- He further discussed about the challenges demotivating the developers from actively engaging in the PM-KUSUM. These included land related challenges, grid unavailability, and voltage variation. A guarantee on a minimum percentage of grid availability and targeted improvement of substation infrastructure were some of the interventions suggested by him to allay the developers' concerns.
- Other major challenge highlighted by Mr. Rahman was the dis-interest shown by utility scale developers to participate in the scheme due to high logistical overheads for small scale projects. It was also due to payment delays from DISCOMs which severely impacted cash flows and the cost of financing. Unconditional letter of credit, payment guarantees from states, and introducing central public sector undertakings as intermediaries for implementation of the schemes could reduce the financial risks involved, he stressed.
- In the panel discussion session, Mr. NK Gupta stated that RRECL's efforts to establish close coordination with farmers have started paying off and 48 projects under component A are currently in different stages of commissioning. The benefit of six percent interest subvention under the Mukhyamantri Laghu Udyog Protsahan Yojana (MLUPY) has also encouraged farmers for setting solar power plants. Payment security assurances by DISOMs in Rajasthan have boosted the confidence of banks in financing farmers to set up solar plants.
- Mr. Gupta further addressed the concerns of revenue drainage due to large scale projects set up by external developers. He stated that revenue generated from a farmer's project generally would go into rural economy and subsequently spent within the state and how this would lead to creation of additional income opportunity for the state through GST. He also added that daytime and regular power supply would benefit allied, small cottage and food processing industries and create employment.
- He concluded, that to scale up the scheme, benefits for MSMEs under the Rajasthan Industrial Promotion Scheme must be extended to farmers. He added that the procurement-based incentive of INR 0.4/kWh or INR 6.60 lakhs/MW/year provided to the DISCOMs for buying power under the scheme can also be directed to the farmers and help address the viability gap in tariffs.
- Ms. Deepti Mathur stated that the major challenge for executing a pilot project under feeder level solarisation was availability of land. She mentioned about taking the cue from Maharashtra, as JVVNL has launched an online portal for developing a land bank. It was informed that a total of 114 farmers have registered their land details on the portal and developers can obtain obtain this information along with substation availability.
- She informed that JVVNL has recently floated a tender for development of projects around 39 substations with a combined capacity of 114 MW. The technical and financial requirements for this tender are quite relaxed given farmers' interest and the lease rates offered were attractive. The tender was open to a joint venture/ consortium between farmers and developers as well. Certain innovative tools have also been incorporated within the tender to incentivize farmers.

- Mr. Banwari Lal Singhoya highlighted challenges to financing such as drastic fall in tariffs due to competitive bidding, rise in equipment cost (which have escalated by 25 percent in last few years), compounding GST factor on modules and balance of systems, price differentials amongst systems and associated banker's risk etc.
- He further stated that the State Bank of India (SBI) is financing farmers with zero-collateral, but certain risks have to be factored in before sanctioning the loans. He mentioned that it is due to the support that SBI has received from RRECL, that SBI has decided to establish dedicated financing units in Bikaner and Jodhpur given the volume of proposals received from these regions.
- Ms. Kritika Kumar reflected on the points raised by previous speakers and stated that there is no dearth of demand from farmers and even the bankers are actively looking out for credible clients, however financing still remains the biggest practical challenge along with lack of implementation support and optimal asset utilisation. She emphasised the need for knowledge enhancement amongst farmers as well as bankers.

**Panel Discussion 2: Learning by doing: Implementing water incentives, innovative irrigation technologies, and agrivoltaics**

- Akash Sharma made a presentation on "Learning by Doing: Implementing Water Incentives, Innovative Technologies, and Agrivoltaics". He spoke about the benefits of introducing monitoring and evaluation mechanisms for the solar plants under components A and C and the economic and social impacts of information on capacity utilisation factor, grid availability, generation profile, voltage status in the feeder, baseline data on pumps' average power consumption, etc. through assistance in determining pump size, ensuring optimal asset utilization, and improving energy access.
- He addressed the concerns of groundwater depletion by making a pitch for innovative irrigation technologies like drip & sprinkle irrigation, rainwater harvesting, and energy efficient pumps.
- On the convergence of agriculture and solar power generation – Mr. Sharma discussed the concept of agrivoltaics, existing business models around it, intended benefits, learnings from pilot projects, challenges involved, and international experiences with agrivoltaics.
- Mr. OP Pareek stated that the solar power in general has been a boon for the farmers. Apart from significant reduction in electricity bills, it has developed a sense of entrepreneurship amongst farmers. He mentioned that the subsidy disbursal process in the state has also improved with facilitation centres in every district.
- He also stressed over the importance of organic farming to tackle the issues of ground water depletion. Through the government had ensured two organic agri-shops in each mandi so that the organic products could be compensated fairly, very little progress have been made so far.
- Mr. Pareek concluded that solarisation of the agriculture sector might reduce groundwater use as farmers would shift irrigation from night to daytime. For safety reasons, farmers prefer not to go out into the fields at night and instead use "auto switches." A dependable daytime power supply would eliminate the need for auto switches, allowing water

extraction to be controlled. Earlier, the government used to provide batteries to farmers for operating pumps at night, but since it had a severe impact on groundwater levels, battery disbursement was discontinued.

- Mr. Florian Postel from GIZ India in his closing remarks thanked everyone for participating in this event and making it a success. He also thanked CUTS International for taking the lead in organising this event, along with other consortium members.