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ANALYSIS**

TOPIC

RECALIBRATING PM-KUSUM SCHEME

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Context

- As the **Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM)** scheme approaches its target year of 2026, a recalibration is necessary to address challenges and optimize its impact in **achieving energy security for farmers, promoting renewable energy, and meeting climate commitments.**

About the PM-KUSUM

- It was launched by the **Ministry of New and Renewable Energy (MNRE)** aimed at enhancing energy security for farmers and **promoting the use of renewable energy in the agricultural sector.**
- It seeks to achieve multiple objectives, including reducing the dependency on diesel in the farm sector, increasing farmers' income, and contributing to India's renewable energy targets.
- The PM-KUSUM scheme aims to **enhance farmers' energy independence and promote renewable energy adoption** through three key components.
 - ♦ **Component A** targets the installation of 10,000 MW of decentralized renewable energy plants on barren land, with power sold to DISCOMs at feed-in tariffs.
 - ♦ **Component B** focuses on **installing 17.50 lakh standalone solar agricultural pumps in off-grid areas**, offering 30% central assistance, 30% state subsidy, and 40% farmer contribution.
 - ♦ **Component C** supports the solarization of 10 lakh grid-connected pumps, enabling farmers to use solar energy for irrigation and sell surplus power to DISCOMs.

Key Benefits

- **Socio-Economic Benefits:** Provides affordable and reliable energy access to marginalized farmers.
 - ♦ Reduces dependency on expensive diesel and erratic grid supply.
 - ♦ Help in doubling the farmers' income.
 - ♦ Surplus energy sold to DISCOMs generates additional revenue.
 - ♦ Cuts operational costs, and enhances profitability.
 - ♦ Boosts local employment through installation, maintenance, and operations of solar infrastructure.
- **Environmental Benefits:** Reduces greenhouse gas emissions by 32 million tonnes of CO annually.
 - ♦ Promotes sustainable agricultural practices by minimizing reliance on fossil fuels.
 - ♦ Advances India's commitment to achieving 500 GW of renewable energy capacity by 2030 under Panchamrit targets.
- **Technological Benefits:**
 - ♦ Promotes innovation in solar technology and supply chains.
 - ♦ Encourages adoption of low-maintenance solar pumps and hybrid systems.

Key Challenges

- **Implementation Bottlenecks:** Slow Progress like only 30% of targets achieved as of 2024.
 - ♦ Centralized implementation has sidelined local agencies with field expertise.
- **Affordability and Accessibility:** Despite subsidies, high upfront costs deter adoption, especially among small and marginal farmers.
- **Availability of Subsidized Electricity:** Heavily subsidized electricity for farmers reduces their incentive to adopt solar pumps.
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- **Technical and Logistical Issues:** Lack of uniformity in pump capacities and poor maintenance infrastructure.

- **Integration with DISCOMs:** Financially stressed DISCOMs are hesitant to procure surplus solar power from farmers.
- **Regional Disparities:** States with better infrastructure like Haryana and Rajasthan outperform others like Bihar and Odisha.

Success Stories and Potential

- **PM-KUSUM** has **contributed to the reduction of diesel consumption** in the agricultural sector, and provided farmers with a reliable and sustainable source of energy.
 - ♦ By promoting the use of solar energy, the PM-KUSUM scheme aligns with India's commitment to increasing the share of installed capacity of **electric power from non-fossil fuel sources to 40% by 2030**.
- Beneficiaries like Devki Devi and Sunita Devi, known as '**Solar Didis**' from Bihar, have benefited from local government programs and the **Aga Khan Rural Support Programme (India)**.
 - ♦ Their experiences underscore the potential of solar energy to transform agricultural practices.

Key Recommendations (Need for Recalibration)

- **Decentralization:** Empowering local agencies to implement the scheme based on regional needs and conditions.
- **Incentives for Solar Adoption:** Enhancing incentives for farmers to adopt solar pumps by addressing the issue of cheap electricity.
- **More Focus on Components A and C:** Prioritizing the implementation of Components A and C to ensure balanced progress across all components.
- **DISCOM Viability:** Introduce policy incentives for DISCOMs to ensure timely procurement of surplus power.
- **State-Specific Strategies:** Develop state-level plans for equitable distribution and efficient implementation.

Conclusion

- The PM-KUSUM scheme has the potential to drive India's climate action and promote sustainable agricultural practices.
- However, to realize this potential, it is crucial to address the implementation challenges and recalibrate the scheme to meet its targets by 2026.

Source: BL



Mains Practice Question

Analyze the socio-economic and environmental significance of the PM-KUSUM scheme. Highlight the challenges in its implementation and suggest ways to recalibrate the scheme for better outcomes.