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**A Study of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan  
Mahabhiyan (PM KUSUM)**

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**Abstract:**

*The Indian agriculture sector is facing various issues and challenges like low productivity, irrigation facilities, infrastructure development, market system etc. In India, development of the economy is not possible without the development of the agriculture sector. Keeping the view of the development of the agriculture sector in mind, the government has been introducing several reforms in the agriculture sector. The Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) Scheme is a significant initiative by the Government of India aimed at promoting renewable energy in the agricultural sector. The scheme focuses on solarizing irrigation pumps, reducing farmers' dependency on conventional power sources, and ensuring sustainable energy access. This research paper examines the implementation, benefits, challenges, and impact of the PM-KUSUM scheme on farmers and rural energy security.*

**Keywords:** Agriculture, Farmers, PM KUSUM, Government

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**Introduction:**

India's agriculture is the backbone of economy, because millions of farmers are directly and indirectly depending on this sector. The dependency on diesel and grid electricity-powered irrigation systems has increases input costs, environmental degradation, and energy insecurity. To solve these challenges, the Central government of India launched the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) Scheme in 2019. The objectives of the scheme are to promote solar energy adoption in the agricultural sector by providing financial and infrastructural support for solar-powered irrigation pumps and decentralized solar energy projects. The PM-KUSUM scheme consists of three key components: (A) setting up renewable energy power plants on barren land, (B) installing standalone solar-powered irrigation pumps, and (C) solarizing

existing grid-connected pumps. These components collectively aim to reduce farmers' dependence on fossil fuels and conventional electricity, enhance energy security, and improve rural livelihoods by enabling farmers to generate and sell surplus solar power. This research paper explores the PM-KUSUM scheme, assessing its role in promoting sustainable agricultural practices, enhancing farmers' income, and contributing to India's renewable energy targets. This research paper explores the PM-KUSUM scheme, assessing its role in promoting sustainable agricultural practices, by analyzing its implementation framework and economic feasibility, this study aims to provide insights and recommendations for optimizing the scheme's effectiveness in achieving its intended goals.

**Review of Literature:**

- **Nikita B More, PS Kapse, RP Kadam, Anuradha Lad and SR Jakkawad (2024)**

Constraints faced and suggestions given by beneficiary of PM-Kusum Scheme, this Study revealed that the need for awareness campaigns to combat online fraud (33.33%) and ensuring the standard quality of supplies (30.83%). Furthermore, beneficiaries expressed the necessity for increased subsidies (35.83%) to improve scheme accessibility.

- **Annamic Dutta and Deepak Krishnan (2023)**, Mapping the Impacts of Solar Water Pumps on Farmers' Lives: Building a Results Framework for Components A and C of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM Kusum) This study examines Components A and C of the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM KUSUM) scheme in India, which include small solar-powered generators and on-grid solar pumps, respectively

- **Nikita B More, PS Kapse, RP Kadam, PR Deshmukh and Anuradha S Lad (2024)** Attitude of Beneficiaries about Pm-Kusum Scheme, this research had revealed that more than half (65.83%) of the beneficiaries had moderately favourable attitude about PM-KUSUM scheme.

**Significance of the Study:**

This study is important in evaluating the central government sponsored PM-KUSUM scheme. It highlights how the scheme works to reduce irrigation costs and promote clean energy adoption. The research also studies the current status of PM KUSUM and also offers policy recommendations to improve the scheme's efficiency. Overall, this study provides valuable insights for policymakers, stakeholders, and farmers in optimizing the scheme for a sustainable agricultural future.

**Objectives of Study:**

The primary objectives of this study are:

1. To analyze the objectives and structure of the PM-KUSUM scheme.
2. To study the process flow of PM KUSUM scheme
3. To study current status of PM KUSUM scheme.

**Research Methodology:**

The present study is depending upon the secondary data. The secondary data is collected from various government websites, journals, newspapers etc.

**About PM KUSUM:**

The PM-KUSUM Scheme follows a structured process to ensure smooth implementation. It begins with the beneficiary registration, where applicants fill in all necessary details. After registration, the payment process takes place, either through online payment via vendor login or offline payment approved by the DGM. Once the payment is confirmed, the DGM approves the offline payment, and the beneficiary can log in to assign a vendor. The vendor then allocates the work to a site engineer, who coordinates with the JSR lineman using the MEDA Lineman Application. The lineman checks the allocated beneficiary list, contacts the assigned site engineer, and schedules a Joint Survey Report (JSR), which is then uploaded with all required details.

After submission, the DGM reviews and approves the JSR, following which the vendor's site engineer proceeds with the installation of the solar pump system. The engineer then uploads the installation report, images of the site, and signatures of the concerned authorities. Once the installation is complete, the vendor verifies the RMS data of the pump on the portal, allowing

them to raise a payment request for the installed system. The DGM and RD then review the payment details, while the HO General Manager ensures the vendor's insurance is in place by checking the RMS data. After this, the DG approves the payment request, allowing the HO Accountant to initiate partial payment to the vendor. Following the payment, the DGM assigns a PO (Purchase Officer) for an inspection, who visits the beneficiary's

location to verify the installation. Upon successful inspection, the vendor raises a final payment request with a bank guarantee. The DGM, RD, and HO General Manager (Solar) review and verify the inspection report, and after final approval from the DG, the HO Accountant releases the full payment to the vendor. This systematic process ensures transparency, accountability, and efficient execution of the PM-KUSUM scheme.

#### Achievement of PM KUSUM:

**Table No. 1: Progress of PM KUSUM**

Component	Parameter	Total Sanctioned	Total Installed/Solarized
<b>Component A</b>	Solar Capacity (MW)	10,000 MW	430.98 MW
<b>Component B</b>	Standalone Solar Pumps (Nos.)	12,29,157	7,25,575
<b>Component C - IPS</b>	Individual Pump Solarisation (Nos.)	95,308	5,387
<b>Component C - FLS</b>	Feeder Level Solarisation (Nos.)	35,70,874	2,44,589

Source: <https://pmkusum.mnre.gov.in/#/landing>

The PM-KUSUM scheme has made significant strides in promoting solar energy adoption across various components. Under **Component A**, while a total of **10,000 MW** solar capacity has been sanctioned, the installed capacity stands at **430.98 MW**, indicating ongoing progress in solar infrastructure development. **Component B** has seen remarkable success in the installation of standalone solar pumps, with **7,25,575** pumps installed out of the **12,29,157** sanctioned, highlighting substantial progress in providing solar-powered irrigation solutions. **Component C** has made advancements in both **Individual Pump Solarisation (IPS)** and **Feeder Level Solarisation (FLS)**. Out of **95,308** sanctioned pumps for IPS, **5,387** have been solarized, whereas **2,44,589** pumps have been solarized under FLS out of **35,70,874** sanctioned. These achievements reflect the

government's commitment to enhancing energy security in the agricultural sector through solar power, though further efforts are required to accelerate installations and meet the sanctioned targets efficiently.

#### Findings and Conclusion:

Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM) Scheme for de-dieselisation of farm sector and enhancing the income of farmers. Under the Scheme, central government subsidy up to 30% or 50% of the total cost is given for the installation of standalone solar pumps and also for the solarization of existing grid-connected agricultural pumps. Further, farmers can also install grid-connected solar power plants up to 2MW under the Scheme on their barren/fallow land and sell electricity to local DISCOM at a tariff determined by state regulator. This scheme

is being implemented by the designated departments of the State Government. A review of government reports, policy documents, research papers, and case studies indicates that the scheme has played an important role in reducing farmers' dependence on grid electricity and diesel-powered pumps, leading to cost savings and additional income through surplus energy sales. This study also reveals that the initiative has contributed to environmental sustainability by lowering carbon emissions and enhancing rural energy security. However, various reports and studies also indicate challenges such as high initial investment costs, delays in subsidy disbursement, lack of awareness among farmers, and administrative hurdles in implementation. Despite these challenges, data suggests that the scheme has strong potential for scalability and long-term benefits if financial support mechanisms are streamlined and awareness initiatives are strengthened. The study underscores the need for policy improvements and better implementation strategies to ensure that the benefits of PM-KUSUM reach a larger number of farmers efficiently.

**Bibliography/References:**

1. Government of Maharashtra, Department of Agriculture. (2023). Agricultural Development Schemes: Policy Document.
2. Dutt, A., & Krishnan, D. S. (2023). Mapping the impacts of solar water pumps on farmers' lives: Building a results framework for components a and c of pradhan mantri kisan urja suraksha evam utthaan mahabhiyan (pm kusum).
3. Nikita B More, PS Kapse, RP Kadam, Anuradha Lad and SR Jakkawad (2024) Constraints faced and suggestions given by beneficiary of PM-Kusum Scheme,
4. Nikita B More, PS Kapse, RP Kadam, PR Deshmukh and Anuradha S Lad (2024) Attitude of Beneficiaries about Pm-Kusum Scheme,
5. Singh, R. (2021). Agriculture and Rural Development: A Study of Maharashtra. Journal of Rural Studies.
6. <https://www.mospi.gov.in/>
7. <https://pmkusum.mnre.gov.in/#/landing>