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**HOUSEHOLD ROOFTOP SOLAR  
SCHEME NEEDS REFINEMENT**

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## HOUSEHOLD ROOFTOP SOLAR SCHEME NEEDS REFINEMENT

### Context

- Recently launched **PM Surya Ghar Muft Bijli Yojana (PMSGMBY)** that aims to boost the adoption of rooftop solar installations across India, requires refinement to fully realize its potential despite its promising start.

### PM Surya Ghar Muft Bijli Yojana (PMSGMBY): Objectives and Implementation

- It is a transformative initiative launched to promote the adoption of solar energy in residential households.
- It aims to provide free electricity to households through the installation of rooftop solar panels.
- It has a substantial **outlay of ₹75,021 crore** and is set to be implemented until the **fiscal year 2026-27**.
- It targets the **installation of 10 million small rooftop solar plants** by March 2027, offering financial support ranging from ₹30,000 to ₹48,000 for **capacities up to 3 kW**.
- The implementation is overseen by a National Programme Implementation Agency (NPIA) at the national level, while State Implementation Agencies (SIAs) manage the execution at the state level.

### Key Features

- **Subsidy Structure:** The scheme provides a subsidy of 60% of the solar unit cost for systems up to 2kW capacity and 40% for systems between 2 to 3kW capacity.
  - ♦ The subsidy is capped at 3kW capacity, translating to a maximum subsidy of 78,000.
- **Eligibility:** Applicants **must be Indian citizens, own a house** with a suitable roof for solar panel installation, have a **valid electricity connection**, and **not have availed any other subsidy for solar panels**.
- **Application Process:** Interested consumers **must register on the National Portal** by selecting their state and electricity distribution company.
  - ♦ The portal assists households by providing relevant information, such as system sizes, benefits calculators, and vendor ratings.
- **Vendor Registration:** Vendors can register with **respective DISCOMs** by submitting an application and a performance bank guarantee.
  - ♦ It ensures a streamlined process for consumers to choose from registered vendors.

### Progress of PMSGMBY

- **Rapid Installations:** Since its launch, PMSGMBY has seen a remarkable uptake, with **over 6.3 lakh installations completed within the first nine months**.
  - ♦ It represents a **ten-fold increase** in monthly installations compared to the period before the scheme's introduction.
- **State-Level Success:** States like **Gujarat, Maharashtra, Kerala, and Uttar Pradesh** have shown exceptional progress because of robust infrastructure and effective stakeholder collaboration.
- **Simplified Processes:** Most DISCOMs have waived technical feasibility approvals for systems under 10kW and digitized their processes, allowing applications to be filed **in just five minutes on the National Portal for Rooftop Solar**.
- **Vendor and Workforce Development:** Nearly 9,000 vendors have been activated, and capacity-building initiatives have trained 40,000 personnel to ensure high-quality installations and service delivery.
  - ♦ An additional 2 lakh technicians are expected to be trained over the next eight months.

### Challenges and Refinement of PMSGMBY

- **Infrastructure and Regulatory Barriers:** Initial implementation faced challenges such as the **need for DISCOMs** to enhance power load capacities and reduce regulatory barriers.
  - ♦ These issues were addressed by waiving **Technical Feasibility Reports (TFR)** for systems up to 10kW and ensuring timely inspections and subsidy releases.

- **Financial and Payment Security:** The scheme has **established a ₹100 crore corpus** to manage payment security, but maintaining this fund and ensuring timely payments remains a challenge.
- **Technical and Operational Issues:** Ensuring the availability of net meters and addressing technical issues related to rooftop installations are ongoing challenges.
  - ♦ Continuous training and support for DISCOM engineers and technicians are necessary to maintain the quality and efficiency of installations.
- **Quality and Safety Concerns:** With over 10,000 service providers operating without adequate oversight, there is a risk of substandard installations.
  - ♦ Establishing stringent quality and safety protocols is essential to ensure the long-term reliability and safety of rooftop solar systems.
- **Regional Imbalance:** Since its inception, the scheme has facilitated 638,352 installations, contributing nearly 2 GW of solar capacity.
  - ♦ However, the distribution of these installations is heavily skewed, with **Gujarat and Maharashtra** alone accounting for **over 65% of the total**.
- **Gaps in Registrations, Applications, and Actual Installations:** Out of 14.5 million registrations, only 2.65 million applications have been submitted, and just 0.68 million installations have been completed.
  - ♦ It suggests inefficiencies in the implementation process that need to be addressed.
- **Lack of Skilled Workforce:** Currently, there is a shortage of trained professionals in this field. This gap could slow down the rollout of the scheme, as households and businesses may face delays in getting their solar panels installed and operational.
- **Bureaucratic and Logistical Challenges:** Navigating the application process, securing necessary approvals, and ensuring timely installation can be cumbersome for many consumers.
  - ♦ It can deter potential adopters and slow down the overall progress of the scheme.
- **Consumer Awareness and Participation:** Despite the progress, raising awareness and encouraging participation among a broader segment of the population is essential.
  - ♦ Many potential beneficiaries are still unaware of the scheme's benefits and the simplified application process.

### Conclusion and Way Forward

- The scheme's original intent was to provide solar power to the ultra-poor, but the current implementation may not be effectively reaching this demographic.
- The average ticket size of installations is believed to be upwards of 3 kW, which may be unaffordable for the intended beneficiaries.
  - ♦ Ensuring that subsidies and support are accessible to those in genuine need is crucial for the scheme's success.
- By refining the implementation process, ensuring equitable distribution, establishing quality standards, and targeting the right beneficiaries, the scheme can significantly contribute to India's renewable energy goals and provide sustainable energy solutions to millions of households.

Source: BL



### Mains Practice Question

Do you agree that the current household rooftop solar scheme in India requires significant improvements to encourage wider adoption and maximize its potential benefits?