07

MINISTRY OF NEW AND RENEWABLE ENERGY

IMPLEMENTATION OF PRADHAN MANTRI KISAN URJA SURAKSHA EVAM UTTHAAN MAHABHIYAN (PM-KUSUM) & PM SURYA GHAR: MUFT BIJLI YOJANA

COMMITTEE ON ESTIMATES
(2025-26)

SEVENTH REPORT

(EIGHTEENTH LOK SABHA)

LOK SABHA SECRETARIAT
NEW DELHI

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(Presented to Lok Sabha on 04.12.2025)

LOK SABHA SECRETARIAT

NEW DELHI

December 4, 2025/Agrahayana 13, 1947 (Saka)

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COMPOSITION OF THE COMMITTEE ON ESTIMATES (2024-25)

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27. Dr. Bhola Singh
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30. Shri Ve Vaithilingam

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29. Shri Ve Vaithilingam
30. Shri Surendra Prasad Yadav

Secretariat

1.	Smt Juby Amar	-	Joint Secretary
2.	Shri Sumesh Kumar	-	Director
3.	Shri Kuldeep Pegu	-	Under Secretary

INTRODUCTION

I, the Chairperson of the Committee on Estimates, having been authorized by the Committee to submit the Report on their behalf, do present this Seventh Report on the subject 'Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar : Muft Bijli Yojana'.

2. The PM-KUSUM a flagship scheme of the Government was launched in the year 2019 with the objective of providing financial support to farmers for solarization of their agriculture water pumps and also to enable farmers to generate additional income through installation of solar power plant on their barren land.

3. The PM Surya Ghar: Muft Bijli Yojana (PMSG: MBY), another flagship scheme of the Government was introduced in the year 2024, with the objective of providing Rooftop Solar panel system to 1 crore households across the country and to empower such households to generate their own electricity. The scheme is to be implemented till the end of the FY 2026-27.

4. In the aforesaid backdrop, the Committee on Estimates (2024-25) selected the subject 'Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar: Muft Bijli Yojana' for in-depth examination on the progress made in implementation of the two schemes and report to the House. The Committee on Estimates (2025-26) continued with examination of the subject.

5. In this Report, the Committee have undertaken a comprehensive examination of various aspects in the process of implementation of PM-KUSUM and PMSGY: MBY Schemes. With regard to PM-KUSUM, the Committee have dealt with issues like performance of various components of the Scheme, provisions of Central Financial Assistance, availability of loans, evacuation of power, adoption of Agrivoltaics and need for involvement of public representatives in the process of implementation. Further, on PMSG: MBY, the Committee have dealt on Challenges in implementation, processing of loans, availability of solar module, need for strengthening supply chain network, need for adopting the concept of model solar city, need for inclusion of the Scheme under the purview of DISHA and synchronizing PMSGY & PMAY. The Committee have analyzed these issues/points in detail and have made observations/recommendations in the Report.

6. The Committee held three sittings on 04-09-2024, 10-02-2025 and 11-03-2025 to take oral evidence of the representatives of the Ministry of New and Renewable energy, Ministry of Finance, State Governments of Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh, Indian Renewable Energy Development Agency Limited (IREDA), Rural Electrification Corporation Limited (REC), Solar Energy Corporation of India (SECI), State Bank of India, Punjab National Bank and Bank of Baroda on the subject. The Committee also held informal discussion on the subject during study visit to Diu on 31.12.2024 and local study visit to Agrivoltaics plant at Issapur, Najafgarh, Delhi on 11.04.2025. The draft Report was considered and adopted by the Committee on Estimates (2025-26) at their sitting held on 21 November, 2025.

7. The Committee wish to place on record their appreciation of the assistance rendered to them in the matter by the Committee Secretariat. The Committee also wish to place on record their sincere thanks to the representatives of the Ministry of New and Renewable Energy and Ministry of Finance for placing their considered views and requisite information required in connection with the examination of the subject.

8. For facility of reference and convenience, the Observations/ Recommendations of the Committee have been printed in bold in Part-II of the Report

NEW DELHI;
04 December, 2025
Agrahayana 13, 1947 (Saka)

DR. SANJAY JAISWAL
CHAIRPERSON
COMMITTEE ON ESTIMATES

LIST OF ABBREVIATIONS

SDG	Sustainable Development Goal
GW	Gigawatt
MW	Megawatt
BU	Billing Unit
PPA	Power Purchase Agreement
CAPEX	Capital Expenditure
RESCO	Renewable Energy Service Company
LOA	Letter Of Authorization
DPR	Detailed Project Report
IEC	Information, Education, And Communication
EPC	Engineering, Procurement, And Construction
BE/RE	Budget Estimate/Revised Estimate
CO2	Carbon Dioxide
ULBs	Urban Local Bodies
PRIs	Panchayati Raj Institutions
PV	Photovoltaic
PVTGs	Particularly Vulnerable Tribal Groups
UNFCCC	United Nations Framework Convention on Climate Change
Discom	Distribution Company
MSDE	Ministry Of Skill Development and Entrepreneurship
PMU	Project Monitoring Unit
PMC	Project Management Consultants.
SECI	Solar Energy Corporation of India Limited
kWp	Kilowatt Peak
REPO	Repurchase Rate
DGT	Directorate General of Training
NISEBUD	National Institute for Entrepreneurship and Small Business Development
NPTI	National Power Training Institute
RDSS	Revamped Distribution Sector Scheme

PART- I

CHAPTER-I

Introduction

1.1 Energy is acknowledged as a key input towards raising the standard of living of citizens of any country, as is evident from the correlation between per capita electricity (a proxy for all energy forms) consumption and Human Development Index (HDI). Accordingly, energy policies of India have over the years directly aimed to raise per capita energy (and electricity) consumption, even while the main focus of the country's development agenda has been on eradication of poverty.

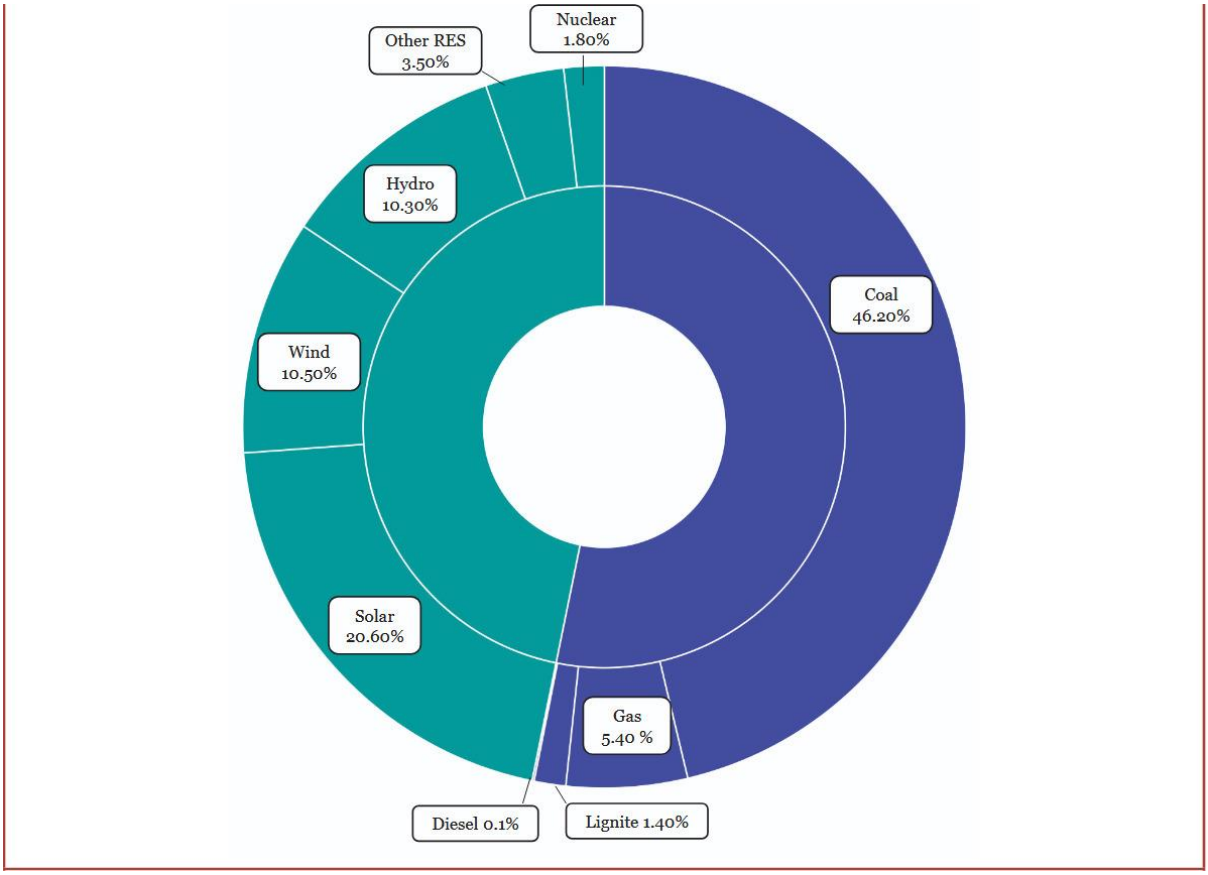
1.2 India has growing energy needs. The 2030 Agenda for Sustainable Development also includes a dedicated and stand-alone goal on energy, SDG 7, which calls for countries to "ensure access to affordable, reliable, sustainable and modern energy for all". India's Human Development Index currently stands at 0.644.25 Based on various forms of energy mixes and energy efficiency scenarios, it is estimated that the minimum level of per capita final energy requirement for India to become a developed country with an HDI of 0.9 must be in the range of 45.7 to 75 gigajoules per year. As per the Energy Statistics of India 2024, provisional estimates indicate that the total final consumption of energy per capita for FY23 was 16,699 mega joules or16.7 gigajoules (~approx.),27 indicating that the gap between actual and required future energy consumption to fuel growth to achieve Viksit Bharat status is quite huge.

1.3 One of the key pillars of SDG7 is the expansion of renewable energy; however, it is clear that even in the most advanced economies, the technologies for renewable energy and their implementation are not yet at a maturity level that allows them to fully replace fossil fuel-based power plants. Several challenges hinder renewable energy's cost-effective and efficient integration into the energy mix. These include significant investments required for grid integration, the development of battery infrastructure to manage intermittency, scaling up production of the components of renewable energy systems, access to critical minerals that are needed for storage technology, the limited availability of land in densely populated areas and the competing and rapidly increasing energy demands from agriculture, infrastructure, and industry.

Renewable Energy in India and its Contribution to the Nation's Total Energy Mix

1.4 As per Economic Survey (2024-25), coal is source of 46.20 percentage of electricity generation in India. Contribution of other sources of electricity in the Country is as follows: -

S. No.	Source	Percentage Contribution in total Installed Electricity Generation (in Percentage)
Fossil Fuel Sources		
I.	Coal	46.50
II.	Lignite	1.40
III.	Gas	5.40
IV.	Diesel	0.1
Non- Fossil Fuel Sources		
I.	Solar	20.60
II.	Wind	10.50
III.	Hydro	10.30
IV.	Other Renewable Energy Sources	3.50
V.	Nuclear	1.80



(India's Installed Generation Capacity (Fuel-Wise)*

*As on 30 November 2024

*Source:- Economic Survey 2024-25

1.5 The Government has set a target of achieving 500 GW of non-fossil power installed capacity by 2030, in line with the Hon'ble Prime Minister's announcement at CoP-26. So far, a total of 209.63 GW of Non-Fossil Power capacity has been installed in the country as of 30.09.2024. This includes 90.76 GW of Solar Power, 46.93 GW of Large Hydro, 47.36 GW of Wind Power, 11.33 GW of Bio Power, 5.07 GW of Small Hydro Power and 8.18 GW Nuclear Power. This has a share of 46.31% of total installed generation capacity in the country i.e. 452.69 GW as on 30.09.2024. During the year 2023-24, out of total 1738.10 BU electricity generated in the country, 359.42 BU (20.68%) were from Renewable Energy. During the year 2024-25 (Up to August, 2024), out of total 801.37 BU electricity generated in the country, 186.87 BU (23.31%) are from Renewable Energy. India stands 4th globally in Renewable Energy Installed

Capacity, 4th in Wind Power capacity & 5th in Solar Power capacity (as per International Renewable Energy Agency (IRENA) RE Capacity Statistics 2023).

1.6 As of now, Coal is major source of electricity generation in India. However, recently, India has achieved a historic milestone by surpassing 100 GW of installed solar power capacity, a significant step toward realizing its ambitious target. The Ministry of New and Renewable Energy (MNRE) is Nodal Ministry in the Country to look after all the aspects relating to New and Renewable Energy. MNRE which has been created as a Department of Non-Conventional Energy Sources (DNES) in the Ministry of Energy in 1982 has upgraded into a separate Ministry of Non-Conventional Energy Sources (MNES) in 1992 and was rechristened as Ministry of New and Renewable Energy (MNRE), in October, 2006.

1.7 The Ministry of New and Renewable Energy (MNRE), in order to achieve its aim of promotion of alternative sources of energy and making India as a global leader in the sector is implementing following schemes:-

I. Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM).
II. The Pradhan Mantri Surya Ghar: Muft Bijli Yojana (PMSG:MBY)
III. Central Public Sector Undertaking (CPSU) Scheme for Grid-Connected Solar Photovoltaic (PV) Power Projects.
IV. Development of Solar Parks and Ultra Mega Solar Power Projects.
V. PLI Scheme: 'National Programme on High-Efficiency Solar PV Modular'.
VI. Green Energy Corridor.
VII. Human Resource Development Programme
VIII. Renewable Energy Research and Technology Development (RE-RTD) Programme.
IX. Solar-Wind Hybrid.
X. Wind Energy.
XI. Bio-energy.
XII. Green Hydrogen.
XIII. Viability Gap Funding (VGF) Scheme for 1000 MW Offshore Wind Energy Projects.
XIV. Lakshwadeep's first on-grid solar plant with battery storage.

XV. Empowering communities through Model Solar Village.

XVI. New Solar Power Scheme (for Tribal and PVTG Habitations/Villages)

XVII. Green Hydrogen.

XVIII. Task Force on Geothermal Energy.

Policies and Regulation for the Growth of Renewable Energy in India.

1.8 When asked to furnish details of Policies and Regulation for the Growth of Renewable Energy in India, the Ministry New and Renewable Energy (MNRE) stated that India's renewable energy growth is guided by policies emphasizing local manufacturing, financial support particularly for decentralized Re systems, ensuring electricity off take and attracting investments. These include:

a) National Renewable Energy Targets and Frameworks: India aims to achieve 500 GW of non-fossil capacity by 2030, including ambitious goals for solar, wind, and hybrid power systems. Annual tenders for 50 GW of renewable capacity ensure a steady pipeline of projects.

b) Renewable Purchase Obligations (RPOs): Separate RPO trajectories are defined for centralized and decentralized renewable sources, promoting large scale and household/ farm level deployments.

c) National Green Hydrogen Mission: Launched in January 2023, it aims to position India as a leader in green hydrogen production. The mission targets at least 5 million metric tonnes of green hydrogen annually by 2030, supported by 125 GW of renewable capacity, fostering energy security and job creation.

d) Domestic Manufacturing and PLI Scheme: The Production Linked Incentive (PLI) scheme for high-efficiency solar modules drives domestic solar manufacturing, reducing reliance on imports. India aims to scale solar manufacturing to 100 GW by 2027.

e) Infrastructure and Transmission Incentives: The Green Energy Corridor Scheme facilitate the smooth transmission of renewable energy and Inter-State Transmission System (ISTS) charge waiver helps in reducing project costs and improving grid integration until 2032 for offshore wind and 2030 for green hydrogen projects.

f) Support for innovative technologies: Wind Solar Hybrid Projects, Floating Solar, and Offshore Wind Energy: New initiatives such as floating solar systems, wind solar hybrid projects and offshore wind energy projects increase the technological base available for RE capacity addition and achieve target of 500 GW by 2030.

g) Ease of Doing Business and Transparency Measures: The launch of a National Solar Rooftop Portal simplifies installation processes, while initiatives like the Green Term Ahead Market (GTAM) promote short-term trading of renewable power.

h) Citizen Centric Programmes: PM-KUSUM and PMSGY: PM-KUSUM supports farmers with solarized pumps and small solar plants, while the PM Surya Ghar Muft Bijli Yojana provides subsidies to households for solar rooftop systems. These schemes target to add around 60 GW solar capacity and bring in direct citizen participation in the RE growth story.

1.9 When asked about latest technological advancements in the renewable energy sector that India is focusing on, the Ministry New and Renewable Energy (MNRE) submitted as under:-

"India is increasingly focusing on several technological advancements in the renewable energy sector. One of the latest trends is the development and integration of solar energy technologies and Next generation PV technologies including Perovskites, roll to roll, Thin films, Multi-Junction Solar Cells, Agri RE tech and PV–CSP-wind-storage hybrid. Additionally, India is investing in energy storage solutions like lithium-ion batteries, sodium ion and Next Generation Energy storage devices to address the intermittent nature of renewable sources. The country is also exploring green hydrogen production, leveraging its abundant renewable resources to create hydrogen as a clean fuel alternative. Moreover, advancements in offshore wind energy technology are being pursued, aiming to harness the vast potential of coastal areas. The government is also promoting research and development in Waste to energy, bio gas, small hydro and New Technologies. These efforts align with India's ambitious renewable energy targets and commitments to reducing carbon emissions."

1.10 Electricity is an essential requirement for all facets of our life. It has been recognized as a basic human need. It is a critical infrastructure on which the socio-economic development of the country depends. Supply of electricity at reasonable rate to rural India is essential for its overall development. Equally important is availability of reliable and quality power at competitive rates to Indian industry to make it globally competitive and enable it to exploit the tremendous potential of employment generation. Services sector has made significant contribution to the growth of our economy. Availability of quality supply of electricity is very crucial to sustained growth of this segment.

1.11 India, being a middle income country, has been subsidizing agriculture and domestic electricity consumers for decades. Subsidization of electricity for agriculture started taking place in the 1970s and 1980s as part of the Green Revolution to help aid food production in India. The direct translation of this was distribution of highly subsidized electricity in the form of flat electricity rates for agriculture or completely free agricultural supply.

1.12 While this subsidization of electricity was successful in increasing food security, the formation of the water–energy–food nexus led to adverse impacts. Many of the connections under this supply were unmetered, resulting in high consumption of highly subsidized energy to irrigate farmers' lands. Additionally, most of this free energy was produced through coal, leading to an increase in carbon emissions as more farmers opted for irrigation pump-sets to irrigate their land throughout the year.

1.13 Increasing use of diesel/electric irrigation pumps sets by farmers led to depleting groundwater levels as farmers started growing more water-intensive crops in water-scarce areas as per Central Groundwater Board (CGWB) Report, 17 per cent of India's groundwater blocks are over-exploited, with 5 per cent and 14 per cent being at critical or semi-critical stages. Another consequence of the same was increasing subsidy bids on electricity and financial losses for the DISCOMs despite cross subsidizing electricity. Electricity subsidies make up a large share of subsidies in the country.

1.14 To reduce the subsidy bill on electricity and adverse impact of thermal power plant emission on environment, switching to clean sources of electricity like solar irrigation pumps for agriculture and use of solar photo-voltaic cell for domestic consumers , the Government of India launched the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) scheme in 2019 with a vision to solarize agriculture in India. The scheme, with its components, gives farmers access to reliable irrigation technology and provides them with an extra income source through its various components. For domestic consumers, central government has factors PM Surya Ghar: Muftbijli Yojana (PMSG:MBY) to increase the share of solar rooftop facility and empower residential household to generate their own electricity.

CHAPTER- II

PRADHAN MANTRI KISAN URJA SURAKSHA EVAM UTTHAAN MAHABHIYAN (PM-KUSUM)

2.1 The Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) was introduced in 2019 with the objectives of incorporating renewable energy in farmers' irrigation practices; helping farmers gain access to solar water-pumps at subsidized rates; and giving farmers an avenue to utilize their barren land through setting up of solar power plants for energy generation.

2.2 PM-KUSUM was divided into three components, A, B and C, with corresponding targets to be met by 2022. Component A entailed developing solar power plants between capacities 500 kW to 2 MW with the objective of selling generated electricity to the DISCOMs. The target for the same was set at 10,000 MW of decentralized ground/ stilt-mounted grid-connected solar or other renewable-energy-based power plants. Component B includes installation of off-grid solar water pumps on farmers' lands. The target for Component B was set at 17.50 lakh stand-alone solar agriculture pumps. Component C first entailed solarization of grid-connected agricultural pumps through installation of grid-connected solar water-pumps on farmers' lands. The 2019 target for the same was solarization of 10 lakh grid-connected agriculture pumps.

2.3 Components A and C were supposed to be implemented initially on pilot mode for 1,000 MW capacity and one lakh grid-connected agriculture pumps respectively while Component B was to be implemented in a full-fledged manner with total Central government support of Rs 19,036.5 crore. The scheme was scaled up from its pilot stage in 2021, and was in August 2022 extended till 2026.

2.4 In 2020, the Ministry of New and Renewable Energy (MNRE) introduced feeder-level solarization (FLS) as a sub-component under Component C in addition to solarization of existing electric pumps (to be referred to as individual pump solarization or IPS). It revised the targets under Components B and C in January 2024. No change in target was proposed for Component A, which remains 10,000 MW to be met by 2026. The targets for Component B were revised from 17.50 lakh to 14 lakh standalone

solar agriculture pumps. The target for Component C was revised from 10 lakh to 35 lakh grid-connected agriculture pumps, including feeder level solarization.

Components of PM-KUSUM

2.5 PM-KUSUM scheme aims to generate 34.8 KW electricity and installation of 49 lakh solar irrigation pumps.

Component	**Approved capacity**	**Creation of RE Capacity targeted (GW)**
Component-A	10000 MW	10
Component-B	14 lakh pumps	7
Component-C (IPS)	1.5 lakh pumps	1.12
Component-C (FLS)	33.5 lakh pumps	16.75
Total		34.8

Various components of scheme are as follows: -

i) Component-A: 10,000 MW of Decentralized Ground Mounted Grid Connected Solar Power Plants.

Under this component, farmers can start a solar power plant between capacities 500 kW and 2 MW and sell the electricity generated to the grid. The Component A benefits farmers by giving them access to an extra source of income from their barren land.

ii) Component-B: Installation of 14 lakh standalone Solar Powered Agriculture Pumps.

Under this component, farmers can opt for standalone solar water pumps replacing their electric/diesel pumps, which would lead to savings in terms of operational costs such as amount spent on purchasing diesel or paying electricity bills. Component B

targets small farmers who are currently dependent on the erratic main grid agricultural supply.

iii) Component-C: Solarisation of 35 Lakh Grid-connected Agriculture Pumps.

Component C is divided into two sub-components. The first is individual pump solarization (IPS), which involves setting up grid-connected solar water-pumps on farmers' lands. Under IPS, the capacity of the solar power plant can be twice the capacity of the farmers' existing water pumps in kW so that farmers can sell the excess electricity generated back to the grid. The second sub-component, feeder- level solarization (FLS) in which States are supported for solarization of agriculture feeder or mixed feeders. This would help ease the subsidy burden from the state government with regard to the subsidy provided to the feeders' agricultural users.

Central Financial Assistance (CFA) provisions under the Scheme

2.6 In order to encourage implementation, the PM KUSUM scheme envisage following provision of Central Financial Assistance: -

(i) Under Component A, no CFA is provided. However, Procurement Based Incentives @ Rs. 0.40 per unit for five years is provided to DISCOMs.

(ii) Under Component B and Component C (IPS) CFA of 30% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower is provided. However, in North Eastern States including Sikkim, Jammu & Kashmir, Ladakh, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower, is provided.

(iii) Under Component C (FLS,) for agriculture feeder solarization, CFA of Rs 1.05 Crore per MW is provided. There is no mandatory requirement of financial support from participating State/UT. The feeder solarisation can be implemented in CAPEX or RESCO mode.

2.7 When asked about reasons for absence of subsidy under component 'A' despite huge expenditure involved in setting up of a solar power plant, the Ministry stated as under:

> For Component A, the central Government provides an incentive of 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower to the DISCOMs, for buying the power produced for a period of five years from the Commercial Operation Date of the plant. The plant can be installed by the farmer or he can provide his land on lease to a developer, who will install the plant. The farmer will sign the PPA with DISCOMs for selling power at Feed in tariff rates which will ensure stable income for farmers.

2.8 When asked about subsidy structure for solar-powered pumps and grid-connected solar power projects under PM-KUSUM, the Ministry stated as under:

> For solar pumps installed under Component-B and for grid connected pumps under Component C (IPS), CFA of 30% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower is provided to the beneficiaries, up to 7.5 HP of pump capacity. However, in North Eastern States including Sikkim, Jammu & Kashmir, Ladakh, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower, is provided for pumps up to 15 HP.

2.9 In addition, the respective state/UT has to provide at least 30% financial support. Balance cost is to be contributed by beneficiary. Component B and Component C (IPS) of PM KUSUM scheme can also be implemented without State share of 30%. The Central Financial Assistance will continue to remain 30% and rest 70% will be borne by the farmer. For agriculture feeder solarization, CFA of Rs 1.05 Crore per MW is provided.

2.10 With regard to monitoring of Central Financial Assistance (CFA) to ensure its effectiveness, the Ministry, further submitted as under:

> "Under the scheme, the gestation period for the projects in all the components is 24 months. Currently the Ministry has allocated all the capacities under

Component B and Component C. For Component B and C(IPS), CFA is released in three tranches:

(a) 30% of CFA, after issuance of LOA
(b) 60% of CFA, after installation work, which is generally 120-150 days after LOA
(c) 10% as final instalment at the time of settlement of the project.

Similar targets and milestones for release of advance CFA are also taken up for Component C(FLS). Under Component A, the PBI of Rs 0.40/units is given to the DISCOMs after having plant generation data for one year.

Over the last few years, the release of CFA under the scheme has increased and in FY 23-24 it is more than 90% of RE. Based on sanctions allocated in previous years, and considering gestation period of 24 months, the expected CFA release is identified and effectively planned for release in different components."

2.11 When asked about the mechanism for calculation and disbursement of subsidies, the Ministry, responded as under:

"Under Component A, Procurement Based Incentive (PBI) to the DISCOMs @ 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower, for buying solar/ other renewable power is provided under the scheme. The PBI is given to the DISCOMs for a period of five years from the Commercial Operation Date of the plant. Therefore, the total PBI payable to DISCOMs is Rs. 33 Lakh per MW.

For Component-B and individual pump solarisation under Component-C, CFA of 30% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower is provided to the beneficiaries, upto 7.5 HP of the pump capacity. However, in North Eastern States including Sikkim, Jammu & Kashmir, Ladakh, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost issued by MNRE or the prices of the systems discovered in the tender, whichever is lower, is provided for pumps upto 15 HP..

In addition, the respective state/UT has to provide at least 30% financial support. Balance cost is to be contributed by beneficiary. Component B and Component C (IPS) of PM KUSUM scheme can also be implemented without

State share of 30%. The Central Financial Assistance will continue to remain 30% and rest 70% will be borne by the farmer.

For agriculture feeder solarization, CFA of Rs 1.05 Crore per MW is provided. There is no mandatory requirement of financial support from participating State/UT. The feeder solarisation can be implemented in CAPEX or RESCO mode."

2.12 When asked about specific measures being taken to address delays in subsidy disbursement, the Ministry stated that parameters for CFA release under the scheme have been simplified to enable timely subsidy disbursement.

Roles and Responsibilities of various agencies under the scheme

2.13 When asked to furnish details role and responsibilities of various agencies involved in implementation of scheme, the Ministry stated as under

Role of SIAs (Scheme Implementing Agency)

• SIA will assist the farmers in project development activities including formulation of DPR, PPA/EPC contracts, getting funds from financial institutions, etc.

• SIAs will provide the handholding support required by farmers/developers, like availing financing from banks, etc. It will also coordinate with District Authorities for ease of implementation.

• To carry out wide publicity of the scheme to increase awareness, identify potential beneficiaries, and coordinate with banks for easy access of finances.

Role of District Authorities for Land lease rates

• Land lease rates would be announced by the state government

• The revenue authority should verify the authenticity of the land through the respective District Collectors/Magistrates. In order to protect the interest of land owner, the State may decide the amount of lease rent for the land along with annual escalation provisions.

• Nodal agency will inform the District Collector/District Magistrate from time to time, about the requirement of land and get in touch with the farmers to lease their land for the purpose.

Role of Banks for Access to Financing

• Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and the remaining amount (other than subsidy) can come from loan.

• SIAs will make special efforts to organize events like Bank Mela at block and district levels and sensitize the banks to the need of farmers for accessibility of finance under the scheme.

• Concessional financing will be available for solarisation of agriculture pumps as RBI has already included this component under priority sector lending and MoAFW has included community level solarisation under Agriculture Infrastructure Fund.

When asked to furnish component wise responsibilities of different stakeholders in the implementation of the Scheme, the Ministry submitted as under:

Component	**Roles of State Implementing Agency (SIA)**	**Role of Centre (Ministry)**	**Specific roles of different stakeholders**
Component A	i.) SIA will coordinate with State/UT, DISCOM and farmers for implementation of the scheme. ii.) SIA will assist the farmers in project development activities including formulation of DPR, PPA/EPC contracts, getting funds from financial institutions, etc iii.) SIAs will provide the handholding support required by farmers/developers, like	i.) MNRE will provide Procurement Based Incentive (PBI) to the DISCOMs @ 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower, for buying solar/ other renewable power under this scheme. ii.) The PBI will be given to the DISCOMs for a period of five years from the	**DISCOMS** i.) The DISCOMs shall aggregate the demand and send their proposal for sanction under the scheme along with details on their readiness to implement the scheme, to MNRE. ii.) Implementing Agencies will ensure transparency & objectivity in allocating capacity

	availing financing from banks, etc. It will also coordinate with District Authorities for ease of implementation. iv.) A State level Committee under the chairmanship of Principal Secretary (Renewable Energy/Energy) will be setup by the participating SIA of that State. The committee will be responsible for settlement of any issues arising during selection of solar/ other renewable energy-based power plants and their implementation. v.) SIA will be responsible for coordinating/organizing the quarterly meetings of the State Level Committee. vi.) SIAs shall ensure publicity of the scheme and create awareness through advertisements etc, and monitor the implementation of the scheme.	Commercial Operation Date of the plant.	iii.) The DISCOMs will ensure "must-run" status to the solar/ other renewable power plants installed under this scheme and will keep the feeders 'ON' during sunshine hours of a day. iv.) DISCOM shall act as facilitator to the beneficiaries in implementation of this scheme. **Farmer as Renewable Power Generator (RPG)** i.) RPG will be responsible for signing PPA and installing the plant as per provisions of scheme guidelines ii.) RPG must adhere to applicable rules and regulations and make necessary compliances towards proper commissioning and operation of the plant during the PPA period.
Component B	i.) The States will call for tender for installation of solar water pumping system through the SIAs or any other agency nominated by the State Government	i.) Based on the demand received from SIAs, MNRE will allocate quantity of pumps to the implementation	**Empaneled Vendors** i.) Selected vendors shall be responsible for design, supply, installation and commissioning of solar

	ii.) The State Government will provide a subsidy of at least 30% iii.) In case the State Government is not in a position to give its share of subsidy of 30% but farmers are willing to set up solar water pumping system with the Central Financial Assistance only, the farmers are permitted to do so iv.) The SIAs are also responsible for creating publicity for scheme awareness in their State/UTs and identification of potential beneficiaries. v.) The implementing agency would be responsible for monitoring include timely installation and functioning of the pumps. vi.) The Implementing Agencies will be responsible for overall installation of solar pumps, ensure timely O&M, and report periodical progress to MNRE	agencies in the States after approval by a Screening Committee under the chairmanship of Secretary, MNRE. ii.) The Central Government will provide financial assistance of 30% (or 50% for North Eastern Region/Hilly region/Islands) of the Benchmark Cost or the Tender Cost, whichever is lower, of the stand-alone solar Agriculture pump.	agriculture pumps. Vendors will mandatorily provide AMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft.
Component C	i.) The state would Develop an Online portal as centralized portal for land aggregation and announce the land lease rates ii.) The SIA will be responsible for coordination with Banks/FIs to provide		It would be the responsibility of the District Collector/ District Magistrates to ensure that the offline applications received at their end from the framers to lease their land for the installation

	the loan facilities for the required farmer share iii.) SIAs are responsible for selection of feeder for solarisation and demand aggregation for solarisation of pumps under FLS. iv.) It is responsibility of SIA to issue additional instructions / conditions such as minimum solarisation level of feeder for IPS, Issue connectivity standards/ regulations, if required, and facilitate connection to the grid for FLS.		of solar power plants, are shared with DISCOM/SIAs

Criteria for selecting beneficiaries

2.14 When asked about criteria for selecting beneficiaries under each of the three components of the Scheme, the Ministry submitted as under:

The selection of beneficiary is done by the SIAs as per the eligibility criteria of the scheme through their state portals, as follows:

Component A

- Beneficiary should have his own land for installation of renewable energy power plants (REPP) up to 2 MW
- Farmers/Group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/ Water User associations (WUA) etc. can opt for developing the REPP directly or through developer(s).

Component B

- Individual farmers are supported to install standalone Solar Agriculture pumps or replacement of existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available.

- Priority to small and marginal farmers and farmers using micro irrigation .

  Component C

- Under Individual Pump Solarization (IPS) farmers having grid connected agriculture pump are allowed to install solar PV upto two times of the pump capacity (in kW)
- Under Feeder Level Solarization (FLS), States are supported for solarization of agricultural feeder or mixed feeders

  Extensive IEC campaigns are carried out by the Ministry and the states to communicate the scheme details to the potential participants."

BUDGETARY PROVISIONS UNDER THE SCHEME

2.15 When asked to furnish details of Financial Outlay in the scheme the Ministry submitted as under:

Component	**Financial Outlay (Rs in Crore)**
Component-A	3,325
Component-B	11,438
Component-C (IPS)	19,545
Component-C (FLS)	
Total	**34,308**

2.16 When asked to furnish allocated BE/RE and actual expenditure for last five year under the scheme, the Ministry submitted as under:

(Rs in Crore)

Financial year	BE	RE	Expenditure
2019-2020	-	-	151.26
2020-2021	1000.00	210.00	156.43
2021-2022	997.30	690.26	406.05
2022-2023	1715.90	1325.00	801.36
2023-2024	1996.46	1100.00	1000.58
2024-2025	1996.00	NA	1169.34*

*till 30.09.2024

2.17 The expenditure percentage has increased over the years due to various amendments in the scheme guidelines taken by the Ministry for ease of implementation.

2.18 When asked for the justifications for increased BE over the years culminating in Rs. 1996 crores for both 2023-24 and 2024-25 and as to whether such Estimates align with the actual and projected expenditure, the Ministry, submitted as under:

> "Effective implementation of the scheme has led to increased expenditure which has contributed to increasing budget estimate of Rs.1996 crores for both 2023-24 and 2024-2025.In addition to other steps, in December, 2022, the Ministry had issued feeder solarization guidelines whereby instead of solarizing individual pumps, agriculture feeders can be solarized. There is a huge demand for this component and over 33 lakh pumps have been allocated by the Ministry. The gestation period for such projects is 18 months from the date of the issuance of LoA. With the gain in momentum, the BE for 2023-24 and For FY 2024-25 was increased. The BE/RE was estimated based on the installation occurred and projected demand from the states."

2.19 When asked to furnish details of State/ UT-wise Year-wise Fund Released under PM-KUSUM Scheme, the Ministry submitted as under:-

State/ UT-wise Year-wise Fund Released under PM-KUSUM Scheme									
								As on 12-08-2025	
S. No.	State Name	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Total
1	A & N Islands	0	0	0	0	0	0	0	0
2	Andhra Pradesh	0	0	0	0	0	0	0	0
3	Arunachal Pradesh	0	0	0	0.82	2.12	1.91	0	4.84
4	Assam	0	0	0	0	0	0	1.41	1.41
5	Bihar	0	0	0	0	0	0	0	0
6	Chhattisgarh	0	0	0	0	0	0	0	0
7	Goa	0	0	0	0	0	0	0.43	0.43
8	Gujarat	0	3.95	0	7.83	28.72	59.95	199.05	299.5
9	Haryana	0	51.33	161.12	137.95	429.78	303.4	135.74	1,219.32
10	Himachal Pradesh	0	2.8	0	5.85	0	1.73	0	10.38
11	Jammu & Kashmir	0	0	0	15.69	0	12.9	0	28.59
12	Jharkhand	0	16.05	0	20.04	2.36	48.73	16.37	103.54
13	Karnataka	0	1.26	0	0	2.38	0.89	82.15	86.68
14	Kerala	0	0	0	0	28.53	1.72	18.98	49.23
15	Ladakh	0	0	0	0	0	0	0	0
16	Madhya Pradesh	71.07	0	0	0	0.8	0	7.95	79.82
17	Maharashtra	0	0	9.6	247.6	326.22	1,619.00	1,071.70	3,274.12
18	Manipur	0	0.36	0	0.23	0.17	0.17	0	0.92
19	Meghalaya	0	0.28	0	0	0.31	0	0	0.59
20	Mizoram	0	0	0	0	0	0.84	0	0.84
21	Nagaland	0	0	0	0.2	0.18	0	0.02	0.39
22	Odisha	0	0.77	0	0	3.44	0	4.09	8.29
23	Puducherry	0	0	0	0	0	0	0	0
24	Punjab	0	8.28	23.7	31.11	5.41	13.09	10.9	92.49
25	Rajasthan	68.98	52.06	153.49	247.63	49.41	295.2	85.09	951.85
26	Tamil Nadu	11.21	0	20.3	0	2.59	6.48	5.71	46.29

27	Telangana	0	0	0	0	0	0	0	0
28	Tripura	0	3.96	7.36	0.12	17.81	9.31	7.44	45.99
29	Uttar Pradesh	0	15.34	13.73	82.3	92.13	173.01	21.73	398.24
30	Uttarakhand	0	0	0	4	0	15.6	7.1	26.71
31	West Bengal	0	0	0	0	0	0	0	0
32	Funds released to CPSUs for conducitng publicity and awareness activities	0	0	16.75	0	0	0.2	0	16.96
	Total	**151.26**	**156.43**	**406.04**	**801.36**	**992.34**	**2,564.14**	**1,675.85**	**6,747.43**

Achievements

2.20 When asked to furnish details of capacities sanctioned and achievements under the three components of the Scheme, the Ministry submitted as under:-

The capacities sanctioned and achievements under the three components of the Scheme as on **31.07.2025** are as given below:

Components	**Current Targets**	**Allocated to States as on 31.07.2025**	**LOA issued**	**PPA Signed**	**Installation as on 31.07.2025**
Component A (in MW)	10,000 MW	10,000 MW	6255 MW	2386 MW	640.99 MW
Component B (No. of Pumps)	14 lakh	12.72 lakhs (Eq to 6661 MW)	11.2 lakh pumps	-	8.53 lakhs (Eq to 3884 MW)
Component C (No. of Pumps)	35 lakh	36.22 lakhs (Eq to 17820 MW)	32.46 lakh (Eq to 17000 MW)	25 lakh (Eq to 13000 MW)	6.55 lakhs (Eq to 2957 MW)

2.21 When asked to furnish details of state-wise progress, the Ministry submitted as under:-

Progress under PM KUSUM (as on 31.07.2025)

S. No.	State Name	Component-A (MW)		Component-B (Nos)		Component-C (Nos)				
		Sanctioned	Installed	Sanctioned	Installed	Sanctioned (IPS)	Installed (IPS)	Sanctioned (FLS)	Installed (FLS)	Installed (Total)
1	Arunachal Pradesh	0	0	700	604	0	0	0	0	0
2	Assam	2	0	4000	0	0	0	0	0	0
3	Chhattisgarh	330	7	0	0	0	0	10000	0	0
4	Bihar	0	0	0	0	0	0	90000	0	0
5	Gujarat	500	0	18212	12016	0	0	697000	190723	190723
6	Goa	50	0	900	100	0	0	11000	700	700
7	Haryana	158	16.61	197655	161073	0	0	2899	0	0
8	Himachal Pradesh	100	100	1270	959	0	0	0	0	0
9	Jammu & Kashmir	0	0	5000	2955	0	0	0	0	0
10	Jharkhand	0	0	52985	36346	0	0	0	0	0
11	Karnataka	0	0	26365	2388	0	0	628588	25886	25886
12	Kerala	0	0	8	8	9448	2259	22368	10964	13223
13	Ladakh	0	0	1400	0	0	0	0	0	0
14	Madhya Pradesh	1790	52.13	59400	7325	0	0	345000	17823	17823
15	Maharashtra	260	4	555000	423379	0	0	775000	341884	341884
16	Manipur	0	0	450	150	0	0	0	0	0
17	Meghalaya	0	0	2735	98	0	0	0	0	0
18	Mizoram	0	0	1700	40	0	0	0	0	0
19	Nagaland	0	0	265	65	0	0	0	0	0
20	Odisha	90	0	16441	5713	0	0	10000	0	0
21	Puducherry	0	0	72	0	0	0	0	0	0
22	Punjab	0	0	18000	15993	186	0	0	0	0
23	Rajasthan	5250	457.3	162914	106831	2138	2138	400000	57995	60133
24	Tamil Nadu	14	3	5187	4260	5000	0	0	0	0
25	Telangana	1450	0	20000	0	28000	0	0	0	0
26	Tripura	5	0	11114	5082	3600	285	0	0	285
27	Uttar Pradesh	1	1	107266	66487	12000	4264	370000	0	4264
28	Uttarakhand	0	0	3685	1477	0	0	0	0	0
29	West Bengal	0	0	0	0	20	20	0	0	20
30	Andaman & Nicobar Islands	0	0	34	0	436	0	0	0	0

31	Andhra Pradesh	0	0	0	0	0	0	200000	0	0
	Total	**10000**	**640.99**	**1272758**	**853349**	**60828**	**8966**	**3561855**	**645975**	**654941**

2.22 On being asked about the reasons for the huge gap between the number of pumps sanctioned and number of pumps installed, the Ministry, submitted as under:

> "To facilitate the implementation, the Ministry has allowed SIAs to carry out tenders to empanel the vendors. In addition to already installed 5 lakh pumps, Letters of award have been issued for additional 4.5 lakh pumps by the SIAs. Award for remaining number of pumps are in process. Since the gestation period is 24 months, it is estimated that all the allocated quantities would be installed by year end 2026."

2.23 When the Committee sought to know specifically on low installations under Component C (IPS and FLS), the Ministry, submitted as under:

> "The scheme was launched in July 2019. However the initial phase of implementation suffered delays due to COVID 19 and supply chain issues. Based on the feedbacks from the states the scheme guidelines were revised multiple times, last being in January 2024. Now the scheme has picked up and states have done the tender of more than 28 GW. It is estimated that the projects would be completed by March 2026."

2.24 With regard to the inclination of most beneficiaries to avail Component 'B', the Ministry explained the reasons as under:

> " The Ministry has carried out comprehensive analysis of the scheme and guidelines have been modified for smooth implementation. The beneficiaries were more inclined to avail benefits under Component 'B', as it help the farmers to avoid recurring expenses of diesel based pumps. To ensure even implementation of all scheme components, the Ministry has taken the following steps,-

- The Component A has been brought under AIF, which would enable easier access to low cost finance.

- For Component B and Component C (IPS), state share has been made optional. This enables the farmers to benefit from the scheme even in the absence of the availability of the state share.
- Under Component C (FLS), MNRE has issued simplified guidelines to address land-related bottlenecks, milestone-based release of the CFA and sufficient timeline for completion of project.
- The Ministry has carried out various awareness programs from time to time to sensitize farmers."

ENERGY POWER PLANT UNDER COMPONENT

2.25 The Committee has been informed that the detailed procedure for the setting up of renewable energy power plant (REPP) under Component A is already mentioned in the comprehensive revised guidelines issued in January 2024. As per the scheme guidelines:

- The REPP under the scheme would be installed by the farmers on his own land either directly by himself or in partnership with group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA), or through a developer.
- The farmer may provide his land to the DISCOM, which will then be considered as RPG in this case. In such a case, the land owner will get lease rent as mutually agreed between the parties.
- The lease rent may be in terms of Rs. per year per acre of land or in terms of Rs. per unit energy generated per acre of land area.
- The farmer(s) may opt for payment of lease rent directly in their bank account by the DISCOM, from the payment due to the developer
- In case the eligible entities are not able to arrange equity required for setting up the REPP, they can opt for developing the REPP through developer(s) or even through local DISCOM, which will be considered as Renewable Power Generator (RPG) / Eligible Entity.

2.26 To support farmers who face difficulties for easy financing, the Government has recently approved the inclusion of Component A under Agriculture Infrastructure Funds (AIF). This enables farmers to have easy access to subsidized loans.

2.27 When the Committee sought to know the reasons for sluggish pace of implementation of Component A and steps taken to address the issue, the Ministry, in their written reply, submitted as under:

> "Based on the demand of states, the Ministry has already allocated 9110 MW under Component A. Out of this, 4000 MW was allocated in July 2024. The main barrier under this Component was access to low-cost financing. Therefore, this component has been included under AIF in August 2024 which would lead to increase access to low cost financing."

2.28 When asked further to specify the reasons as to why no subsidy is being provided under the Component, inspite of the fact that setting up of solar power plant requires huge investment, the Ministry, in their written reply, submitted as under:

> "For Component A, the central Government provides an incentive of 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower to the DISCOMs, for buying the power produced for a period of five years from the Commercial Operation Date of the plant. The plant can be installed by the farmer or he can provide his land on lease to a developer, who will install the plant. The farmer will sign the PPA with DISCOMs for selling power at Feed in tariff rates which will ensure stable income for farmers."

Financing Provisions in the Scheme guidelines

2.29 MNRE in order to continue to enhance the ease of implementation & based on the feedback from stakeholders has taken steps to accelerate the implementation of the scheme. In this regard, MNRE in January 2024 issued the revised comprehensive scheme guidelines subsuming and simplifying all the earlier guidelines and OMs to ease the implementation of the scheme. The guidelines clearly defined the roles and responsibilities of stakeholders for financing requirement in the scheme.

2.30 As per the information provided by the Department of Financial Services, the bank wise details of Credit report under PM KUSUM are as follows:

(Amount in Rs. crore) Component of PM KUSUM Scheme	No. of Application Received	Sanction		Disbursement		Pending total		No. of Applications Rejected
		No. of Applications	Amt.	No. of Applications	Amt.	No. of Applications	Requested Amt.	
Component 'A'	**286**	**265**	**966**	**257**	**815**	**9**	**43**	**12**
Component 'B'	**876**	**571**	**19**	**556**	**18**	**9**	**0**	**296**
Component 'C'	**92**	**86**	**842**	**78**	**585**	**6**	**26**	**0**
Total	**1,254**	**922**	**1,827**	**891**	**1,418**	**24**	**69**	**308**

2.31 On the query of the Committee regarding CAPEX and RESCO investment models under the scheme, the Ministry submitted as under:

"The key difference between RESCO and CAPEX mode is given below:

CAPEX	RESCO
• In the CAPEX mode, the initial investment is done by the DISCOM/SIA which can be recovered from the savings in the electricity bill within 4 - 5 years	• In the RESCO mode, the initial investment is done by the developer and beneficiary can get cheaper solar power without any investment.

depending upon the tariff applicable. • The current outlay on subsidy being presently provided for supply of electricity to agriculture pumps by State Government can be used to repay the loan in five to six years after which power will be available free of cost and outflow from State Government's exchequer on account of electricity subsidy for agriculture will come to an end.	• For installation of feeder level solar power plants through RESCO model, the developers will be selected on the basis of lowest tariff offered for supply of required solar power for a period of 25 years after taking into account the subsidy being given by Govt. of India. • In the RESCO model the burden of electricity subsidy for agriculture will be reduced to the extent of difference mentioned above and not become zero as in case of CAPEX model, where once the loan is repaid, subsidy support from state Government is no longer required.

2.32 When asked to furnish State-wise details of the number of installations completed under RESCO and CAPEX models, the Ministry submitted as under:

State	**Installed under Component C (FLS) (Nos.) as on 30.09.2024**	**CAPEX/RESCO Models**
Gujarat	1878	RESCO
Goa	700	CAPEX
Kerala	6275	CAPEX
Madhya Pradesh	4569	RESCO
Maharashtra	3650	RESCO
Rajasthan	1474	RESCO

2.33 When asked to furnish details of loan sanctioned under the scheme, the Ministry of Finance (Department of Financial Services) has submitted as under:

(In Rs. Crore)

Components of PM KUSUM Scheme	No. of Applications Received	Sanction		Disbursement		Pending total		No. of Applications Rejected
		No. of Applications	Amt.	No. of Applications	Amt.	No. of Applications	Amt.	
Component 'A'	286	265	966	257	815	9	43	12
Component 'B'	876	571	19	556	18	9	-	296
Component 'C'	92	86	842	78	585	6	26	-
Total	1,254	922	1,827	891	1,418	24	69	308

Till 28.02.2025

2.34 Observing that Banks are not forthcoming to provide loans, the Committee enquired about the guidelines, if any, to banks in this regard. In their written reply, the Ministry of New and Renewable Energy (MNRE), furnished the following information:

> "All the three components of the scheme are now covered under AIF which will enable the farmers to access low cost finance under PM KUSUM. The Ministry issued comprehensive guidelines in January 2024, where the role and responsibilities of stakeholders is clearly defined. The SIAs are the implementing agency and provisions are made to carry out awareness programs and sensitize Banks for easy financing. The Ministry has also carried out an outreach program, 'Bankers Conclave 2024' during May 2024 to sensitize banks and facilitate easy financing in the scheme."

TECHNICAL SPECIFICATIONS OF EQUIPMENT AND INFRASTRUCTURE

2.35 The Ministry has informed that for installation of solar water pumping systems under the PM-KUSUM scheme, the vendors have to follow the technical specifications and standards laid down by MNRE and BIS. The Ministry has already notified the standards at the time of the scheme launch and subsequently amended in March 2023. The Ministry has also notified the quality control orders for solar inverters to

ensure quality of the system installed. During the time of empanelment, the vendors have to submit their solar pump models for testing in Test Labs and submit the test reports. At the time of installation, the vendors must also submit the approved test report of relevant model to SIAs. The solar pumps installed under the scheme are covered with Operation & Maintenance (O&M) for five years, to be provided by the vendors. In case of any failure of solar pumps, the vendors are bound to provide the necessary service and maintenance for five years.

2.36 Elaborating on the infrastructural support available for installation of solar pumps and power plants, the Ministry submitted as under:

> "Under the Component B of the scheme, individual farmers are supported to install standalone Solar Agriculture pumps or replacement of existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available. Also, priority is given to small and marginal farmers and farmers using micro irrigation techniques."

2.37 When asked about the logistics and supply chain challenges related to procurement and distribution of solar equipment, the Ministry stated as under:

> "The vendors are empanelled under the PM-KUSUM in the Centralised and State tenders. The empanelled vendors are responsible for the Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of Off-Grid Solar Photovoltaic Water Pumping Systems (SPWPS), including complete system warranty and its repair and maintenance for 5 Years under the scheme. The logistics and supply chain are the responsibilities of vendors and are monitored by SIAs."

ASSISTANCE AND TRAINING TO FARMERS

2.38 As per the scheme guidelines, vendors have to provide maintenance of the solar pumps for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. Further, as per the tender conditions, in case of any delay in the maintenance beyond the stipulated time schedule, SIA has the right to impose the penalty on the vendors, including encashing the Bank guarantee. In such cases, the pending

maintenance work and the replacement of parts would be done by the SIA based on enchased penalties. The Ministry carries out various awareness programs from time to time to sensitize farmers and to allay apprehensions.

2.39 When enquired about training programmes for beneficiaries with regard to use and maintenance of solar equipment, the Ministry stated as under:

> "As per the scheme guidelines, the vendor has to provide an Operation and Maintenance manual in both English and local language to each SPWPS beneficiary. Further, to ensure timely maintenance of the systems the vendor is required to have one authorized service center in each operational district or cluster of districts as decided by the SIA depending upon a number of installed pumps and a helpline in the local language should be made available. The helpline number shall be indicated on the pump/ controller at a suitable location easily visible to the user. Further, the Vendor has to provide local training to local persons regarding the proper maintenance of Solar Pumps."

COVERAGE OF THE SCHEME, IMPACT AND CHALLENGES

2.40 The scheme is demand driven and capacities are allocated based on demand received from the States/UTs. Under Component A, the availability of farmers' land is key factor for its performance along with access to low cost finance. The states where the state share is available for replacing diesel pumps have shown progress under Component B. Under Component C (FLS), the states with higher subsidies for agriculture feeders are segregating the feeders and implementing the scheme. Few states like Rajasthan, Maharashtra, Haryana etc. are front runners in the implementation of the scheme.

2.41 When asked about reviewing of the progress of implementation, the Ministry of New and Renewable Energy (MNRE) stated as under:

> "The Ministry regularly reviews the progress of the scheme and undertakes mid-course corrections as required. The scheme guidelines also provides for a State level Committee under the chairmanship of Principal Secretary (Renewable Energy/Energy) which is responsible for reviewing the scheme from time to time."

2.42 On the query of the Committee regarding impact of scheme on income levels of farmers, the Ministry stated as under:

> "PM KUSUM has been beneficial to farmers. In addition to enhancing their income levels, the scheme would result in reduction in carbon emission to the tune of 40 million tonnes of CO_2. It is also estimated that at the current level of installation, the scheme is resulting in saving of around 340 million litres of diesel per annum."

2.43 On being asked about challenges being faced by farmers in adopting the scheme, the Ministry of New and Renewable Energy (MNRE) submitted as under:

> "The most common challenge faced by the farmers is the access to easy financing under this scheme. Though all the three components under the scheme are currently included under Agriculture Infrastructure Funds (AIF), the disbursement from banks have been low. Access to right information is also key issue being faced by the farmers during the application process for all the components of the PM KUSUM scheme. The Ministry has taken various steps for ease of implementation of PM KUSUM and reducing the challenges based by the farmers, which inter-alia includes:
>
> • No penalty for any shortfall in solar power generation from solar power plant installed by farmer.
>
> • All the components of the scheme are covered under Agricultural Investment Fund to enable farmers for access to easy financing
>
> • Awareness generation activities through regular advertisement, social media channels, TV and radio, dedicated podcasts, Youtube channel etc.
>
> • The Ministry also operates a toll-free number to provide necessary support to farmers."

2.44 On the query of the Committee regarding inclusion of public representatives for effective implementation of the Scheme, the Ministry stated as under:

> "Hon'ble MPs and other local representative can play a major role in successful implementation of the scheme. The citizens can be motivated to register and

apply in large numbers on the portal. This will lead to increased number of installations in the respective areas. Further, the District Level Committee under the scheme includes two elected representatives from ULBs/PRIs."

Sustainability of the Scheme

2.45 On the query of the Committee regarding plans in place to ensure the long-term sustainability and maintenance of the solar power plants and solar water pumps installed under the PM-KUSUM scheme, the Ministry stated as under:

The Ministry has amended scheme guidelines from time to time to ensure the ease of implementation and long-term sustainability of the installed systems. For the maintenance of the solar power plants and solar water pumps installed under the PM-KUSUM, the following provisions are there in the scheme:

Component A and C (FLS)	Beneficiary/developer and DISCOMs sign a Power Purchase Agreement (PPA) for 25 years. This allows the developers to maintain and operate the system for 25 years.
Component B and C (IPS)	For solar pumps, it is mandatory for the vendors to provide O&M for 5 years from the date of installation.

2.46 On the query of the Committee regarding long-term plans for scaling up or modifying the PM-KUSUM scheme based on its performance and outcomes, the Ministry stated as under:-

Based on the learning's of implementation and feedbacks received from the stakeholders, the Ministry has revised and updated the scheme guidelines and issued comprehensive revised guidelines in January 2024. The major highlights of the steps taken to enable the ease of implementation of the scheme are as follows:

a. Farmers are now exempt from penalties for any shortfall in solar power generation from solar power plants installed under Component A.

b. Component A of the scheme is included under the AIF to provide access to easier financing.

c. States are permitted to solicit their own bids for the installation of standalone solar agricultural pumps under Component B.

d. Parameters for CFA release under Component B have been simplified

e. The state share for Components B and C (IPS) has been made optional

f. MNRE has issued simplified guidelines to address land-related bottlenecks in the FLS program.

g. A milestone-based release of the CFA has been established under Component C (FLS).

h. The overall project timeline for all components has been set at 24 months from the date of the sanction letter, allowing states sufficient time for implementation.

i. The Renewable Purchase Obligation (RPO) has been notified for decentralized power initiatives which enable better off take of PM KUSUM.

All the capacities available under the scheme are fully subscribed. However, as a result of above steps taken, the scheme has gained traction and there is increased demand from the state for allocation of additional pumps.

Aligning of pumps as per requirement of ground water level

2.47 It has been observed that farmers have to opt for greater capacity of water-pumps due to low ground water level. However, the scheme provides central financial assistance up to the 7.5 HP solar pumps, thereby increasing financial burdens on the farmers, if they opt for higher capacity solar pump. In this regard, on the query of the Committee regarding proposal before the Ministry to align capacity of pumps with the size of land and requirement of ground water level accordingly, the Ministry stated as under:

> As per the Standard Operating Procedure (SOP) under the guidelines, the SIA has to conduct a survey of the beneficiary site to decide the type and capacity of the pumps to be installed at the beneficiary site. As per the guidelines of the PM-KUSUM scheme, the size of the pump is to be decided on the basis of the water table in the area, land covered, the quantity of water required for irrigation, and any other parameter that the SIA survey indicates.

Groundwater level

2.48 Explanation of ground water for irrigation has caused severe depletion of ground water level in the country. Many regions/districts in the country have depleted levels of groundwater. In this regard, on the query of the Committee regarding measures taken by the Ministry to ensure that installation of solar pumps in such regions or area do not adversely impact the ground water level, the Ministry stated as under:

> Under the PM-KUSUM scheme, the installation of the new Solar Agriculture pumps is not allowed in Dark zones/black zones. However, existing standalone diesel pumps are allowed to be converted into standalone solar pumps in these areas, provided they use micro irrigation techniques to save water. Further, in order to minimize water usage for irrigation purposes, as per the guidelines, the SIA has to give preference to the farmers who are using Micro irrigation systems or are covered under Micro irrigation schemes or who opt for the micro irrigation systems.

When asked to furnish details of the States having highest number of 'dark zone' areas in descending order, the Ministry submitted as under:-

> (As per the information provided by the Central Ground-Water Board, the state-wise details for the semi-critical, critical, and over-exploited categories as per Ground Water Resource Assessment, 2023 in descending order are given below:-

State Name	**Number of block areas which are Semi-Critical, Critical, & Over-exploited**
Uttar Pradesh	277
Rajasthan	261
Tamil Nadu	183
Punjab	133
Haryana	108
Madhya Pradesh	91
Karnataka	88

Telangana	82
Maharashtra	75
Bihar	68
Gujarat	51
West Bengal	44
Kerala	33
Andhra Pradesh	31
Delhi	29
Chhattisgarh	27
Jharkhand	22
Odisha	9
Ladakh	6
Puducherry	4
Uttarakhand	4
Daman and Diu	2
Assam	1
Chandigarh	1
Dadra and Nagar Haveli	1
Jammu and Kashmir	1
Lakshadweep	1
Andaman and Nicobar Islands	0
Arunachal Pradesh	0
Goa	0
Himachal Pradesh	0
Manipur	0
Meghalaya	0
Mizoram	0
Nagaland	0
Sikkim	0
Tripura	0
Grand total	**1633**

2.49 When asked about the policy for installation of solar water pumps in 'dark zone' areas, the Ministry stated as under:-

> Under the Component B of PM-KUSUM scheme, the installation of the new Solar Agriculture pumps are not allowed in Dark zones/black zones. However, existing standalone diesel pumps allowed to be converted into standalone solar pumps in these areas provided they use micro irrigation techniques to save water.

Modification implemented under Scheme since Inception

Introduction of Feeder Level Solarization

2.50 With the scale-up of the Scheme, a new sub-component under Component-C, Feeder Level Solarization, was introduced. Guidelines for implementation of Feeder Level Solarization were issued on 04.12.2020. With this, the States were allowed to solarize the agriculture feeders with 30% (up to Rs. 1.05 Crore/ MW and Rs. 1.75 Crore/MW for NE and Hilly Regions) CFA from MNRE. Solarization of feeders can be done in either CAPEX or RESCO mode.

Inter-se Transfer of CFA from Component B to Component C

2.51 During implementation, it was observed that there is huge variation between the demand raised by the States for the Components B and C against the targets for FY 2020-21. While the demand was less than the targets under Component-B, it was much more than the targets under feeder level solarisation under Component-C. During a review by Cabinet Secretary on 23.02.2021, it was suggested that MNRE may explore possibility of inter-se transfer of the capacities between the three components keeping the overall CFA within the approved limit. Accordingly, with the concurrence of Department of Expenditure (DoE), inter-se transfer of capacities under Component B and two variants of Component C were permitted vide OM dated 01.08.2022.

Extension till 31.03.2026

2.52 Vide OM dated 01.08.2022, the implementation period of the scheme was extended till 31.03.2026 along with approval to allow higher pump capacity of upto 15 HP to the individual farmers in the North-eastern States; UTs of Jammu & Kashmir

and Ladakh; and the States of Uttarakhand and Himachal Pradesh. However, the CFA for pumps up to 15 HP will be restricted to 10% of the total installations. Total outlay under the Scheme remained at Rs. 34,422 Crore.

2.53 Increase in targets under Component B and C to 49 lakhs pumps

Consequent to DoE approval vide its OM dated 06.09.2023, the Ministry increased the total target under component B & C from 35lakhs to 49lakhs. Therefore, currently, the targets under the various components of the PM-KUSUM scheme under the same budget allocation as on today are as follows:-

Component	**Approved capacity**	**Creation of RE Capacity targeted (GW)**
Component-A	10000 MW	10
Component-B	14 lakh pumps	7
Component-C (IPS)	1.5 lakh pumps	1.12
Component-C (FLS)	33.5 lakh pumps	16.75
Total		34.8

Exemption from State share

2.54 Many states were facing difficulties to access state share for the scheme implementation. In this regard, the Ministry has also received requests from a few states for exemption of state share under PM KUSUM. Subsequently, based on the DoE's approval MNRE vide comprehensive guidelines issued dated 17.01.2024, relaxed the condition of the necessary requirement of the State Share. States can now go ahead with the implementation of the scheme with a Central Share of subsidy with the balance to be borne by the farmers towards the cost of solar pump, where such demand exists.

Recent Developments

2.55 MNRE in order to continue to enhance the ease of implementation & based on the feedback from stakeholders has taken steps to accelerate the implementation of the scheme. In this regard some recent significant steps are as follows:-

a) Revised Guidelines

MNRE in January 2024 issued the revised comprehensive scheme guidelines subsuming and simplifying all the earlier guidelines and OMs to ease the implementation of the scheme. The provision of the centralised tender the component-B of the PM-KUSUM has been relaxed by allowing the State-level tender for the installation of standalone solar pumps and the eligibility criteria for participation in the tender have been expanded to increase the installer base in order to expedite extending benefits under the Scheme. To address the issue of the land under the component-C (FLS), the guidelines have been simplified by making the provision for the formation of the SPV and development of the portal for the land aggregation. To promote the better quality of the installation, the specifications & testing procedures of the solar pumps have been simplified and revised from time to time. Besides, as per the demand received from the states, MNRE has allocated almost all the capacities available under three components.

b) **Inclusion of Component A in Agriculture Infrastructure Fund (AIF)**

To provide the farmers access to subsidized loans under the scheme, Components B & C were included under the Agriculture Infrastructure Fund (AIF) with effect from 25.09.2020. Additionally, as per the request of MNRE Cabinet on 28.08.2024 also approved the convergence of Component-A of PM-KUSUM with AIF for farmer/group of farmers/ Farmer Producer Organizations/ Cooperatives/ Panchayats. To monitor the progress of the disbursement of low-cost financing to farmers, MNRE conducts regular review meetings with Banks/FIs. MRNE also organised a National Bankers Conclave with Banks and Financial Institutions in May 2024 in Mumbai for extensive consultation and enhancing financing options.

c) Awareness and outreach programs

In order to increase awareness about the Scheme and beneficiary participation in the scheme, MNRE is conducting extensive IEC & outreach activities. The list of few workshops to sensitize banks for implementation of PM KUSUM are:

•Bankers Conclave 2024 during May 2024

•National Workshop on PM KUSUM during June 2024

•Outreach and Capacity building program in Component A during December 2024

•Chintan Shivar 2024 during November 2024 with a dedicated session on 'Financing in RE'

•Regional Workshops on RE during January 2025 (One in Mumbai, Other in Jaipur)

•Bankers Conclave 2025 during February 2025 in Mumbai

The Ministry is taking serious steps to disseminate the information to relevant stakeholders, including banks, to increase the lending and implementation of the PM KUSUM scheme.

AGRIVOLTAICS

2.56 Basics of Agrivoltaics

Agrivoltaics is an emerging area that seeks to combine agriculture and solar energy production on the same spot of land. This may be achieved by elevating solar modules and increase the space between rows while continuing agriculture on the ground below or between. Agrivoltaics is also known as Agrophotovoltaics. Agrivoltaics not only reduces land use impact and potential risks of land conflicts but also bears the potential to provide improved conditions for crop growth due to protection against strong solar irradiation, hot temperatures, and improved water availability. Yet, there is no internationally unified definition of agrivoltaics.

2.57 On the query of the Committee regarding potential benefits of agrivoltaics for agriculture sector, the Ministry stated as under:

'Co-locating solar and agricultural could yield several significant benefits to water-energy-food nexus, by maximizing the efficiency of water used for plant irrigation by decreasing evaporation from soil and transpiration from crop canopies, preventing depression in photosynthesis due to heat and light stress, thus allowing for greater carbon uptake for growth and reproduction of plant and increasing PV generation by transpiration cooling from the understorey crops lowering temperatures on the underside of the panels.

The additional benefits of Agrivoltaic systems are

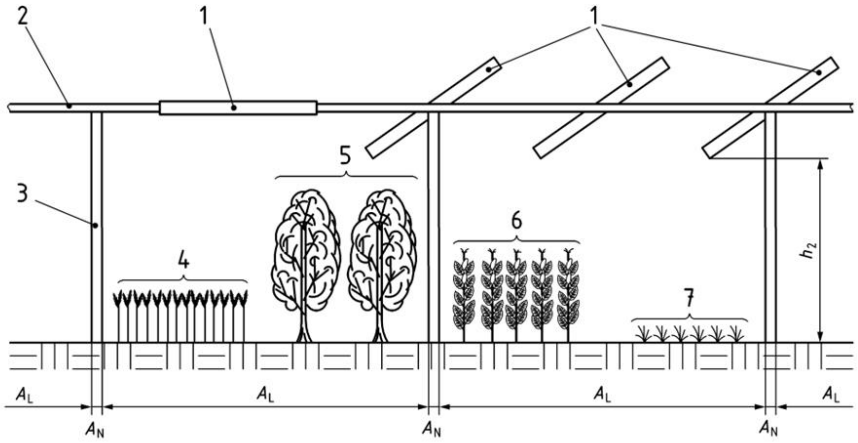
1. Potential additional benefits for agriculture e.g., protection against damage from hail, frost, and drought
2. Increase in income for farmer by leasing land to developer
3. Improved energy access for post-harvest agro processing.'

Table represents agricultural use options in agrivoltaic systems of category I (installation with clear height) and category II (installation close to the ground).

Agrivoltaic systems	Usage	Examples
Category I: **Installation with clear height** Farming **under** the agrivoltaic system	1A: Permanent and perennial crops	Fruit growing, soft fruit growing, viticulture, hops
	1B: Annual and multi-year crops	Arable crops, vegetable crops, temporary grassland, arable forage
	1C: Permanent grassland for mowing	Intensive farm grassland, extensively used grassland
	1D: Permanent grassland used as pasture	Permanent pasture, portion pasture (e.g. cattle, poultry, sheep, pigs and goats)
Category II: **Ground level installation** Farming **between** the agrivoltaic system rows	2A: Permanent and perennial crops	Fruit growing, soft fruit growing, viticulture, hops
	2B: Annual and multi-year crops	Arable crops, vegetable crops, temporary grassland, arable forage
	2C: Permanent grassland for mowing	Intensive farm grassland, extensively used grassland
	2D: Permanent grassland used as pasture	Permanent pasture, portion pasture (e.g. cattle, poultry, sheep, pigs and goats)

Category I is characterized by an installation with clear height (at least 2.10 m) and agricultural use under the system as shown in Fig 1. The solar modules can be mounted at different angles and positions and can partially or completely cover the agriculturally usable area. The agriculturally unusable area is limited to the area of the installation and areas that are no longer available for conventional agriculture while farming the field.

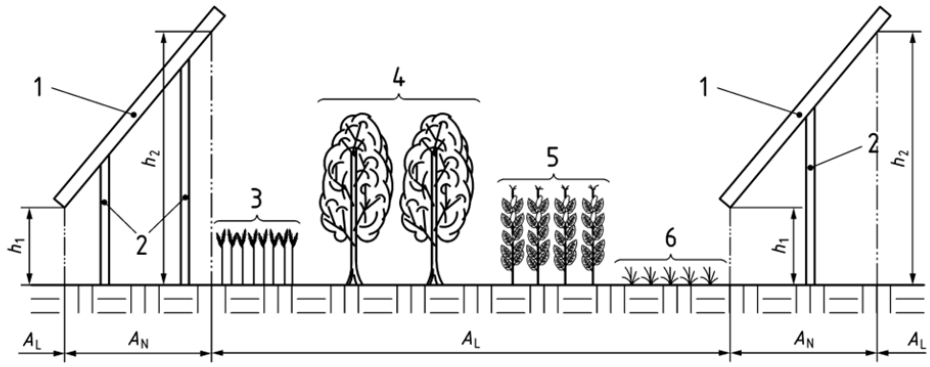
Category II is typical are ground-mounted PV plants with the area between the rows of systems is used for agriculture as shown in Fig 2 and Fig 3.



Key

A_L	agriculturally usable area
A_N	agriculturally unusable area
h_2	clear height over 2,10 m
1	examples of solar modules
2	strut
3	mounting structure
4 to 7	examples of agricultural crops

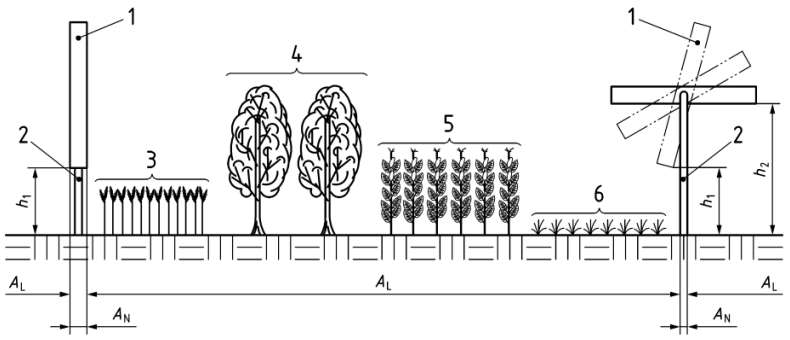
Fig 1: Category I Agrivoltaic system



Key

A_L	agriculturally usable area
A_N	agriculturally unusable area
h_1	clear height under 2,10 m
h_2	clear height over 2,10 m
1	examples of solar modules
2	mounting structure
3 to 6	examples of agricultural crops

Fig 2: Category II (variant1) Agrivoltaic system



Key

A_L	agriculturally usable area
A_N	agriculturally unusable area
h_1	clear height under 2,10 m
h_2	clear height over 2,10 m
1	examples of solar modules
2	mounting structure
3 to 6	examples of agricultural crops

Fig 3: Category II (variant 2) Agrivoltaic system

2.58 When asked to furnish details of Agrivoltaics projects in the country, the Ministry stated as under:

''Agrivoltaics in India is in the technology demonstration phase. Most projects are set up on a pilot basis without any scaling-up plans. The commissioning trend for these projects suggests an uptake in the interest for agrivoltaics in the last decade. A list of major pilot projects of agrivoltaics model across the country are as under:-

Table 2: List of pilot projects on agrivoltaics in India[16]

Sl. No.	Project name	Developer	Capacity (kW)	Type of Agrivoltaic	Type of crops	Commissioning year	Additional remarks
1	GSECL STPS solar Jamnagar, Gujarat	Gujarat State Electricity Corporation	1,000	Interspace/ Overhead	Lady fingers, bottle gourd, coriander, cluster beans, tomato, cucumber,	2016	Adopts drip irrigation

					chili, mung dal		
2	Agri based solar power plant Kutch, Gujarat	Gujarat State Electricity Corporation	1,000	Interspace/ Overhead	Brinjal, cluster beans, coriander, lady finder, bottle gourd, pulses	2016	Adopts drip irrigation
3	Amrol distributed solar power project Amrol, Gujarat	Gujarat Industries Power Corporation	1,000	Interspace/ Overhead	Groundnut, soybean, pearl millet, cotton, green gram, pigeon pea, maize, cluster bean	2016	In collaboration with Anand Agriculture University
4	GIPCL plant in Vastan Surat, Gujarat	GIPCL	1,000	Interspace/ Overhead	Groundnut, soybean, pearl millet, cotton, green gram, pigeon pea, maize, cluster bean	2016	In collaboration with Anand Agriculture University
5	CAZRI plant Jodhpur, Rajasthan	CAZRI Institute	105	Interspace/ below the panel	Brinjal, aloe vera, mung bean, moth bean, cluster bean, cumin, chickpea,	2017	Equipped with rainwater harvesting system for cleaning panels & irrigation

					cabbage, onion		
6	Amity University plant Noida, Uttar Pradesh	Amity University	10	Overhead	Maize, potato brinjal mustard	2017	Automated sprinkler system for panel cleaning
7	Dayalbagh project Agra, Uttar Pradesh	Dayalbagh Educational Institute	200	Overhead	Grams, brinjal, tomato, wheat, spinach, cauliflower, carrot	2020	Panel mounted on towers at 18' feet height provide enough space for machinery use
8	Junagarh Agriculture University Junagarh, Gujarat	Junagarh Agriculture University	7.2	Overhead	Tomato	2017	No requirement of agriculture machines
9	Solar-agri electric model Ahmedabad, Gujarat	Abellon Clean Energy	3,000	Interspace	Bottle gourd, lady finger, watermelon, turmeric, ginger, chilli	2012	Project set up under Gujarat Solar Policy
10	Clean Solar Tandur, Telangana	Mahindra Susten	200	Interspace	lemon grass, brinjals, lady finger, onions, green chillies	2016	The project is part of a 36.6 MW ground mounted project
11	Agro PV model plants Jalogaon,	Jain Irrigation	14.4	Overhead	Banana, rice	2014	Heightened stills allow movement of agriculture machinery

	Maharashtra						
12	NISE plant Gurgaon, Haryana	National Institute of Solar Energy	100	Interspace/ below the panel	Tomato, Chilli, flowers	N.A.	The institute is also planning to develop a vertical PV plant with bifacial modules
13	Cochin International Airport Project Cochin, Kerala	Cochin International Airport	NA	Interspace	Vegetables, cucumber, pumpkin	2015	The project is part of a 40 MW ground mounted solar project
14	Grosolaragrivoltaic Dhule, Maharshtra	Grosolar	7,000	Interspca e/ below the panles	Germanium, onion, vegeatbles	2021	The project was set up under Mukhyamantri Saur Krishi Vahini Yojana

CHAPTER -III

PM SURYA GHAR: MUFT BIJILI YOJANA (PMSG: MBY)

3.1 PM Surya Ghar: Muft Bijli Yojana scheme aims to provide free electricity to households in India. The scheme was launched by Prime Minister Narendra Modi on February 15, 2024. Under the scheme, households will be provided with a subsidy to install solar panels on their roofs. The subsidy will cover up to 40% of the cost of the solar panels. The scheme is expected to benefit 1 crore households across India. It is estimated that the scheme will save the government Rs.75,000 crore per year in electricity cost.

The PMSG: MBY aims to increase the share of solar rooftop capacity and empower residential households to generate their own electricity. The scheme has an outlay of Rs 75,021 crore and is to be implemented till FY 2026-27. The Committee have been informed that the PM Surya Ghar: Muft Bijli Yojana (PMSG: MBY) has been notified with an objective of installation of Rooftop Solar (RTS) on one crore households. This will help in generation of 1 lakh crore units of renewable energy through the capacity installed under the scheme and will result in reduction of 720 million ton of CO2eq emission during the 25 years of life time for rooftop solar projects. This scheme aims to aid in achievement of India's commitment for green climate through its NDCs (Nationally Determined Contributions) at UNFCCC by installation of 30 GW of solar capacity through rooftop solar in residential sector by 2026-27.

3.2 When asked about aim and objectives of PMSG: MBY Scheme, the Ministry submitted as under: -

I. To achieve 1 crore rooftop solar (RTS) installations in residential sector.

II. To help provide free/low-cost electricity to 1 crore households up to 300 units of electricity per month by installation of RTS.

III. To produce renewable electricity of 1 lakh crore units through the solar capacity installed under the scheme, which will result in reduction of 72 crore ton of CO2eq emission during the 25 years of lifetime for RTS projects.

IV. To develop the required enabling ecosystem for RTS projects, including regulatory support, manufacturing facilities, supply chain, vendor network, operation & maintenance facilities, etc., in the country.

V. To boost local economy and employment generation along with enhanced energy security.

VI. To aid in achievement of India's commitment for green climate through its NDCs (Nationally Determined Contributions) at UNFCCC by installation of 30 GW of solar capacity through RTS by 2026-27.

Component of the scheme

3.3 When asked to furnish details of various components under the scheme, the Ministry submitted as under:-

S. No.	Scheme Component
1.	CFA to Residential Consumers
2.	Incentives for Discoms
3.	Model Solar Villages in each district
4.	Incentives for Local Bodies
5.	Payment Security Mechanism
6.	Innovative Projects
7.	Capacity Building (1% of CFA)
8.	Awareness & Outreach (1% of CFA)
9.	Service Charge (1% of CFA)

3.4 When asked to furnish details of various component of the Scheme, the Ministry submitted as under: -

a. CFA to Residential Consumers: The scheme provides central financial assistance (CFA) for RTs capacity upto 3 kW per household as per details given below:

Sr. No.	Type of Residential Segment	CFA	CFA (Special Category States)
1.	Residential Sector (first 2 kWp)	Rs 30,000/kWp	Rs 33,000/kWp
2.	Residential Sector (additional 1 kWp)	Rs 18,000/kWp	Rs 19,800/kWp
3.	Residential Sector (above 3 kWp)	No additional CFA	No additional CFA
4.	GHS/RWA etc, for common facilities for up to 500 kWp (@3 kWp per house)	Rs 18,000/kWp	Rs 19,800/kWp

To avail CFA, it is mandatory to install solar modules manufactured in the country using domestically manufactured solar cells. Further, Ministry has approved list of modules and manufacturers (ALMM) and it is mandatory to procure solar modules only that are approved under the ALMM.

b. Incentive to DISCOMs: The objective of incentivising DISCOMs is to motivate towards installation of RTS. These incentives will help DISCOMs in carrying out activities to promote installation of RTS including regulatory and administrative mechanisms. The total financial outlay for incentives to DISCOM component is Rs. 4,950 crores. The incentives will be 5% of applicable benchmark cost for capacity achieved above 10% and less than 15% of the installed base capacity and 10% of the applicable benchmark cost for capacity achieved beyond 15% of the installed base capacity.

c. Model Solar Village: The objective is to solarize one village per district and promote uptake of solar rooftops in India. The scheme would promote green and clean energy access to electricity in the villages. An amount of ₹ 800 crore has been allocated for this component with a provision of central financial assistance of ₹ 1 crore per model village.

d. Incentive to Local Bodies: The objective is to incentivize Urban Local Bodies (ULBs) & Panchayat Raj Institutions (PRIs) and push the deployment of residential RTS and undertake local mobilization efforts. Rs 1000 crore is allocated for this component. Every installation in residential segment in the jurisdiction of ULB or PRI, for which CFA has been transferred to consumer will be considered for calculating the incentive @ ₹1,000 per installation.

e. Payment Security Mechanism (PSM): Provision of Rs 100 crores to set up suitable PSM for upscaling RESCO model. The payment security fund will insulate RESCO players from delays in settlement of payments from the DISCOMs/contracting party.

f. Support for Innovative Projects: Allocation of Rs 500 Cr has been provisioned to implement pilots for innovations such as Block chain-based peer to peer RTS, Digital solutions for RTS, Smart building materials, RTS with EVs, Grid responsive RTS with battery storage solutions, DISCOM IT systems for RTS management, and promote new & innovative business models, (Behind the Meter Storage, Rent-A-Roof Models, Peer to Peer Sale of electricity etc.)

g. Capacity Building: The objective is to create more than 3 lakh skilled manpower, through fresh skilling, and up-skilling, out of which at least 1 lakh will be Solar PV Technicians. An outlay of 1% of CFA for residential consumers i.e., Rs 657 crore is allocated for Capacity Building. The National Programme Implementing Agency (NPIA) and State Implementation Agencies (SIA) which will formulate a Skilling and Capacity Building Action Plan with the approval of MNRE. Training agencies for capacity building include National Institute of Solar Energy (NISE), MSDE identified Agencies, National Power Training Institute (NPTI) and state institutions.

h. Awareness and Outreach: The objective is to create awareness among electricity consumers with focus on residential sector and to encourage residential consumers to participate in rooftop PV system installation while educating them about the process. The Financial Outlay for the scheme includes a component on Awareness and outreach with a financial budget of Rs 657 crore. NPIA and SIA are responsible to implement this component at National and State level respectively.

i. Service Charges: Provision of Rs. 657 Cr as service charges to national/state implementing agencies for activities including, Demand aggregation activities; Operation of IT System; Creation of working RTS cell/PMUs/PMCs in DISCOMs, SECI and MNRE; Registration process management; Availability and streamlining the process of net-metering /billing; Inspection, monitoring, development of online portal; 3rd party verification of the projects by MNRE, etc.

Procedure for Implementation of Scheme

3.5 When asked to submit details of steps taken to operationalise the scheme, the Ministry submitted as under: -

a) National Portal: The scheme is being implemented through the National Portal (https://www.pmsuryaghar.gov.in) where all consumers can apply, select vendors, mutually decide rate of installation and after due approvals and inspection of system, are eligible for the subsidy claim as per the installed capacity of the RTS system.

b) Vendors have to register with the beneficiaries' Distribution Utility (DISCOM) by submitting an application with a declaration and a Performance Bank Guarantee (PBG) of ₹2.5 lakh valid for at least five years. The vendor is responsible to:

- Conduct a physical survey to assess the RTS capacity.
- Guide beneficiaries on the technical and financial aspects.
- Assist in obtaining necessary approvals and installing net-meters.

- Ensure compliance with technical standards and provide maintenance for five years.
- DISCOMs will take action against vendors providing misleading information or failing to meet the conditions, including blacklisting and forfeiture of the PBG.

3.6 Elaborating further on the issue, the Ministry stated as under:-

REC Limited is the Registering Authority for National Registration and multi-state registration at the National level. The vendors have to submit a bank guarantee of Rs 25 Lakh for the National registration and a bank guarantee equivalent of Rs 2.5 lakh per State/UT under which registration is being sought for multi-state registration.

3.7 When asked to furnish State-wise details of vendors registered under the scheme, the Ministry stated as under: -

"This number has increased significantly from ~4000 at the launch of the scheme, creating several jobs in the supply chain and rooftop solar ecosystem. State-wise details of vendors registered under the scheme are as follows: -

S No.	State	Vendors
1	Andaman and Nicobar Islands	22
2	Andhra Pradesh	771
3	Arunachal Pradesh	21
4	Assam	813
5	Bihar	451
6	Chandigarh	87
7	Chhattisgarh	321
8	Goa	63
9	Gujarat	1,566
10	Haryana	530

11	Himachal Pradesh	125
12	Jammu and Kashmir	270
13	Jharkhand	118
14	Karnataka	418
15	Kerala	1,211
16	Ladakh	25
17	Lakshadweep	6
18	Madhya Pradesh	779
19	Maharashtra	3,241
20	Manipur	34
21	Meghalaya	31
22	Mizoram	15
23	Nagaland	29
24	NCT of Delhi	170
25	Odisha	439
26	Puducherry	106
27	Punjab	324
28	Rajasthan	961
29	Sikkim	10
30	Tamil Nadu	922
31	Telangana	370
32	The Dadra & Nagar Haveli and Daman & Diu	65
33	Tripura	55
34	Uttarakhand	552
35	Uttar Pradesh	3,078
36	West Bengal	162
	Total	**18,161**

3.8 When asked about steps being taken to ensure credibility of vendors empanelled under the Scheme, the Ministry stated as under: -

"To enhance consumer confidence and ensure high-quality installations, the PM Surya Ghar: Muft Bijli Yojana includes a comprehensive Vendor Rating Programme. This framework evaluates and rate vendors based on consumer feedback, quality assessments, and techno-financial evaluations. The rating system will help consumers make informed choices and encourage vendors to adhere to industry best practices".

Governance Framework for implementation of scheme

3.9 On the query of the Committee regarding Governance Framework for implementation of scheme, the Ministry submitted as under:-

"The scheme's implementation framework includes the constitution of Group of Ministers to provide overall direction and coordination for the scheme, a Steering Committee chaired by Cabinet Secretary, a State Level Coordination Committee headed by the Chief Secretary of State/Advisor to Administrator of UTs and a District Level Committee headed by the District Magistrate/District Collector. The scheme is being implemented through a Mission Directorate and REC Limited has been named as the National Programme Implementing Agency (NPIA) for the Scheme and the respective DISCOMs are designated as State Implementing Agencies (SIAs) in their respective operational areas".

Progress of the scheme

3.10 The scheme is expected to benefit 1 crore households across India. There are no region-specific targets notified under the scheme. However, States/UTs have been requested to notify installation targets for the concerned State/UT.When asked to furnish State-wise details of targets set under the scheme, the Ministry submitted as under: -

Several states have set targets for themselves for PMSG installations, totalling to 1.10 crore. States-wise details are as follows: -

S. No.	State	State Targets
1	A&N	3,000
2	Andhra Pradesh	10,00,000
3	Arunachal Pradesh	9,970
4	Assam	2,18,000
5	Bihar	2,88,000
6	Chandigarh	43,000
7	Chhattisgarh	5,00,000
8	DNH and D&D	1700
9	Goa	4,225
10	Gujarat	10,00,000
11	Haryana	1,00,000
12	Himachal Pradesh	50,000
13	Jammu & Kashmir	83,500
14	Jharkhand	21,000
15	Karnataka	1,02,141
16	Kerala	10,00,000
17	Ladakh	4,000
18	Lakshadweep	1,634
19	Madhya Pradesh	6,00,000
20	Maharashtra	20,00,000
21	Manipur	25,000
22	Meghalaya	833
23	Mizoram	13,000
24	Nagaland	10,938
25	NCT of Delhi	2,30,000
26	Odisha	3,00,000
27	Puducherry	6,000
28	Punjab	30,000
29	Rajasthan	5,00,000
30	Sikkim	25,000
31	Tamil Nadu	1,80,000
32	Telangana	1,15,000
33	Tripura	3,667
34	Uttar Pradesh	25,00,000
35	Uttarakhand	40,000
	Total	**1,10,09,608**

3.11 On this issue the Ministry further stated as under: -

State of Tripura has set target of 11 MW for residential sector and West Bengal is yet to declare the target.

3.12 When asked to furnish State-wise details of Registration and Application Status, the Ministry submitted as under: -

Sl. No.	State/UT wise Registration and application status| 10-10-2024		
	State	Registration Status (Nos.)	ApplicationStatus (Nos.)
1	Andaman and Nicobar Islands	939	60
2	Andhra Pradesh	5,96,918	52,519
3	Arunachal Pradesh	1,131	74
4	Assam	17,27,588	2,58,417
5	Bihar	9,24,397	50,348
6	Chandigarh	3,101	300
7	Chhattisgarh	2,10,424	8,343
8	Goa	10,048	4,003
9	Gujarat	11,57,238	2,87,642
10	Haryana	4,29,888	1,43,729
11	Himachal Pradesh	1,51,975	3,366
12	JAMMU and KASHMIR	2,86,324	7,195
13	Jharkhand	2,50,446	5,647
14	Karnataka	4,56,729	56,899
15	Kerala	2,35,978	74,338
16	Ladakh	2,892	304

17	Lakshadweep	529	152
18	Madhya Pradesh	5,19,575	37,266
19	Maharashtra	15,43,788	4,26,289
20	Manipur	2,466	492
21	Meghalaya	7,843	1,429
22	Mizoram	2,944	500
23	Nagaland	1,165	224
24	NCT of Delhi	22,256	6,131
25	Odisha	12,61,849	67,203
26	Puducherry	19,256	816
27	Punjab	1,16,615	8,902
28	Rajasthan	4,45,054	1,64,913
29	Sikkim	404	21
30	Tamil Nadu	9,60,785	71,217
31	Telangana	1,15,933	15,477
32	The Dadra and Nagar Haveli and Daman and Diu	4,355	127
33	Tripura	9,724	888
34	Uttar Pradesh	18,94,989	2,65,666
35	Uttarakhand	1,42,109	21,240
36	West Bengal	3,53,420	23,923
	Total	**1,38,71,075**	**20,66,060**

3.13 With regard to State-wise details of the number of rooftop solar system installations, the Ministry, furnished the following information:-

"Under the scheme, 58.58 lakh applications have been submitted on National Portal and 17.01 lakh households have been benefited with installation of rooftop solar as on 10 August 2025".

The State/UT wise details are as under: -

PMSG: MBY State/UT wise Implementation Status as on 10.08.2025

S. No.	State/UT	No. of Applications	No. of Households Benefitted
1	Andhra Pradesh	1399069	44013
2	Arunachal Pradesh	128	0
3	Assam	379914	30755
4	Bihar	87192	10081
5	Chhattisgarh	48598	5783
6	Goa	5288	1011
7	Gujarat	515686	560926
8	Haryana	188502	30935
9	Himachal Pradesh	9452	3837
10	Jharkhand	10225	742
11	Karnataka	223954	17114
12	Kerala	183494	130982
13	Madhya Pradesh	92328	55715
14	Maharashtra	691487	404328
15	Manipur	1224	460
16	Meghalaya	2539	22
17	Mizoram	1055	443
18	Nagaland	592	41
19	Odisha	128236	11251
20	Punjab	19512	8263
21	Rajasthan	296917	68717
22	Sikkim	96	10
23	Tamil Nadu	97138	41635
24	Telangana	57341	24125
25	Tripura	6467	703
26	Uttarakhand	72899	40730
27	Uttar Pradesh	1220955	189443

S. No.	State/UT	No. of Applications	No. of Households Benefitted
28	West Bengal	30574	791
29	Andaman and Nicobar Islands	331	84
30	Chandigarh	1583	621
31	Jammu and Kashmir	66864	9044
32	Ladakh	1131	726
33	Lakshadweep	923	536
34	NCT of Delhi	12653	5494
35	Puducherry	2331	1375
36	Dadra & Nagar Haveli and Daman & Diu	1864	401
	Total	**58,58,542**	**17,01,137**

3.14 When enquired about the details of the States where majority of the applications have been received and status of installations against those applications, the Ministry stated as under:

"As on 10.10.2024, the total number of installations are 4.76 Lakh. The details of the States with more than one lakh Applications and Installations are:

1. Maharashtra: 4.26 Lakh Applications | 93,570 Installation
2. Gujarat: 2.87 Lakh Applications | 2.22 Lakh Installation
3. Uttar Pradesh: 2.65 Lakh Applications | 41,223 Installation
4. Assam: 2.58 Lakh Applications | 1453 Installations
5. Rajasthan: 1.64 Lakh Applications | 13,615 Installations
6. Haryana: 1.43 Lakh Applications | 7,210 Installations"

3.15 On the query of the Committee regarding reasons for the gap between registrations and installations, the Ministry stated as under:

"The main reasons for the gap between registered consumers and completed installations are as follows:

1. In many States/UTs, the electricity tariff for domestic consumers is quite low (zero in some cases).

2. Some consumers don't have roofs suitable for rooftop solar installation.
3. Limited availability of approved vendors in certain regions.

   Awareness activities are being carried out to bridge the gap between registrations and installations. Further, new vendors are being added and capacity building of vendors (existing/new) is also being carried out."

3.16 When the Committee sought to know the strategy to increase participation among residential consumers, the Ministry, stated as under:

> "Ministry is undertaking multipronged strategies to increase participation in PMSG: MBY. These includes an extensive awareness and outreach campaign at Central and State level with activities like TVC, Radio Jingle, a robust capacity building programme, an impactful vendor rating system, extensive collaboration with Banks and Department of Financial Services to enhance ease of financing. This is supplemented by handholding of DISCOMs along with continuous monitoring and feedback-based improvement in the portal in consultation with States."

3.17 With regard to the process for application, approval and installations, the Ministry stated as under:

> "PMSG: MBY streamlines the application, approval, and installation process through a centralized online portal, single-window clearance, and digital verification, reducing paperwork and delays. The portal has an authorized vendor network for quality installations and an automated subsidy disbursement process."

Financial Progress under the Scheme

3.18 When asked to elaborate on the financial outlay of Rs. 75,000 crore, the Ministry, submitted as under:

“The component wise breakup under PMSG: MBY scheme is as follows:

PMSG Scheme Component	**Rs (in Crores)**
CFA to Residential Consumers	65700
Incentives for Discoms	4950
Incentives for Local Bodies	1000
Model Solar Villages in each district	800
Service Charge	657
Capacity Building	657
Awareness & Outreach	657
Innovative Projects	500
Payment Security Mechanism	100
	75021

3.19 When asked to furnish details of financial allocations and actual expenditure under the scheme since inception, the Ministry submitted as under: -

BE of Rs 6250 crores were allocated for PM Surya Ghar Muft Bijli Yojana for FY 2024-25. Budget was increased to Rs. 11,100 crores during the RE Stage for FY 24-25. Against RE of Rs. 11,100 crores, approximately Rs. 9,278.43 crore has been made available under various budget heads of the Scheme. As of 31.03.2025, an expenditure of Rs. 7822.92 crore (around 95% against the final RE) has been incurred against the final RE of Rs 8188.02 crores. A Budget Estimate (BE) of ₹20,000 crores has been allocated to the PM Surya Ghar Muft Bijli Yojana for FY 2025-26.Year-wise details of allocation and expenditure are as follows:-

(Rs. In Crore)

S. No.	Year	Budget Estimate (BE)	Revised Estimate (RE)	Actual expenditure
1.	2024-25	6250	11000	7822.92
2.	2025-26	20000	-	7,158.30*

*till 10.08.2025

Central Financial Assistance/Subsidy

3.20 There is provision of subsidy under the scheme for e domestic consumers to install solar panels on their roofs. The subsidy will cover up to 40% of the cost of the solar panels. The scheme is expected to benefit 1 crore households across India. On being asked by the Committee to elaborate the rate of subsidies and financial incentives under the scheme, the Ministry, stated as under:

"As per the Guideline for CFA under PMSGMBY issued by Ministry, the scheme provides a CFA of 60% of system cost for 2 kW systems and 40% of additional system cost for systems between 2 to 3 kW capacity. The CFA will be capped at 3 kW. At current benchmark prices, the CFA for the scheme is as follows:

1. Residential Sector (first 2 kWp of RTS capacity or part thereof)- Rs. 30,000/ kWp (CFA- other States) and Rs. 33,000/kWp (CFA for Special Category States)
2. Residential Sector (with additional RTS capacity of 1 kWp or part thereof)-Rs. 18,000/ kWp (CFA- other States) and Rs. 19,800/kWp (CFA for Special Category States)
3. Residential Sector (additional RTS capacity beyond 3 kWp)-No additional CFA (CFA- other States) and No additional CFA (CFA for Special Category States)
4. Group Housing Societies/ Residential Welfare Associations (GHS/RWA) etc., for common facilities including EV charging up to 500 kWp (@3 kWp per house)- Rs. 18,000/ kWp (CFA- other States) and Rs. 19,800/kWp (CFA for Special Category States)".

The Ministry also informed about provision for financial incentives for other stakeholders under the scheme. When asked to furnish details, the Ministry submitted as under

- Incentives for DISCOMs- The scheme with total budget outlay of Rs. 4,950 Crore provisions incentives to the DISCOMs.
- Incentives for Local Bodies- The scheme with total budget outlay of Rs 1000 Crore has provision of providing incentive to local bodies @ Rs 1000 per installation."

3.21 When asked to furnish details State/UTs – wise details of Central Financial Assistance released under the scheme, the Ministry submitted as under:

as on 10.08.2025

S. No.	**State/UT**	**CFA Released (in No.)**	**CFA Released (Amount in Rs. Crore)**
1	Andhra Pradesh	36096	278.56
2	Arunachal Pradesh	0	0.00
3	Assam	23505	198.95
4	Bihar	8536	65.65
5	Chhattisgarh	3388	26.03
6	Goa	766	6.01
7	Gujarat	391051	3059.16
8	Haryana	27838	205.88
9	Himachal Pradesh	3297	28.18
10	Jharkhand	647	5.01
11	Karnataka	10521	83.41
12	Kerala	115493	900.86
13	Madhya Pradesh	49318	383.00
14	Maharashtra	227313	1802.52
15	Manipur	396	3.38
16	Meghalaya	21	0.12

S. No.	State/UT	CFA Released (in No.)	CFA Released (Amount in Rs. Crore)
17	Mizoram	385	3.25
18	Nagaland	28	0.23
19	Odisha	9648	73.52
20	Punjab	7358	57.09
21	Rajasthan	59671	464.25
22	Sikkim	9	0.08
23	Tamil Nadu	33299	249.93
24	Telangana	14892	118.10
25	Tripura	579	4.85
26	Uttarakhand	37623	322.42
27	Uttar Pradesh	165940	1264.57
28	West Bengal	121	0.91
29	Andaman and Nicobar Islands	60	0.47
30	Chandigarh	537	4.10
31	Jammu and Kashmir	7812	66.69
32	Ladakh	651	5.57
33	Lakshadweep	510	4.38
34	NCT of Delhi	2517	21.28
35	Puducherry	1229	9.43
36	Dadra & Nagar Haveli and Daman & Diu	379	2.95
	Total	**12,41,434**	**9,720.77**

3.22 With regard to the procedure for determining Central Financial Assistance (CFA) for each residential segment, the Ministry, stated as under:

"The Central Financial Assistance (CFA) under the PMSG: MBY is determined based on the solar PV module capacity, typically covering a significant part of the installation cost. Additionally, certain States/UTs provide their top-up subsidies, further reducing cost for residents. Together, the central and state

subsidies can significantly lower the expense for beneficiaries and enhance the feasibility of the adoption."

3.23 On the query of the Committee regarding the rationale behind not providing CFA for installations above 3KW, the Ministry stated as under:

"The cap on additional CFA for installations above 3 kWp is based on the rationale that larger systems are often pursued by higher-income households with better access to financing. By focusing CFA support on installations up to 3 kWp, the scheme aims to make solar energy more accessible to a wider section of society, particularly those who may not have extensive financial resources. This approach ensures that the subsidy benefits are distributed more equitably among residential users."

3.24 On the query of the Committee regarding steps taken to create awareness about the scheme including CFA, the Ministry stated as under:

"The Ministry is carrying out various awareness and outreach activities in order to reach out to the potential beneficiaries. The activities already carried out includes door to door campaigns, TV Commercials, radio jingles, audio visual played in theaters, extensive outdoor media campaign, Print advertisement, NukkadNataks, beneficiary testimonials to create neighborhood effect, website banners, LED screens in Common Service Centers (CSCs), Railway Stations. Apart from this, grass root activations and community engagement has also been planned with participation from local representatives through Surya Rath, NukkadNataks. Further, Video Podcasts of stakeholders, tutorial Videos for Consumers, Vendors, DISCOMS, Bankers and Solar Panel Installers, Influencer Marketing has also been planned."

3.25 On the query of the Committee regarding effectiveness of incentives being provided to DISCOMs and local bodies in terms of achieving its objectives, the Ministry stated as under:

"Incentives to DISCOMs have been provisioned to provide resources to the DISCOMs to participate in IEC and branding activities, create conducive regulatory and administrative mechanisms to ensure adherence to timelines for approvals (feasibility, commissioning, inspection, grievance redressal etc.),

achieve targets for implementation, ensuring timely availability of net meters, saturation of RTS on government buildings, utilization of incentive for RTS dedicated activities, incentivizing field level staff through recognition and rewards and other measures that are to be undertaken by the State DISCOMs or other agencies for RTS deployment. It is expected that the incentives to DISCOMs will encourage them to take initiatives for expeditious implementation of the scheme. Further, the incentive have also been provisioned for local bodies so that they are able to push the deployment of residential rooftop solar within their respective jurisdictions and under local mobilization efforts to maximize the number of installations under PMSG:MBY. Since the launch of the scheme in February, around 4.7 lakh installations have been achieved."

Additional subsidies announced by States/UTs

3.26 On the query of the Committee being provided by the State/UTs Government for the applicants under the scheme, the Ministry submitted following details:-

S. No	State/UT	Subsidy
1.	Uttar Pradesh	Rs 15,000/kW up to 2 kW
2.	Haryana	Up to Rs 25,000/kW up to 2 kW (only for poor families)
3.	Goa	50% till 10 kW, 10% till 30 kW
4.	DNH & DD	Rs.10,000/kW up to 3 kW
5.	Ladakh	Rs. 20,000 /kWpupto 2 kWp; Rs. 10,000/kWp for additional 1kW
6.	Delhi	Rs. 2,000/kW upto 5 kW, generation-based incentive
7.	Assam	Rs. 15,000/kW up to 3kW; capped at Rs. 45,000

8.	Odisha	Rs 25,000/kW for upto 2kW and 10,000 for extra 1 kW i.e 60,000 upto 3kW
9.	J&K	Rs 3,000/kW upto 3kW
10.	Lakshadweep	Rs 45,000/kW upto 2kW, Rs 27000 for next 1kW
11.	A & N Islands	Rs 45,000/kW upto 2kW, Rs 27000 for next 1kW
11.	Mizoram	Within AMC Area: Rs 12,000/kW, up to 100 KM: Rs 14,000/kW, up to 200 KM: Rs 16,000/kW, Beyond 200 KM, Rs 18,000/KW. Subsidy up to 10 kW for all cases.
13.	Rajasthan	Rs 17,000 per system upto 5 kW
14.	Nagaland	Rs 50000/- upto 3 KW

Financing by Banks and loan applications under the Scheme

3.27 The scheme provides for easy, collateral free loans from Public Sector Banks at 6.5% rate of interest, at present, that can be accessed seamlessly through the Jan Samarth portal under the Department of Financial Services which has been integrated with National Portal.

Parameter	Details
Loan amount	Solar Rooftop up to 3 kW, Maximum Loan Amount: 2.00 lakh
Eligibility	All Individuals with roof rights & sufficient roof area; No Electricity Bill overdue.
Interest Rate and Tenor	REPO + 50 bps (6.0% + 50bps = 6.50%) for 10 years
Security	Collateral free, no processing fees
Moratorium	6 Months (for installation) from the date of disbursement

3.28 On the query of the Committee regarding availability of loans to supplement the subsidies for higher installation costs, the Ministry stated as under:

> "Loan of up to 90% of project cost of rooftop solar project for residential category is provided by Public Sector Banks under the Scheme. The consumer may also opt for financing through the National Portal. The loan products of various banks and financial institutions are available on the National Portal and the consumer may opt for any of them through integration provided by Jan Samarth Portal or through other Financial Institutions directly. The Public Sector banks are providing loan facility at 7% interest rate with 10 years tenure upto 3kW capacity, without collateral. For installations of above 3 kW capacity, the loans are available at higher rate of interest."

3.29 When asked to furnish details of loan provided under the Scheme, the Ministry of Finance (Department of Financial Services) has furnished the following information with regard to progress of loans under the Scheme:

As on 10.02.2025

Number of Applications

Bank Category	Sourced	Sanctioned	Disbursed	Rejected	Customer Not Interested	Under Process
Public Sector Banks	2,49,723	1,34,377	1,05,511	58,778	17,212	37,804
Major Pvt Banks@	65	43	17	7	7	8
Total	**2,49,788**	**1,34,420**	**1,05,528**	**58,785**	**17,219**	**37,812**

Amount (₹ Crores)

Bank Category	Sourced	Sanctioned	Disbursed	Rejected	Customer Not Interested	Under Process
Public Sector Banks	4,972.09	2,624.36	2,001.40	1,194.12	340.71	781.38
Major Pvt Banks@	1.62	1.0	0.3	0.19	0.2	0.23
Total	**4,973.71**	**2,625.36**	**2,001.70**	**1,194.31**	**340.91**	**781.61**

3.30 On the query of the Committee regarding issues being faced in processing and disbursement of loans, the Ministry, stated as under:

> "The State/UT government have been sensitized to have regular review of PMSG: MBY at SLBC level. As per feedback received, particular bottlenecks in the loan processing or disbursement stage are:

a) Owner of property and electricity bill holder are different

b) In rural areas ownership of house is not clear or documented."

3.31 When asked to furnish Bank-wise details of loan application, approval and disbursal under the scheme since inception, the Ministry submitted as under: -

Till date, 5.31 lakh loan applications have been received under the scheme, of which 2.82 lakh applications have been sanctioned, out of which loan for 1.29 lakh applications have been disbursed. Bank wise status of loan applications under PMSG: MBY scheme are given as under

Bank wise status of loan applications under PMSG: MBY scheme as on 19.05.2025

Sl. No.	State Name	Application Sourced (Nos.)	Sanctioned (Nos.)	Disbursed (Nos.)
1	State Bank of India	2,52,496	1,40,899	36,753
2	Punjab National Bank	62,863	35,159	25,471
3	Bank of Baroda	51,898	29,487	24,321
4	Canara Bank	41,132	22,193	10,261
5	Union Bank of India	28,194	12,932	8,641
6	Bank of India	20,437	9,362	6,124
7	Indian Bank	17,839	7,863	3,261
8	Bank of Maharashtra	10,755	6,078	3,627
9	Central Bank of India	8,993	3,173	1,918
10	UCO Bank	8,583	4,416	2,142
11	Indian Overseas Bank	5,521	2,373	1,478
12	Punjab & Sind Bank	1,869	761	616
	Sub-Total (X)	**5,10,580**	**2,74,696**	**1,24,613**

13	**Other Banks (Y)**	20,619	7,544	4,850
	Grand-Total (X+Y)	**5,31,199**	**2,82,240**	**1,29,463**

Cumulative Solar Module Manufacturing Capacity in the Country

3.32 PMSG:MBY scheme has made it mandatory to install solar modules manufactured in the country using domestically manufactured solar cells to avail Central financial assistance.In this regard, the Ministry has approved list of modules and manufacturers (ALMM) and it is mandatory to procure solar modules only that are approved under the ALMM.

3.33 When asked about details of Solar panel or Solar module manufacturing capacity of the Country, the Ministry stated as under:

(i) The solar module manufacturing capacity in the country, as per the capacity listed in Approved List of Models and Manufacturers (ALMM), is around 58 GW per annum.

3.34 When asked about details of cumulative solar module manufacturing capacity in the country, the Ministry submitted as under: -

Year	**2019-20****	**2020-21***	**2021-22***	**2022-23***	**2023-24***
Cumulative Solar Module Manufacturing Capacity in India (in MW)	~8,000	8,182	11,497	22,389	37,694 (as on 31.03.2024)

**Capacity mentioned for FY 2020-21 and onwards is as per the capacity listed in ALMM;*

***Capacity mentioned in FY 2019-20 is as per Industry's feedback.*

3.35 Further elaborating on the issue, the Ministry stated as under: -

> The Ministry has been consistently bringing out policies to enhance domestic manufacturing capabilities of solar cells, solar module and other related components to reduce dependence on imports. Various initiatives taken, *inter-alia*, include Production Linked Incentive Scheme, Domestic Content Requirement (DCR) for subsidized schemes, Preference to 'Make in India' in Public Procurement, Imposition of Basic Customs Duty on import of solar PV cells & modules.

Import of Solar Modules in the Country

3.36 The details of solar modules imported in the country during the last five financial years, as per the website pertaining to Export-Import Data Bank of Department of Commerce, is given below:

Year	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
	Cells & Modules	Cells & Modules	Modules	Modules	Modules
Import Value (in million USD)	1684.29	571.65	3363.20	943.53	4353.51

Availability of Net Meters

3.37 Net metering is crucial for the PM Surya Ghar: Muft Bijli Yojanaas it allows consumers to generate their own electricity and offset their energy consumption, leading to reduced electricity bills and potentially earning credits for excess energy fed back into the grid. In this regard, on the query of the Committee regarding availability of net-meters, the Ministry stated as under:-

> "It has been observed that the timely availability and installation of net meters is a concern in some of the States/UTs. The Energy Departments of States/UTs

have been requested to ensure sufficient stock of tested net meters. It has also been requested that the net meter agreement between the DISCOM and the consumer is digitized. Further, the DISCOMs have been requested to prioritize installation of smart meters in RTS households."

MODEL SOLAR VILLAGE AND SOLARIZATION OF GOVERNMENT BUILDINGS

Solar Model Village:

3.38 Model Solar Village component of scheme aims to solarize one village per district and promote uptake of solar rooftops in India. The scheme would promote green and clean energy access to electricity in the villages. When asked to furnish details of steps taken to operationalise this component, the Ministry submitted as under: -

"Operational guidelines for the Model Solar Village (MSV) component of the scheme have been issued. 576 districts have set up District-Level Coordination (DLC) Committees to oversee the implementation of Model Solar Village. 383 districts have already identified potential villages for development as Model Village, and out of which 322 districts have already initiated the challenge for selection of village to be developed as MSV".

3.39 With regard to the criteria for selection of model solar village, the Ministry informed that as per the Guidelines for implementation of 'Model Solar Village' under PMSGY issued by MNRE, a village must be a revenue village with a population size of more than 5,000 as per the latest published Census. However, in case of special category States (States/UTs of Uttarakhand, Himachal Pradesh, J&K, Ladakh, States in the Northeast including Sikkim, UTs of A&N and Lakshadweep), revenue villages with population size of more than 2,000 as per the latest census would be eligible.

3.40 When asked to furnish State wise details of solar villages which have been created, the Ministry stated as under:

"MNRE has issued guidelines for Model Solar Village component of PMSGY vide OM dated 09.08.2024. As per the guidelines, a village in each district to be selected within a period of 6 months for development as Model Solar Village. All the States/UTs are in the process of selection of the Model Solar Villages." (point no. 109 (ii), part – II).

Solarising Government Buildings:

3.41 Under PMSG: MBY, solarisation of Government buildings by installation of rooftop solar is one of the components of the scheme. A total of 1183.98 MW rooftop solar capacity has been installed on 46,057 no of government buildings. Notably, Chandigarh and Daman & Diu have reported achievement of 100% solarisation of their government buildings.

3.42 On being asked about the progress made in solarisation of Government buildings, the Ministry stated as under:

"Ministry has issued separate guidelines for saturation of the Government Buildings, which consist of different methodologies for attaining the saturation with installation of rooftop solar. Ministry has also allocated CPSEs (working under MNRE and Ministry of Power) to all central Ministries and States/UTs to assist them for saturation exercise. However, Central Ministries and States/UTs are free to choose any other agency for the saturation exercise. Ministry has also requested to all Central Ministries and States/UTs for nominating their nodal officers for this exercise. Apart from this, for collating the building-wise data on National Portal, user credentials have also been shared. As on date, the data for more than 55,000 buildings have been filled on the portal."

Grievance Redressal Mechanism

3.43 When asked about steps taken for providing platform for resolution of grievance redressal under the scheme, the Ministry stated as under:-

"An online grievance raising tool has been developed as part of National Portal, which allows consumers to submit their grievances. Upon submission of the grievance, a unique ticket number is generated for tracking purpose. Further, a call centre has also been made operational for answering queries of the interested consumers. (Call Centre Number: 15555). Queries are being handled by Call Centre in 12 Languages (English, Hindi, Tamil, Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Telugu). A total of 4,63,319 grievance tickets have been raised, out of which 4,47,086 tickets have been closed".

Capacity Building of Manpower

3.44 When asked about steps taken for capacity building of technician for installation and maintenance under the scheme, the Ministry stated as under:-

50,477 Solar installers/Engineers/Technicians have been trained by DGT. Out of which, 40,721 have also completed their OJT. 1,218 individuals have gone through refresher training conducted by DGT. 12,669 Training for entrepreneurs as vendors has been conducted by NISEBUD. 12,013 DISCOM officials have been trained by NPTI and 424 individuals have been trained as trainers by NPTI.

Awareness and Outreach

3.45 When asked about steps taken for awareness about various aspects of scheme, the Ministry stated as under:-

"The awareness and outreach program for PMSG: MBY has been carried out in the entire country. Consumer awareness has been carried out through various channels such as Print advertising in leading newspapers. TV commercials campaigns in TV channels, radio campaigns across FM stations including regional channels. Outdoor hoardings have been installed at prominent locations across the country".

Utility Led Models:

3.46 The Ministry has informed that several states have proposed utility led aggregation models to install rooftop solar for low-income households. These proposals are under consideration in MNRE.

State	Number of Households targeted under Utility Led Model
Andhra Pradesh	7,77,142
Odisha	3,00,000
J&K	2,22,000

Assam	1,79,229
A&N	15,000
Ladakh	7,000
Jharkhand	98,872
Rajasthan	26,80,000
Kerala	1,00,000

Benefits to Economically Disadvantaged Urban Residents

3.47 On being further asked about steps taken to provide benefits of the Scheme to the economically disadvantaged urban residents, the Ministry stated as under:

> "In densely populated urban areas such as Mumbai, Pune etc, it has been observed that the consumers usually reside in high rise buildings/apartments. For such cases, the scheme supports installations of RTS systems for the resident Welfare Association/ Group Housing Societies. The CFA for RWAs/GHS has been provisioned at Rs. 18,000/- per kW for installation of RTS of upto 500 kWp (@ 3kWp per house) for common areas. For economically disadvantaged urban/rural residents, who cannot bear the upfront cost of RTS system, the scheme provisions installation of systems in RESCO mode. Under RESCO mode, the demand of the interested consumers is aggregated and implemented through a RESCO entity. Affordable housing under Pradhan Mantri Awas Yojana can also benefit from the scheme, especially for solarization of common facilities electricity load. State Governments and DISCOMs may also adopt utility led models of implementation to cover the economically disadvantaged urban/rural residents through appropriate local models."

Impact of the Scheme:

3.48 The Committee have been informed that the PM Surya Ghar: Muft Bijli Yojana has significantly boosted residential solar energy adoption, leading to reduced electricity bills and long-term savings for households. Success stories from various states illustrate families who have transitioned to solar energy, showcasing significant financial savings and enhanced energy independence.

3.49 On being asked about the role of the Scheme in boosting local economy and employment generation, the Ministry stated as under:

> "The PM Surya Ghar: Muft Bijli Yojana is contributing towards boosting local economy and employment generation in following ways:
>
> Manufacturing and distribution of Solar cells/ modules (Domestic Content Requirement), inverters, meters, Module Mounting Structure etc. used in the installation of RTS plant."

3.50 Elaborating further on the issue, the Ministry submitted as under: -

> As the scheme shall be implemented only through the vendors registered on the National Portal i.e. a consumer has to choose a registered vendor for availing CFA under the scheme. Due to this there is increase in vendor base under the scheme for RTS plant installation, thus various job opportunities are opened up at local level. The scheme targets creation of 17 lakh jobs

CHALLENGES FACED DURING IMPLEMENTATION OF THE SCHEME

3.51 When asked about challenges faced during implementing implementation of scheme, the Ministry submitted as under: -

i. Eliminate separate net-metering agreements for consumers: Currently net-metering agreement requires consumer to visit DISCOM EE (whose office may be far from consumer's residence) multiple times to sign in front of EE. DISCOMs should do away with net-metering agreement as DISCOM is bound to abide by net-metering regulation as per SERCs, and there is no commitment

needed from consumer that may require this agreement. Any dispute can be resolved based on regulation as on the date of net-metering connection given.

ii. Use PMSG: MBY funds to promote RTS and waive related fees: The PMSG: MBY has provision for incentives and service charge to DISCOM with outlay of Rs 4950 cr and Rs 200 cr respectively. DISCOMs should set up dedicated manpower at all Division and HQ level to promote the scheme utilising the above funds. Also, DISCOMs should waive various fees and charges associated with rooftop solar applications, especially for installations under 10 kW for residential consumers. This includes application fees, security deposits, connection agreement fees, and meter testing charges. DISCOMs should do away with all RTS related fees or charges since above incentives adequately cover their cost.

iii. Train all DISCOM engineers on PMSGMBY: All DISCOM engineers posted in the field need to be trained regarding the implementation of PMSG: MBY.

iv. Ensure net meter availability and bulk testing by vendors: States to ensure DISCOMs have adequate availability of net meters or have enough testing facilities district wise if meters are to be provided by the consumer/vendors. Vendors should also be allowed to submit meters in bulk for testing.

v. Fix solar billing issues affecting customers: Incorrect solar bill issue is a problem affecting customers which are going to install RTS plants. Having strict mechanism of correct bill issuance to RTS customers by discom is important. Integrate billing/generation data.

vi. When consumers install solar PV systems under the PM Surya Ghar Muft Bijli Yojana, their electricity bills reduce significantly or even become zero, lowering the required security deposit held by Discoms, which is typically collected to cover two billing cycles. While Discoms are required to refund or adjust surplus deposits when they exceed requirements, this is not done proactively. To promote solar PV adoption, Discoms should actively reduce deposit amounts and credit or refund the surplus as part of the scheme, providing an added incentive for consumers to switch to solar energy.

vii. The RDSS targets for smart meter installations should align with state targets for the PM Surya Ghar scheme to support rooftop solar adoption.

3.52 When asked specifically about the key regulatory and policy challenges in implementation of the Scheme, the Ministry stated as under:

1. "Lack of Uniformity in State Regulations: Different states have varying regulations, policies, and tariffs for rooftop solar installations.
2. Grid Integration and Distribution Infrastructure Issues: In some areas, especially in remote regions, the local grid infrastructure may not be equipped to handle the integration of rooftop solar systems.

   The regulatory process simplification and other necessary facilitation by the States/UTs has been made part of the MoU, which is to be signed by each State/UT with Ministry for implementation of PMSG: MBY. "

Initiatives required under Scheme on the part of State

3.53 When asked about the ways the State Governments can enhance the pace of implementation of the Scheme, the Ministry submitted as under: -

i. Undertake Saturation approach for select cities; deploy large number of vendors

ii. Facilitate vendor expansion in under-serviced districts

iii. Activate awareness campaigns

iv. Finalize Model Solar Village in each District

v. Install rooftop solar for low-income households through Utility Led Aggregation models

vi. Solarize all govt. buildings on priority basis using the RESCO model. Ensure adequate payment security for government buildings solarisation

PART-II

Observations/Recommendations

1. The Committee observe that electricity is one of the basic pre-requisites for enhancing the Human Development Index (HDI) of the country. In the endeavour of current Government to make India a Developed nation by 2047, round the clock availability of cost-effective electricity for all sectors of economy viz. Industry, Agriculture or domestic consumers is urgently required to fast pace the economic growth rate to achieve this noble aim. Such uninterrupted and affordable power supply is imperative to accelerate the pace of economic growth and realise the aforesaid objective.

The Committee note that coal accounts for 46.20 per cent of the total installed electricity generation capacity in the country, while renewable sources of energy contribute about 44.90 per cent, of which solar energy alone accounts for 20.60 per cent. The Committee are concerned that an over-reliance on coal as the predominant source of electricity generation not only contributes to rising electricity prices but also leads to increased pollution, thereby exacerbating global warming and climate change.

The Committee further note that increase in electricity prices directly impacts the competitiveness of Indian industries in the global market and is a significant factor contributing to inflationary pressures on domestic consumers and farmers. The Committee observe that higher electricity costs in the agricultural sector increase the input cost of farming, thereby reducing farmers' incomes. The Committee note that, to mitigate this burden, various State Governments have been providing subsidies to agriculture and domestic electricity consumers for decades. While such subsidies offer relief, they also exert considerable pressure on the State exchequer and contribute to the financial losses of Distribution Companies (DISCOMs), thereby constraining their capacity to invest in infrastructure development and Research & Development initiatives.

In this context, the Committee appreciate the initiatives of the Government of India in launching the Pradhan Mantri Kisan Urja Suraksha evam

Utthaan Mahabhiyan (PM-KUSUM) scheme and the PM Surya Ghar Muft Bijli Yojana, aimed at promoting solar power generation in the agricultural and domestic sectors respectively. The Committee express the hope that effective and timely implementation of these schemes will significantly contribute towards ensuring the availability of reliable and affordable electricity supply for these sectors, while also reducing dependence on conventional energy sources.

PM-KUSUM Scheme

2. The Committee note that Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) was introduced in 2019 with the objectives of incorporating renewable energy in farmers' irrigation practices, helping farmers gain access to solar water-pumps at subsidized rates and giving farmers an avenue to utilize their barren land through setting up of solar power plants for energy generation. The Committee further note that PM-KUSUM was divided into three components, A, B and C, with corresponding targets to be met by 2026. Component A entailed developing 10,000 MW of decentralized Ground Mounted Grid Connected Solar Power Plants. Component B includes installation of 14 lakh standalone off-grid solar water pumps on farmers' lands. Component C first entailed solarisation of 35 Lakh Grid-connected Agriculture Pumps. Component C is divided into two sub-components. The first is individual pump solarization (IPS), which involves setting up grid-connected solar water-pumps on farmers' lands. Feeder- level solarization (FLS) is second sub-component and entails farmers with land located at a 5-km distance from the nearest substation to start a microgrid and sell power to the substation and power their agricultural feeders.

Performance of Component-A under PM-KUSUM scheme

3. The Committee note that Component A which aimed to develop 10,000 MW of decentralized Ground Mounted Grid Connected Solar Power Plants under the scheme by 2026 is running behind the schedule. The Committee observe that despite the fact that Government has allocated 10000 MW capacity to

various States, it was able to achieve installation of only 641 MW capacity till 31 July 2025. In this regard, the Committee have been informed that availability of low-cost finance was a barrier in effective implementation of this scheme and after inclusion of this scheme under Agriculture Infrastructure Fund, the pace of projects will be enhanced. The Committee have also been informed that initial phase of implementation suffered delays due to COVID 19 and supply chain issues. The Committee have further been informed that consequent upon revision of guidelines, the scheme has picked up and it is estimated that the projects would be completed by March 2026.

In this regard, the Committee are of considered view that installation of 10000 MW solar Power Plant on barren land set under component A is an ambitious target and there is urgent need of constant monitoring for timely completion of projects under the scheme. The Committee, therefore, recommend the Ministry to undertake a comprehensive review of the bottlenecks affecting the timely implementation of Component-A, beyond the issue of finance, and take expeditious steps to address them. These may include streamlining the approval process at the State level, ensuring availability of suitable land, facilitating clearances, and enhancing coordination between the Central and State agencies. The Committee further desire that the Ministry set quarterly targets for installation, closely monitor progress, and place the updated status before them.

4. The Committee observe that entire capacity has been allocated to 13 States while no projects has been sanctioned in rest of States/UTs. Even among these States Rajasthan has garnered majority of projects (5250 MW projects) under the scheme. The Committee, while expressing their satisfaction over utilization of entire capacity envisaged under the Projects are apprehensive over concentration of projects in few States as it shows poor response to the scheme by rest of the States. The Committee note that, despite the demand-driven nature of the scheme, the limited participation of a majority of States/UTs reflects certain shortcomings in the conceptualization and implementation of the scheme, such as the requirement of heavy initial capital investment, absence of Central Financial Assistance or ineffective awareness campaigns.

The Committee, while taking note of the restricted geographical spread of the projects, recommend the Ministry to undertake a detailed analysis of reasons for such limited participation and take corrective measures while modifying this component in the future. The Committee desire that the scheme be designed in such a way that farmers from the maximum number of States and Union Territories can derive benefits from this Central Sector initiative.

5. The Committee further observe that the scheme was designed to incentivize farmers to install small-capacity solar power plants (between 500 kW and 2 MW) on their barren land and sell the electricity generated to the grid, thereby providing them with an additional source of income. However, the Committee note that factors such as need of substantial capital investment required to set up a solar plant, absence of Central Financial Assistance and cost involved in converting agricultural land to non-agricultural land are dissuading farmers from participating in the scheme. The Committee, therefore, urge the Government to revisit the provisions of the scheme and consider removing the requirement for farmers to convert agricultural land to non-agricultural land for the purpose of availing benefits under the scheme. The Committee further desire the Ministry to make provisions for Central Financial Assistance for small-sized projects under the scheme, so as to enhance the participation of individual farmers and Farmers' Producer Organisations (FPOs) in establishing solar power plants.

<u>Performance of Component-B under PM-KUSUM scheme</u>

6. The Committee note that component B aims for installation of 14 lakh standalone off grid Solar Powered Agriculture Pumps. Under this component of PM Kusum Scheme, individual farmers are supported to install standalone Solar Agriculture pumps or replace existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available. The Committee further note that Ministry have achieved significant success under this component as 853349 solar pump has been installed till 31.07.2025 against 1272758 sanctioned projects. The Committee further observe that there is huge response towards this component from majority of States/UTs. The Committee

appreciate the Ministry for achievement of 67 percentage against sanctioned projects. The Committee recommend the Ministry to sanction rest of the projects against the target of installation of 14 lakh solar power pump and to monitor progress of installation of pumps which has already been sanctioned.

7. The Committee have been informed that they have received request for implementation of scheme without any State Share and Ministry has acceded to their request and revised the guidelines accordingly. However, no State has implemented this scheme without State share till date. In this regard, the Committee are of the view that non-availability of State share for installation of solar pump will enhance the burden on individual farmers. Further, cost of solar pump is comparatively more than normal electricity or diesel pump, thereby reducing the inclination of farmers to opt for scheme even if they want to shift to solar power. The Committee are of further view that shifting to solar pump is a long term solution to secure round the year availability of environment friendly electricity for agriculture sector and needs to be funded adequately to encourage farmers to adopt and install it. The Committee, therefore, recommend the Ministry to explore the ways to enhance funding ratio under this component of PM-KUSUM Scheme.

<u>Capacity of Pump for subsidies</u>

8. The Committee note that, under the Scheme, subsidies are extended for the installation of solar water pumps of capacity up to 7.5 HP. However, in several States such as Rajasthan, the ground water level is more than 100 meters deep, which necessitates pumps of higher capacity for drawing water. In this context, the Committee recommend the Ministry to allow installation of standalone solar agricultural pumps of higher capacity in states such as Rajasthan where fixing this upper limit will not solve the purpose. The Committee believe that such a revision would ensure more effective and equitable implementation of the Scheme across the Country particularly in regions with low ground water levels where farmers require higher capacity pumps for irrigation.

Performance of Component-C under PM-KUSUM scheme

9. The Committee note that Component C under PM-KUSUM scheme aims for solarisation of 35 Lakh Grid-connected Agriculture Pumps and consist of two sub components namely Individual Pump Solarization (IPS) which involves setting up grid-connected solar water-pumps on farmers' lands. Under IPS, the capacity of the solar power plant can be twice the capacity of the farmers' existing water pumps in kW so that farmers can sell the excess electricity generated back to the grid. The second sub-component, Feeder Level Solarization (FLS) in which States are supported for solarization of agriculture feeder or mixed feeders.

The Committee observe that 60828 solar pumps have been sanctioned under Individual Pump Solarization (IPS) component against the target of 1.5 lakh solar pump. The Committee also note that most of the sanctioned projects were geographically confined to 09 States/UTs. The Committee therefore, urge upon the Ministry to act pro-actively to increase the number of installations. In this regard, the Committee were informed that acceptance of this scheme was quite low as most of the States are subsidizing electricity for agriculture and farmers do not want to spend from their pocket to install a solar Power Pump. The Committee also note that some States due to fund constraints have requested the Ministry for implementation of scheme without State share which has been acceded to by the Government. However, in that case, farmer has to bear 70 percentage of total cost of fund, thereby reducing the appeal of scheme among farmers. On this issue, the Committee reiterate their earlier recommendation at para 8 and recommend the Ministry to explore the ways to enhance funding ratio under this component of PM-KUSUM Scheme, so that farmers can be encouraged to install solar pump and avail environment friendly and round the year supply of electricity for their farms.

10. The Committee note that Component C of PM-KUSUM scheme which was earlier limited to solarizing grid connected irrigation pump (Individual Pump Solarization) has now been extended to solarizing Agriculture feeder Power Station. The Feeder Level Solarization (FLS) which is second sub-component

entails financial support to States for solarization of agriculture feeder or mixed feeders. This would help ease the subsidy burden from the State Government with regard to the subsidy provided to the feeder agricultural users. The Committee further note that Central Financial Assistance of Rs 1.05 Crore per MW is provided to the States for solarizing agriculture or mixed feeder under this component. There is no mandatory requirement of financial support from participating State/UT. The feeder solarization can be implemented in CAPEX or RESCO mode. The Committee observe that this sub-component has got very good response from various State Governments as solar feeder covering 35,61,855 pumps have been sanctioned under the Scheme. The Committee further note that 6,45,975 Pumps were installed under the scheme till 31.07.2025. In this regard, the Committee appreciate the approach of the Ministry for mid-course correction by introduction of feeder level solarisation under the PM-KUSUM scheme, as it will help to enhance solarising irrigation at institutional level rather than involving farmers directly. The Committee recommend the Ministry to provide proper handholding to the various State Governments for timely completion of sanctioned projects. The Committee also recommend the Ministry to involve States which have not shown any response to this component of scheme. The Committee would like to be apprised about steps taken by the Ministry in this direction.

<u>Evacuation of Power</u>

11. The Committee note that under IPS component of the scheme, farmers have to bear the cost of evacuating power generated from the solar plant set up by them to a nearest grid which may be situated at a distance of 5 km from the location of the Plant. However, there is no provision for providing financial support or incentives to the farmers for evacuation of power. Therefore, the Committee strongly emphasize the need for providing financial assistance for the same as it is a huge additional burden upon the farmers, who may have already availed loans for setting up of such high value solar power plant. Alternatively, the Committee also recommend that the responsibility of evacuation of power under the Scheme, particularly for project which are solely

owned by a farmer and which are set up in his farm land, must be entrusted upon the respective DISCOMs. The Committee note that the Government is providing subsidies to DISCOMs for procurement of electricity generated from solar pump under the scheme. The Committee feel that it is imperative upon the DISCOMs to take steps for smooth evacuation of power from solar power plants set up by farmers and thereby relieving them from having to deal with the technical aspects and financial burden associated with the process of power evacuation. The Committee, therefore, recommend to entrust the responsibility of power evacuation to DISCOMs which should also include installation and maintenance of requisite infrastructure for evacuation of power upto 2.0 KW and beyond, as per capacity of the project. The Committee are of the view that these measures can go a long way in ensuring effective implementation of the scheme.

Availability of Loans under the Scheme

12. The Committee note that earlier, collateral was required for availing loans under the Scheme. In this regard, the Committee appreciate the Government for bringing loans taken under the PM-KUSUM Scheme under the Agriculture Infrastructure Development Fund (AIF), thereby exempting farmers from providing collateral for loans up to ₹2 crore. The Committee observe that loan of ₹1,827 crore had been sanctioned for applications under the Scheme till 28.02.2025. The Committee further observe that most of the sanctioned loans are under Component A and Component C, which primarily involve installation of large solar power plants or solarization of feeders. The Committee are of the view that ensuring easy availability of loans under the Scheme would encourage more farmers, especially small and marginal farmers, to participate. This, in turn, would benefit the exchequer by reducing the burden of electricity subsidies and also contribute to reducing environmental pollution. The Committee, therefore, recommend that the Government impress upon Banks to facilitate loan availability to small and marginal farmers under the Scheme by minimizing compliance requirements and providing necessary handholding support.

Cost of Solar Pump

13. The Committee note that the cost of a solar water pump or solar water pumping system ranges between ₹1,67,419 and ₹3,49,566, depending on the capacity of the pump. The Committee are of the view that such high prices make solar pumps unaffordable for a large section of farmers, particularly small and marginal farmers. The Committee, therefore, strongly recommend the Ministry to accord high priority to Research and Development (R&D) aimed at reducing the cost of solar pumps through innovations in design, materials and efficiency. Indigenous manufacturing should be incentivized, and start-ups and research institutions encouraged to collaborate in developing cost-effective and reliable solar pumping solutions. The Committee further recommend that adequate financial and policy support be extended to promote such R&D initiatives. The Committee believe that sustained focus on innovation will not only make solar pumps more affordable, but also ensure long-term self-sustainability of the PM-KUSUM Scheme by reducing dependency on Central Financial Assistance (CFA).

Adoption of Agrivoltaics

14. The Committee note that Agrivoltaics is an emerging concept that combines agriculture and solar energy generation on the same portion of land. This can be achieved by elevating solar modules and increasing the space between panel rows, thereby allowing continued cultivation of crops below or between the structures. The Committee further note that Agrivoltaics in India is still in the technology demonstration phase, with 14 pilot projects currently operational in the country. In this regard, the Committee also note that PV solar panels under Agrivoltaics have the potential to mitigate the adverse impact of excessive heat and sunlight, as the partial shading reduces soil temperature, retains soil moisture, and creates microclimatic conditions favourable for crop growth.

While appreciating the initiatives taken for the adoption of Agrivoltaics, the Committee observe that agricultural activities remain particularly

challenging in arid regions, especially in the Northern and Western parts of the country. The Committee, therefore, recommend that the Government should encourage farmers in selected arid regions to adopt Agrivoltaics on cultivable agricultural land under Component B and Component C of the PM-KUSUM Scheme on a pilot basis. This intervention has the potential to enhance agricultural productivity while simultaneously providing farmers with additional income by feeding surplus solar power into the grid. Further, the Committee desire that the Government should study and adopt best practices from global leaders such as Japan and China, which have demonstrated significant success in the large-scale deployment of Agrivoltaics.

Financial Support for Agrivoltaics

15. The Committee, during their study visit to the Agrivoltaics plants of SAEV Pvt. Ltd., at Issapur, Najafgarh (Delhi) were informed by the representatives of the Ministry that there is presently no provision for financial assistance or subsidies under the PM-KUSUM Scheme for beneficiaries adopting Agrivoltaics. The Committee further note that, in the absence of such support, farmers and entrepreneurs are compelled to bear the entire financial burden of establishing these projects without any logistical or financial backing from the Government. The Committee are of the considered view that innovative technologies such as Agrivoltaics are futuristic, economically viable, and environmentally sustainable solutions for solarising agricultural operations in the country. They also have the potential to improve agricultural productivity and enhance the income of farmers. The Committee, therefore, recommend the Ministry to undertake a detailed analysis of the impact of Agrivoltaics projects on crop productivity and farmers' income. The Committee also recommend the Ministry to extend support to such dual-purpose projects by considering the provision of subsidies or incentives to progressive farmers adopting Agrivoltaics, in order to accelerate large-scale adoption.

Involvement of Public Representatives in Implementation of PM-KUSUM Scheme

16. The Committee note that there is no mechanism for involvement of Members of Parliament and other public representatives during implementation process of the scheme being implemented by the Ministry. In this regard, the Committee are of the considered view that public representatives represent voice of the general population as well as beneficiaries of various welfare schemes and their involvement may prove crucial to ensure effective implementation of such schemes. The ground level feedbacks and inputs provided by public representatives especially from far flung areas may also help in plugging the gaps in implementation. The Committee, therefore, recommend the Ministry to put in place a mechanism for involvement of public representatives in the process of implementation of the PM-KUSUM Scheme by ensuring their presence during all review meetings at the local or State Level.

PM Surya Ghar: Muft Bijli Yojana

17. The Committee note that PM Surya Ghar: Muft Bijli Yojana scheme aims to provide free electricity to households in India. This scheme is an ambitious attempt of Government to increase the share of solar rooftop capacity and empower residential households to generate their own electricity. Under the scheme, households will be provided with a subsidy to install solar panels on their roofs. The subsidy is being provided for solar rooftop panel of upto 3 KW capacity and will cover up to 40% of the cost of the solar panels. The scheme is expected to benefit 1 crore households across India. It is estimated that the scheme will save the government Rs.75,000 crore per year in electricity cost.

The Committee note that 1,38,71,075 registrations have been received on the portal against the target of 1 crore households and 58.58 lakh applications have been successfully processed as on 10.08.2025. The Committee note that the number of successful applicants is disproportionately low compared to the initial registrations. Further, pace of implementation is uneven across States and Union Territories. States such as Uttar Pradesh, Maharashtra, Gujarat,

Assam and Karnataka have shown commendable progress, whereas Bihar, Jharkhand, Himachal Pradesh, Uttarakhand, Tamil Nadu, Telangana, Punjab and several North-Eastern States are lagging behind in both registrations and approvals. In this regard, the Committee are of the view that any Central Government scheme should be uniformly implemented across the Country and attempt must be made to ensure active participation from all States. The Committee, therefore, recommend the Ministry to analyse the reasons for poor participation in these States/UTs and take corrective measures. The Ministry should also document the best practices of States with successful implementation and share them widely so that lagging States/UTs may adopt effective strategies/best practices to enhance participation of domestic electricity consumers under the Scheme.

18. The Committee further note that 17,01,137 solar panels/lights have been installed under the Scheme. While States like Gujarat, Maharashtra and Kerala have performed relatively better in terms of installation, most other States are lagging far behind when compared to their registered applicants. The Committee recommend the Ministry to identify and address bottlenecks such as delays in approvals, subsidy disbursal, vendor empanelment and installation logistics. The Committee also recommend the Ministry to take corrective steps in consultation with State Governments for consumer awareness campaigns, streamlining of application and approval processes, capacity building and strengthening of supply chains to accelerate the pace of installations. The Committee are of view that such measures would ensure uniform and timely implementation of the Scheme across the country and promote faster adoption of solar energy in the domestic sector.

<u>Processing of Loans</u>

19. The Committee note that PM Surya Ghar: Muft Bijli Yojana scheme has provision for availability of concessional loan wherein loans for upto 90% of the project cost for installation of Rooftop Solar System (RTS) is being provided by Banks at a rate of interest of 7% for a tenure of 10 years. In this regard, the

Committee observe that only 2,82,240 loans out of 5,31,199 applications have been sanctioned till 19.05.2025 under the scheme. The Committee also observe that loan amount of Rs. 2001.7 crore has been disbursed by the Banks to 1,05,528 applicants till 28.02.2025. The Committee also note that rate of rejection of loan application is quite high under the scheme as more than 2,48,959 applications for loans have been rejected by banks. In this regard, the Committee have been informed that lack of clarity regarding ownership of house is posing major hurdle in sanction of loan by the banks. The Committee also observe that major banks in the private sector are not taking initiatives to sanction loans. The Committee also observe that banks are not adhering to a uniform SoP for processing of loans leading to the requirements for different set of documents at different banks. In this regard, the Committee are of the view that PMSGY:MBY scheme with the target to achieve 1 crore rooftop solar installations will be quite beneficial in ensuring availability of reliable and cheap electricity supply in the entire Country. It will help to conserve environment by reducing emission of green house gases and thus assisting the Country to achieve the target of reducing carbon emissions by 50% by 2030 and for the entire economy to be net zero by 2070. Simultaneously, it will also help State Governments to reduce subsidy burden on electricity sector. Against this background, easy availability of loan to domestic consumers for installation of solar rooftop will go a long way to achieve these aims. The Committee, therefore, recommend the Ministry to formulate a standardized SoP/Documentation process to enable banks to follow consistent guidelines, reduce administrative delays and disseminate proper information about features of loans to consumers for speedy disposal of loan applications.

<u>Availability of Solar Module or Solar cell</u>

20. The Committee note that PM Surya Ghar: Muft Bijli Yojana scheme has made it mandatory to install solar modules manufactured in the country using domestically manufactured solar cells to avail Central financial assistance. In this regard, the Committee have been informed that solar module manufacturing capacity in the country is around 58 GW per annum. The Committee also note

various initiatives being taken by the Government, such as Production Linked Incentive Scheme, Domestic Content Requirement (DCR) for subsidized schemes, preference to 'Make in India' in public procurement, etc. to boost domestic manufacturing of solar modules and other related components. However, the Committee while appreciating the Government for steps taken to enhance domestic production of solar panel in the Country note that at present there is a huge supply- demand gap in the solar manufacturing sector and that the country is importing over 4000 million USD worth of modules, in a year. As the Government has set a target of generating 500 GW of non-fossil power by the year 2030, it needs to take proactive steps to bridge the huge supply-demand gap. The Committee, therefore, urge upon the Government to take steps to increase solar manufacturing facilities in each State of the country, in line with the targets set for solar energy generation of the respective States. The increase in solar manufacturing facilities in the States will bring down the logistical cost of solar modules which will gradually decrease the overall cost of the entire solar system and make it affordable to all sections of the society. The Committee, also recommend the Ministry to make provision for incentives for manufacturers of solar modules and start-ups who are desirous of manufacturing solar modules or solar cells in the Country.

Empanelment of Vendors and Strengthening supply chain network

21. The Committee note that Vendors are responsible for Conducting physical survey to assess the RTS capacity, providing guidance to beneficiaries on the technical and financial aspects, providing assistance in obtaining necessary approvals and installing net-meters and ensuring compliance with technical standards and provide maintenance for five years. The Committee further note that to become a vendor they have to register with the beneficiaries' Distribution Utility Company (DISCOM) by submitting an application with a declaration and a Performance Bank Guarantee (PBG) of ₹2.5 lakh valid for at least five years. The Committee have further been informed that 18,161 vendors has been registered in various States/UTs under the scheme. However, the Committee have observed that the number of registered vendors are very less in States such as Bihar, Jharkhand, Chhattisgarh, Telangana, North-Eastern

States etc. The Committee are of the view that availability of trustworthy and competent vendors is key for better performance of scheme. It is reflected in the success of States like Gujarat, Maharashtra, Uttar Pradesh, Kerala etc. which have much better pace of installation of Rooftop Solar Panel, as these States are also leading in registration of number of Vendors. The Committee, therefore, recommend the Ministry to take additional efforts in enhancing the number of vendors empanelled under the Scheme. The Ministry may take steps like reducing the amount of performance Bank Guarantee, awareness campaign etc. to enhance the number of vendors in States/UTs which are lagging behind.

22. The Committee have observed that the far-flung areas of the country are facing short supply of various components required for installation of RTS systems due to various factors such as instability in supply of raw materials, increase in the cost of solar modules/cells, shipping costs, regulatory challenges, etc. The Committee are of the considered view that such uncertainties with regard to the network of supply chain may have an adverse impact on implementation of the scheme as well as on the growth of renewable energy sector in the country. The Committee, therefore, urge upon the Government to take steps to optimize supply chain strategies, diversify the sources of supply and increase the investments for local manufacturing of the components to address all such supply chain challenges.

<u>Model Solar City</u>

23. The Committee note that revenue villages with a population size of more than 5000 and revenue villages with more than 2000 population in special category States are being considered for implementation of the 'Model Solar Village' under the Scheme. While appreciating this innovative concept, the Committee recommend the Ministry to consider implementing a 'Model Solar City' programme in urban areas of the country on the pattern of 'Model Solar Village'. The Committee observe that urban centres have high energy demand and consumption, mostly depend on conventional sources, which has further intensified challenges of energy requirement, pollution and environmental

degradation due to rapid urbanization. The Committee, therefore, recommend the Ministry to adopt the concept of 'Model Solar City' under PMSGY as a sustainable solution to develop eco-friendly, energy-efficient urban spaces. The Committee hope that such an initiative would not only promote the use of renewable energy for sustainable growth but would also foster healthy competition among cities and urban centres to integrate solar energy into their urban development planning.

Extension of the Scheme to certain Dwellers

24. The Committee are happy to note from the submission of the Ministry that the Scheme has managed to significantly boost the adoption of solar energy by households belonging to various sections of the society. At the same time, the Committee would like to highlight that there are many small settlements like hamlets in remote areas and also single dwelling units in agricultural fields generally known as *Dhaani* in Hindi where people reside to attend to agricultural activities, and that such settlements/dwellings do not have regular electricity connections from electricity grids. Further, these dwellers are economically disadvantaged and do not have the means to bear the upfront investment which will enable them to take the benefits of the scheme. The Committee, therefore, urge upon the Government to consider making suitable amendments to the guidelines of the scheme, including the provisions of subsidies/CFA by way of increasing the subsidy, so that such dwellers or settlements can also reap the benefits of the Scheme. The Committee are of the opinion that such measures for extension of coverage of the Scheme would be financially more viable and provide sustainable electricity solutions than resorting to grid extension to such settlements or dwellings.

Implementation of the Scheme

25. The Committee note that responsibility of monitoring and implementation of the PM Suryaghar: Muft Bijli Yojana lies with the State Implementing Agencies (SIA). The Committee also note that the Ministry regularly holds review meetings with the States to expedite the implementation process. However, considering the current scenario of implementation at the ground level in many states, the Committee have observed that there is still visible lack of co-ordination between the Ministry and the SIAs. Most of the SIAs are not proactive in settlement of issues relating to implementation, holding of regular review meetings at the State level, publicity or creating of awareness about the Scheme, etc. The Committee while expressing the view that co-operation of the State Governments is vital for its successful implementation, the Committee, therefore, recommend the Ministry to take steps for inclusion of the PMSGY: MBY also under the purview of DISHA for enhancing the coordination between all stakeholders involved for better implementation of the Scheme.

Synchronizing PM Surya Ghar: Muft Bijli Yojana (PMSGY) with PM Aawas Yojana (PMAY)

26. **The Committee note that PM Surya Ghar: Muft Bijli Yojana (PMSGY) provides for disbursement of subsidy to households for installation of Rooftop solar system of upto 3 KW capacity. However, the Committee have observed that beneficiaries of another flagship scheme of the Government- the Pradhan Mantri Awas Yojana (PMAY), who are desirous of availing the PMSGY, are unable to do so due to lack of funds to pay for the upfront cost of the systems. The Committee are of the considered opinion that synergizing the two schemes will benefit the poor and marginalized sections of the society. The Committee, therefore, recommend the Government to consider making suitable changes in PMGSY so that the scheme can be synchronized with PMAY. The Committee also recommend the Ministry to consider possibility of providing every PMAY allottee with a RTS system of 500 watt capacity. Such a step can serve as a game**

changer and can enable three crore beneficiaries of the PMAY to generate their own source of clean and green energy free of cost. It will also give a fillip towards achieving the country's green energy goals.

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NEW DELHI;
04 December, 2025
Agrahayana 13, 1947 (Saka)

DR. SANJAY JAISWAL
CHAIRPERSON
COMMITTEE ON ESTIMATES

MINUTES OF THE SECOND SITTING OF THE COMMITTEE ON ESTIMATES (2024-25)

The Second Sitting of the Committee was held on **Wednesday, 04th September, 2024 at 1130 hrs. in Committee Room No.2, Parliament House Annexe Extension Building, New Delhi-110001**

PRESENT

Dr. Sanjay Jaiswal – Chairperson

Members

2. Shri Brijmohan Agrawal
3. Shri M. Mallesh Babu
4. Shri Pradan Baruah
5. Shri Charanjit Singh Channi
6. Shri P. P. Chaudhary
7. Ms. Iqra Choudhary
8. Shri Sudheer Gupta
9. Shri Manish Jaiswal
10. Shri Naveen Jindal
11. Shri Awadhesh Prasad
12. Shri M. K. Raghavan
13. Shri Bishnu Pada Ray
14. Shri Rajiv Pratap Rudy
15. Dr. Rajkumar Sangwan
16. Shri Arvind Ganpat Sawant
17. Kumari Selja
18. Dr. Bhola Singh
19. Dr. Indra Hang Subba
20. Shri Manoj Tiwari
21. Shri Ve vaithilingam

SECRETARIAT

1. Shri. Santosh Kumar - Joint Secretary
2. Shri Lalkithang - Director

Representatives of the Ministry of New and Renewable Energy:-

1	Sh. Bhupinder Singh Bhalla	Secretary, MNRE
2	Sh. Prashant Kumar Singh	OSD,MNRE
3	Sh. Sudeep Jain	Additional Secretary
4	Sh. Ajay Yadav	Joint Secretary
5	Sh. Dinesh Dayanand Jagdale	Joint Secretary
6	Ms. Suman Chandra	Director
7	Ms. Jeevan Kumar Jethani	Sci.-F
8	Sh. Pankaj Saxena	Sci.-G

2. At the outset, the Chairperson, Committee on Estimates, welcomed the Secretary and other officials of the Ministry of New and Renewable Energy (MNRE) to the sitting of the Committee convened to have briefing on the subject 'Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar : Muft Bijli Yojana'. Their attention was also drawn to Direction 55(1) of 'Directions by the Speaker, Lok Sabha' about the confidentiality of the proceedings of the Committee.

3. After a brief introduction on the subject by the Secretary, MNRE, the Joint Secretary and Additional Secretary of the Ministry made two separate presentations on PM-KUSUM and PM Surya Ghar-Muft Bijli Yojana, respectively. The presentation on Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) *inter-alia* highlighted objectives of the Scheme to add 34.8 GW of Renewable Energy capacity, total central financial outlay, targets of the Scheme, components of the Scheme, salient features of each component, role of DISCOMs, progress in implementation, IEC activities to create awareness, etc.

The presentation on PM-Surya Ghar: Muft Bijli Yojana scheme *inter-alia* highlighted the targets of the scheme, key elements including subsidy, total outlay of the scheme, period of implementation, amount of electricity to be generated, registration of vendors, grievance redressal mechanism, incentives to DISCOMs, Model Solar Village, awareness and outreach programmes, etc.

4. The Chairperson and other Members of the Committee, then raised several queries relating to both the Schemes. The queries on PM-KUSUM were *inter-alia* related to budgetary provisions and expenditure, grievance redressal mechanism, need for offline registration, need for involvement of MPs, coverage of the scheme in

Andaman and Nicobar Islands, need for creating more awareness and publicity, upfront subsidy, criteria for availing the Scheme, Capacity building activities, subsidy to States, role of PFCs, progress of implementation in certain States, amount of diesel and forex saved, difference among the components, etc. Further, the queries on PM-Suryaghar-Muft Bijli Yojana were *inter-alia* related to incentives for BPL families, RESCO model, coverage in group housing societies, selection criteria for model village, role of State-Governments, need for accelerating installations, maintenance of solar panels, cost of electricity per KW, need for harnessing wind energy in certain States, solarization of cold storage facilities, cost of installation of solar panels, various aspects of subsidy, renewable energy scenario in the country, etc.

5. The representatives of the Ministry responded to the queries raised by the Members. The Chairperson thanked the representatives of the Ministry and asked them to furnish written replies, on the points, for which information was not readily available, within fifteen days.

6. The witnesses, then, withdrew.

7. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE TWELFTH SITTING OF THE COMMITTEE ON ESTIMATES (2024-25)

The Twelfth Sitting of the Committee was held on Monday, **10th February, 2025 at 1500 hrs. in Committee Room No. 'D', Parliament House Annexe, New Delhi-110001**

PRESENT

Dr. Sanjay Jaiswal – Chairperson

Members

2. Shri P. P. Chaudhary
3. Smt. Sangeeta Kumari Singh Deo
4. Shri Deepender Singh Hooda
5. Shri Manish Jaiswal
6. Shri Naveen Jindal
7. Thiru Dayanidhi Maran
8. Shri P.C. Mohan
9. Shri Awadhesh Prasad
10. Shri Rajiv Pratap Rudy
11. Dr. Rajkumar Sangwan
12. Shri Arvind Ganpat Sawant
13. Kumari Selja
14. Dr. Bhola Singh
15. Dr. Indra Hang Subba
16. Shri Ve vaithilingam

SECRETARIAT

1. Shri. Y. M. Kandpal - Joint Secretary
2. Shri Lalkithang - Director

REPRESENTATIVES OF THE MINISTRY OF NEW AND RENEWABLE ENERGY

Sl. No.	Name of the Officer	Designation
1.	Ms. Nidhi Khare	Secretary
2.	Shri Sudeep Jain	Additional Secretary
3.	Shri Lalit Bohra	Joint Secretary
4.	Shri Pankaj Saxena	Scientist-G
5.	Ms. Suman Chandra	Director
6.	Shri Jeevan Kumar Jethani	Scientist-F
	Solar Energy Corporation of India Ltd. (SECI)	
7.	Shri Rameshwar Prasad Gupta	CMD
	Rural Electrification Corporation Ltd (REC)	
8.	Shri Vivek Kumar Dewangan	CMD
	Indian Renewable Energy Development Agency Ltd (IREDA)	
9.	Shri S. K. Dey	General Manager (Projects)
	Energy Department, Government of Rajasthan	
10.	Shri Alok	Additional Chief Secretary
	Department of Horticulture, Government of Rajasthan	
11.	Shri Danveer Verma	Joint Director
12.	Shri Ganesh Meena	Deputy Director
	Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA), Government of Uttar Pradesh	
13.	Shri Narendra Bhooshan	Additional Chief Secretary
14.	Shri Anupam Shukla	Special Secretary
15.	Shri Ajai Kumar	Senior Project Officer
	Agriculture Department, Government of Uttar Pradesh	
16.	Shri Suresh Kumar Singh	Additional Director

Madhyanchal Vidyut Vitran Nigam Ltd., Government of Uttar Pradesh.

17. Shri Jai Prakash Sharma — Chief Engineer

South Bihar Power Distribution Co. Ltd., Government of Bihar.

18. Shri Bhupendra Umrao — Electrical Executive Engineer

2. At the outset, Hon'ble Chairperson, Committee on Estimates welcomed the Members to the Sitting of the Committee and drew their attention to the completion of 75 years of the Constitution of the Estimates Committee in April, 2025 and sought their views / comments on celebrating this special occasion. The Committee felt that this historic occasion needed to be commemorated in a befitting manner. After some deliberations, the Committee resolved that an All India Conference of the Chairpersons of the Estimates Committees of the Lok Sabha and the State Legislatures be organized and also to bring out a Souvenir to mark this occasion. The Committee also decided that the event may by organized during the Monsoon session of Parliament, after reconstitution of the Committee on 1st of May, 2025. The Committee authorized the Chairperson to take-up the matter with Hon'ble Speaker and decide dates etc.

3. The Chairperson, then welcomed the Secretary and other officials of the Ministry of New and Renewable Energy (MNRE), CMDs of SECI and REC Ltd., GM (Projects), IREDA and stakeholders from the State Governments of Bihar, MP, Rajasthan and Uttar Pradesh, convened to have oral evidence on the subject 'Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar : Muft Bijli Yojana'. Their attention was also drawn to Direction 55(1) of 'Directions by the Speaker, Lok Sabha' about the confidentiality of the proceedings of the Committee.

4. After a brief introduction on the subject by the Secretary, MNRE, the Joint Secretary of the Ministry made two separate presentations on the subject. The presentation on PM Surya Ghar : Muft Bijli Yojana *inter-alia* highlighted various aspects of Central Financial Assistance (CFA), subsidies on installation of 2 kw and 3 kw

capacity, additional subsidies provided by States, progress of work for solarisation of Government buildings, grievance redressal mechanism, RESCO/ Utility Led Aggregation Model for installation of RTS, etc,.

The presentation on Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) *inter-alia* highlighted overall achievements under each of the components of the Scheme, Statewise progress of the components, progress in terms of installation of number of pumps and capacity since launch of the Scheme, challenges being faced and steps taken to address such challenges, etc.

5. Thereafter, the representatives from Departments of Energy and Horticulture, Government of Rajasthan, UPNEDA, Government of Uttar Pradesh and REC Ltd briefed the Committee with regard to their roles, field experiences and the challenges being faced in implementation of the two schemes in the respective States/ and in the country as a whole. The Special Secretary cum Director UPNEDA, Govt. of Uttar Pradesh also made a brief presentation focusing on the challenges and views /suggestions for effective implementation of the schemes *viz* need for fixing the challenges faced on the National Portal, streamlining of loan processes, synchronization of Jan Samarth and National Portal, subsidy disbursement, strengthening of supply chain, etc.

6. The Hon'ble Chairperson and other Members of the Committee, then raised several queries relating to the subject. The queries on PM-KUSUM were *inter-alia* related to segregation of agricultural and industrial load, subsidies to Discoms, issues related to implementation of Component 'C', progress of implementation in States providing free electricity for agriculture, upper limit with respect to pump capacity, implementation in hilly and other backward areas, implementation in Maharashtra, loan to farmers, loans sanctioned by IREDA, issue of NIL installation in the States of Assam, Bihar and Andhra Pradesh, lack of awareness among farmers, etc. Further, the queries on PM-Surya Ghar- Muft Bijli Yojana were *inter-alia* related to upfront cost of RTS to be borne by beneficiaries, Implementation of the scheme in clusters/ residential complexes, registration of vendors, need for publication of statewise list of vendors, rate of interest on loans charged by financial institutions, loans and rate of interest charged by IREDA,

role of REC as the National Programme Implementing agency objectives of the financial incentives being provided to Discoms, inspection of RTS panels, etc.

7. The representatives of the Ministry responded to the queries raised by the Members. The Chairperson thanked the representatives of the Ministry and asked them to furnish written replies, on the points, for which information was not readily available, within fifteen days.

8. The witnesses, then, withdrew.

9. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE THIRTEENTH SITTING OF THE COMMITTEE ON ESTIMATES (2024-25)

The Thirteenth Sitting of the Committee was held on Tuesday**, 11th March, 2025 at 1500 hrs. in Committee Room No. 'B', Parliament House Annexe, New Delhi-110001**

PRESENT

Dr. Sanjay Jaiswal – Chairperson

Members

2. Shri Kalyan Banerjee
3. Shri P. P. Chaudhary
4. Shri Devusinh Chauhan
5. Smt. Sangeeta Kumari Singh Deo
6. Shri Sudheer Gupta
7. Shri Naveen Jindal
8. Shri Jugal Kishore Sharma
9. Thiru Dayanidhi Maran
10. Shri P.C. Mohan
11. Shri B. K. Parthasarathi
12. Dr. Rajkumar Sangwan
13. Shri Arvind Ganpat Sawant
14. Kumari Selja
15. Dr. Indra Hang Subba
16. Shri Ve vaithilingam

SECRETARIAT

1. Shri. Y. M. Kandpal - Joint Secretary
2. Shri Lalkithang - Director

REPRESENTATIVES OF THE MINISTRY OF NEW AND RENEWABLE ENERGY

Sl. No.	Name of the Officer	Designation
1.	Ms. Nidhi Khare	Secretary
2.	Shri Sudeep Jain	Additional Secretary
3.	Shri Pankaj Saxena	Scientist-G
4.	Ms. Suman Chandra	Director
5.	Shri Jeevan Kumar Jethani	Scientist-F
6.	Shri Divyanshu Jha, IAS	Deputy Secretary
7.	Shri Vivek Kumar Dewangan	CMD (REC Ltd.)
8.	Mr. Vijay Kumar Singh	Director (Project) (REC Ltd.)
9.	Mr. Chandra Sekhar Sakhamuri, IAS	ED (REC ltd)
10	Shri Valli Natarajan	Executive Director (REC ltd.)
	Ministry of Finance (Department of Financial Services)	
11.	Shri Manoj Ayappan	Joint Secretary
	Bank of Baroda	
12.	Shri Sanjay Maduliar	Executive Director
	Punjab National Bank	
13.	Shri Ashok Chandra	MD & CEO
14.	Shri Sunil Kumar Chugh	Chief General Manager
	State Bank of India	
15.	Shri Surender Rana	Deputy Managing Director (Retail –Agri & SME)

2. At the outset, Hon'ble Chairperson, Committee on Estimates welcomed the Members to the Sitting of the Committee and informed them that the Committee shall undertake an On the Spot Study Visit to Itanagar, Guwahati, Kolkata and Hyderabad from 23rd to 29th April, 2025.

3. The Chairperson, then welcomed the Secretary, Ministry of New and Renewable Energy (MNRE), Joint Secretary, Ministry of Finance (Department of Financial Services) and other officials of the Ministry, MD & CEO, Punjab National Bank, Deputy Managing Director (Retail –Agri & SME), State Bank of India and Executive Director, Bank of Baroda to the sitting, convened to have oral evidence on the subject 'Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar : Muft Bijli Yojana' with special emphasis on the 'Role and performance of banks and other financial institutions in implementation of the Schemes'. Their attention was also drawn to Direction 55(1) of 'Directions by the Speaker, Lok Sabha' about the confidentiality of the proceedings of the Committee.

4. After a brief introduction on the subject by the Secretary, Ministry of New and Renewable Energy (MNRE), Joint Secretary, Ministry of Finance (Department of Financial Services) made two separate presentations on the subject. The presentation on PM Surya Ghar : Muft Bijli Yojana *inter-alia* highlighted various aspects of loans under the schemes including non requirement of income documents, rate of interest, moratorium on repayment, margin of down payment, progress of loans under both public and private sector Banks, Statewise details on processing of loans, involvement of State Level Banker's Committees (SLBCs), awareness campaigns by PSBs, model financing scheme to vendors, product improvisations, etc.

The presentation on PM- KUSUM *inter-alia* highlighted various issues related to processing of loans including identification of beneficiaries, inability of farmers to provide margin amount, conversion of agri to non-agri land, details of component wise and bank wise processing of loans, vendor financing, Grievance redressal system, efforts to reduce pendency of loan applications, etc.

5. The Hon'ble Chairperson and other Members of the Committee, then raised several queries relating to the subject. The queries on PM-Surya Ghar- Muft Bijli Yojana were *inter-alia* related to the gap between number of applications and installations, documents required for loans, coverage of the scheme for small hamlets, issues related to Net-metering, solarisation of district hospitals, use of AI, need for reduction of rejection, rate of loan applications, feasibility of the scheme in hilly regions, need for synchronizing PM-Surya Ghar scheme with PMAY.

The queries on PM-KUSUM were *inter-alia* related to corporate taking benefits of the scheme, processing of loans in Odisha, special initiatives for aspirational districts, financing options, interest subvention, need for regular meeting with banks by stakeholders, need for making the scheme pro-farmer, steps taken to make scheme self sustainable etc.

6. The representatives of the Ministry responded to the queries raised by the Members. The Chairperson thanked the representatives of the Ministry and asked them to furnish written replies, on the points, for which information was not readily available, within fifteen days.

7. The Committee also decided to undertake a local on the spot study visit to Sunmaster Agrivoltaics Private Ltd located at Issapur, Najafgarh, Delhi to Study the dual use technology of Agrivoltaics for generating solar energy and agriculture products in the same area of land.

8. The witnesses, then, withdrew.

9. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE TENTH SITTING OF THE COMMITTEE ON ESTIMATES (2025-26)

The Tenth Sitting of the Committee was held on Friday, the 21 November, 2025 from 1100 hrs. to 1120 hrs. in Room No. '2', Parliament House Annexe Extension building, New Delhi.

PRESENT

Dr. Sanjay Jaiswal - **Chairperson**

Members

2. Shri P. P. Chaudhary
3. Shri Chandan Chauhan
4. Ms Iqra Chaudhary
5. Smt. Sangeeta Kumari Singh Deo
6. Shri Sudheer Gupta
7. Shri Jugal Kishore
8. Shri Vishaldada Prakashbapu Patil
9. Shri Awadhesh Prasad
10. Shri Rajiv Pratap Rudy
11. Shri Arvind Ganpat Sawant
12. Dr. Bhola Singh
13. Shri Manoj Tiwari

SECRETARIAT

1. Smt. Juby Amar - Joint Secretary
2. Shri Sumesh Kumar - Director

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee. The Committee then took up for consideration and adoption of the Draft Report on the Subject "Implementation of Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) & PM Surya Ghar: Muft Bijli Yojana".

3. The Committee after due deliberations adopted the draft Report. The Committee, then, authorised the Chairperson to finalize the draft Report on the basis of factual verification received from the concerned Ministry and present the same to Lok Sabha.

4. XXX XXX XXX

The Committee then adjourned.