

F. No. 32/645/2017-SPV Division
Government of India
Ministry of New and Renewable Energy

Block no. 14, CGO Complex,
Lodi Road, New Delhi -110003
Date: 13th March 2019

Office Memorandum

Subject: Request for comments of stakeholders on draft Guidelines for implementation of Scheme for farmers for installation of solar pumps and grid connected solar power plants.

Government has recently approved scheme for farmers for installation of solar pumps and grid connected solar power plants. Administrative Approval for the scheme was issued by Ministry of New & Renewable Energy (MNRE) on 08.03.2019.

2. Draft Guidelines for the above-mentioned Scheme have been prepared by this Ministry and enclosed herewith for consultations. Stakeholders are requested to send their comments/suggestions/views on the above-mentioned Guidelines, in enclosed format, **latest by 22.03.2019** at shobhit.srivastava@nic.in.



(Shobhit Srivastava)
Scientist-C

To

All concerned stakeholders

Format for submission of Comments on Draft Guidelines

S.No.	Para/Sub-para No.	Comment/Suggestion

Guidelines for Implementation of Scheme for Farmers for Installation of Solar Pumps and Grid Connected Solar Power Plants

1. Background

As a part of Intended Nationally Determined Contributions (INDCs), India has committed to increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030.

The Cabinet had approved scaling-up of solar power target from 20,000 MW of Grid Connected Solar power Projects to 1,00,000 MW by 2022.

While Large Scale Solar power generation projects are being installed to achieve the ambitious target of 100 GW of Solar Power generation by 2022, it has been planned to simultaneously develop decentralized Solar energy and other renewable energy generation Plants of capacity up to 2 MW which could be connected directly to existing 33/11 kV sub-transmission system of Distribution Company, thus saving in transmission system requirement apart from T&D losses. Such plants near 33/11 kV sub-station may be developed by marginal farmers, giving them an opportunity to increase their income by utilising their barren and uncultivable land for solar or other renewable energy based power plants, cultivable land may also be used if the Solar plants are set up on stilts where crops can be grown below the stilts, which they can sell Electric power to DISCOMs.

Besides, developing decentralized renewable power, it is planned to replace Agriculture Diesel pumps with Solar Water pumps and Solarise Grid connected Agriculture pumps. At present, over 30 million agricultural pumps are installed in India, out of which nearly 10 million pumps are diesel based. The Distribution Companies (DISCOMs) are not in a position to energize these pumps through grid connection as seen from the long waiting lists with such Distribution Companies. Hence there is a need to provide energy to these pumps through solar energy. Also, over 20 million grid-connected agriculture water pumps installed in the country consume more than 17 percent of total annual electricity consumption of the country. Solarization of the same can reduce dependence of these pumps on conventional sources of energy supplied by DISCOMs and thus reducing their burden of subsidy on agriculture consumption of Electricity. This will also provide additional source of income to farmers who will be in a position to sell the surplus power to DISCOMs.

The new Scheme Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM) Scheme has provision of these components of decentralised renewable energy plants and agriculture pumps.

2. Approval of the KUSUM Scheme

The Government of India has launched Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM) Scheme with following components:

- i. Component-A: Setting up of 10,000 MW of Decentralized Ground/ Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants;
- ii. Component-B: Installation of 17.50 Lakh Stand-alone Solar Agriculture Pumps; and
- iii. Component-C: Solarisation of 10 Lakh Grid Connected Agriculture Pumps.

The Component-A and Component-C will be implemented initially on pilot mode for 1000 MW capacity and one lakh grid connected agriculture pumps respectively and Component-B will be implemented in full-fledged manner with total Central Government support of ₹ 19,036.5 Crore.

After successful implementation of pilot project of Components A and C, the same shall be scaled up with necessary modifications based on the learning from the pilot phase with total Central Government support of ₹ 15,385.5 Crores.

All three components of the scheme aim to add Solar capacity of 25,750 MW by 2022 with the total Central Financial Support of ₹ 34,422 crore.

3. Implementation mechanism:

These guidelines have been formulated to provide broad implementation framework of the Scheme.

i. Component A: Setting up of 10,000 MW of Decentralized Ground/Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants

Under this component, solar or other **renewable energy based power plants (REPP)** of capacity 500 kW to 2 MW will be setup by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (**FPO**) hereinafter called **Renewable Power Generator (RPG)**. However, States/DISCOMs may allow setting-up of solar or other renewable energy based power plants of capacity less than 500 kW in specific cases. The REPP will be preferably installed within five km radius of the sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses.

The Distribution companies (DISCOMs) will notify sub-station wise surplus capacity which can be fed from such RE power plants to the Grid and shall invite applications from interested beneficiaries for setting up the renewable energy plants. The renewable power generated will be purchased by DISCOMs at a feed-in-tariff (FiT) determined by respective State Electricity Regulatory Commission (SERC). In case, the aggregate capacity offered by Applicants is more than notified capacity for a particular sub-station, bidding route will be followed by DISCOMs to select Renewable Power generator and in such cases the FiT will be the ceiling tariff for bidding. Selection of bidders will be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or e-reverse auction as the case may be. The bidding may be renewable energy source agnostic. A model PPA (Power Purchase Agreement) to be executed between RPG and DISCOMs is being prepared by MNRE and shall be circulated to all stake holders. The duration of PPA will be 25 years from Commercial Operation Date (COD) of the project.

In case the farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)etc. 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 RPG in this case. In such a case, the land owner will get lease rent as mutually agreed between the parties. The lease rent in such a case 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 lease rent in such a case may be anywhere between Rs 0.10 paise per unit to Rs 0.30 paise per unit of Electricity generated, depending on the market conditions of the land, and may even go higher if market demands so. The lease rent payment shall be made directly to the farmers in their bank account by the DISCOM, from the payment due to the developer. A model Land Lease Agreement to facilitate the beneficiaries is being prepared by MNRE and shall be circulated to all stake holders. However, the terms of Land Lease Agreement may be finalised on mutual consent of concerned parties.

The REPP under the scheme would be implemented on Barren / uncultivable land. Agricultural land is also permitted under the scheme provided that solar plants are installed in stilt fashion (i.e. raised structure for installation of Solar panels) and with adequate spacing between panel rows for ensuring that farming activity is not affected. The RPG would be free to adopt any renewable energy source or technology while responding to the bid. However, in case cultivable land, only solar plants may be installed that too on stilts, so that the farmers continue to cultivate the land, apart from getting the benefit of lease rent. In such a case DISCOM may also float bids (in case of specific substations) where setting up of solar projects on stilts may be mandatorily required, and bids for energy tariff invited accordingly.

Selection and Implementation of Decentralised Renewable Energy Power Plants

a. Expression of Interest (EoI) for Short-listing of RPG

DISCOM shall invite 33/11 kV sub-station wise EoI from RPG to participate in selection process for development of decentralised renewable power plants. The RPG shall submit their interest against the EoI as per the schedule notified by DISCOM. An RPG will not be allowed to apply for more than one renewable power plant for a particular 33/11 kV sub-station. The EoI of an RPG will also be disqualified if it is found that its proprietor/partner/director/member has also filed EoI as proprietor/partner/director/member for another RPG for the same sub-station.

The DISCOM may request to submit non-refundable processing fee from the interested RPGs, which in no case shall be higher than Rs. 5000 per MW or part thereof of the capacity applied for.

In order to ensure only quality systems are installed, MNRE specifications would be followed.

In case of REPP being developed by a developer the Net-Worth of the developer should not be less than Rs. 1.00 Crore per MW (of the capacity applied). This shall not be applicable for farmers cooperative or panchayats or Farmer Producer Organisations (FPO) or farmers setting up REPP in their own lands.

b. Selection of REPP

In case the total aggregate capacity of eligible applications received for a particular 33/11 kV sub-station is less than or equal to the capacity notified for connectivity at the sub-station, LoA will be awarded to all eligible applicants for procurement of renewable power at predetermined FiT determined by respective State Electricity Regulatory Commission (SERC).

In case the total aggregate capacity of eligible application received for a particular 33/11 kV sub-station is more than the capacity notified for connectivity at the sub-station, then DISCOM shall invite Bids from all these applicants. All eligible applicants will have to submit tariff bids within a prescribed time. Selection of bidders will be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or e-reverse auction as the case may be. LoA will be awarded to all successful bidders.

c. Connectivity with the 33/11 kV sub-station

REPP of capacity up to 2 MW may be connected at 11 kV side of sub-station and the selected RPG will be responsible for laying of transmission line from REPP to 33/11 kV sub-station, where the plant is connected to the grid and metering is done.

The RPG shall comply grid connectivity and other regulations as applicable.

d. Clearances required from the State Government and other local bodies

The RPG is required to obtain necessary clearances as required for setting up the REPP.

e. Power Purchase Agreement (PPA)

A copy of standard Power Purchase Agreement to be executed between the DISCOM and the RPG shall be provided by DISCOM along with invitation for submission of EoI. Within two months of the date of issue of Letter of Award (LoA) by DISCOM, the Power Purchase Agreement (PPA) will have to be executed by RPG. The PPA shall be for a period of 25 years from the date of COD. The DISCOM will be obliged to buy the entire power from RPG within the contract capacity. However, the RPG is required to achieve a minimum CUF of 15%. The RPG will be free to operate the plant after expiry of the 25 years of PPA period if other conditions like land lease, etc., permits. However, any extension of the PPA period beyond 25 years shall be through mutual agreements between the RPG and DISCOM. As a payment security measure DISCOM will have to maintain LC and Escrow Arrangement as defined in the PPA.

f. Bank Guarantees

The RPG shall provide the following Bank Guarantees to DISCOM as follows:

- Earnest Money Deposit (EMD) of Rs. 1 Lakh/MW in the form of Bank Guarantee along with EoI.
- Performance Bank Guarantee (PBG) of Rs. 5 Lakh/MW within 30 days from date of issue of Letter of Award.

The Bank Guarantees against EMD shall be returned to the selected RPG on submission of valid PBGs. The selected RPGs are required to sign PPA with the DISCOM in line with the timeline given in the Guidelines. In case, the selected RPG fails to execute the PPA within the stipulated time period, the Bank Guarantee equivalent to EMD shall be en-cashed by DISCOM as penalty. In case any bidder is not selected, DISCOM shall release the EMD within 15 days of the date of issue of LoA to selected RPG(s). The PBGs shall be valid for a period of 12 months from the date of issue of LoA for the REPP. The PBG will be returned to the RPG immediately after successful commissioning of solar power plant, after taking into account any penalties due to delay in commissioning as per provisions stipulated in the Guidelines.

g. Commissioning

The selected RPG shall commission the solar power plant within nine months from date of issuance of LoA. A duly constituted Committee of DISCOM officials will physically inspect and certify successful commissioning of the plant. In case any RPG fails to achieve this milestone, DISCOM shall encash the Performance Bank Guarantee (PBG) in the following manner:

- a. Delay up to two months - The PBG on per day basis and proportionate to the balance capacity not commissioned.
- b. In case the commissioning of the solar power plant is delayed over two months, the PPA capacity shall stand reduced / amended to the Project capacity commissioned at the end of 11th month from date of issuance of Letter of Award.

In case of delays of plant commissioning due to the reasons beyond the control of the RPG, DISCOM after having satisfied with documentary evidences produced by the RPG for the purpose, can extend the time for commissioning date without any financial implications to the SPG.

h. Shortfall in minimum generation

During PPA, if for any year, it is found that the RPG has not been able to generate minimum energy corresponding to the lower limit of CUF of 15%; such shortfall in performance shall make SPG liable to pay the compensation as provided in the PPA to the DISCOM. This will, however be relaxable to the extent of grid non-availability for evacuation, which is beyond the control of the RPG. Further, this compensation shall not be applicable in events of Force Majeure identified under PPA with Discom affecting supply of solar power by RPG.

i. Commercial Operation Date (COD)

The Commercial Operation Date (COD) shall be considered as the actual date of commissioning of the solar power plant as declared by the Commissioning Committee.

j. Release of PBI to DISCOM

DISCOM would be eligible to get PBI @ Rs. 0.40 per unit purchased or Rs. 6.6 lakh per MW of capacity installed, whichever is less, for a period of five years from the COD. However, to avail the PBI, DISCOM shall submit following documents after completion of one year from the COD and every year thereafter till five years:

- Timely payment of monthly lease rent, if applicable, to the land owner of the project.
- Monthly units purchased from the plant and corresponding payment made to the project developer.

Applicable PBI would be released to the DISCOM after submission of these documents by DISCOM to MNRE.

Roles and responsibilities of stakeholders:

Ministry of New and Renewable Energy:

MNRE shall allocate initial capacity of 1000 MW for Pilot Project to DISCOMs based on their demand and readiness for implementation. Pilot projects will be continuously monitored during implementation and also on completion to evaluate their success and a detailed report will be prepared for recommending further scaling up of the capacity under this component. Such evaluation may be done internally or through external agency as per decision of the MNRE.

Ministry will issue Model PPA and model Lease Agreement for implementation of the scheme.

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. The PBI will be given to the DISCOMs for a period of five years from the Commercial Operation Date of the plant. Therefore, the total PBI that shall be payable to DISCOMs will be Rs. 33 Lakh per MW.

DISCOMs:

The DISCOMs shall have to send their demand for sanction under the scheme along with details on their readiness to implement the component A of the scheme.

The concerned DISCOM shall declare the renewable power capacity that can be connected to a 33/11 kV sub-station and carry-out the procedure for selection of RPG. On selection of RPG, DISCOMs shall issue the LoA and sign PPA with RPG. DISCOMs will provide connectivity at the sub-station to the selected RPG. 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. They shall act as facilitator to the beneficiaries in implementation of this scheme.

In case, RPG has taken land from a farmer/group of farmers on lease for the project, the amount of monthly lease rent would be paid by the DISCOMs to the lessor directly in his/her bank account before 5th day of the month following the month for which the lease rent is due. In such a case, the lease rent paid by the DISCOM will be deducted from monthly payment due to the RPG.

State Nodal Agency (SNA):

State Nodal Agency (SNA) will coordinate with States/UTs, DISCOMs and farmers for implementation of the scheme. They will assist the farmers in project development activities including formulation of DPR, PPA/EPC contracts, getting funds from financial institutions, etc. For settlement of any issues arising during selection of solar/ other renewable energy based power plants and their implementation, a State level Committee under the chairmanship of Principal Secretary (Renewable Energy/Energy) will be setup by the participating State/UT and SNA of that State will be responsible to coordinate/organize the quarterly meetings of the State Level Committee. In addition, SNAs shall ensure publicity of the scheme and create awareness through advertisements etc, and also monitor the implementation of the scheme. The SNA will be eligible to get service charge of Rs.0.25 Lakh per MW after commissioning of the projects.

Renewable Power Generator (RPG):

Individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO) or projects developer would be the RPG. They have to participate in the selection process to be carried out by Discoms. In case of selection, they have to sign PPA and install the plant as per provisions of these guidelines and applicable rules and regulations.

ii. Component B: Installation of 17.50 Lakh Stand-alone Solar Pumps

Under this Component, individual farmers will be supported to install standalone solar Agriculture pumps of capacity up to 7.5 HP for replacement of existing diesel Agriculture pumps in off-grid areas. Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP.

Solar PV capacity in kW equal to the pump capacity in HP is allowed under the scheme. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar Agriculture pump will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan.

However, in North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar pump will be provided. The State Government will give a subsidy of 30%; and the remaining 20% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 10% of the cost as loan.

New Solar Agriculture pumps would not be covered under this component in Dark zones/black zones. However, existing standalone diesel pumps, can be converted into standalone solar pumps in these areas. Further, micro irrigation techniques will be encouraged to save water. Further, whenever the grid reaches in the off-grid area, the stand alone Solar Agriculture Pumps can be connected to the grid to feed surplus power.

DISCOMs/ Agricultural Department/ Minor Irrigation Department / any other Department designated by State Government will be the implementing agencies for this component. 2% of the eligible CFA will be provided as service charges to the Implementing Agency. In case of centralised tendering, some percentage out of service charges (to be decided by MNRE) may be given to the central agency.

a. Allocation and procurement of pumps

State-wise allocation of solar Pumps will be issued by MNRE once in a year, after approval by a Screening Committee under the chairmanship of Secretary, MNRE. In the beginning of every financial year during the Scheme tenure, MNRE will call for submission of demand from the implementation agencies. Based on overall target for the year and the demand received from implementation agencies, MNRE will allocate quantity of pumps to the implementation agencies in the States. On acceptance of the allocated quantity by the implementation agencies and submission of detailed proposal

as per MNRE format, within a given time period, final sanction will be issued by MNRE. MNRE will have the discretion to amend the sanction any time of the year after ascertaining the pace of progress in any particular state, or as per requirements of the scheme.

Implementing agencies will submit proposals through online portal to MNRE for approval. Offline proposals will not be accepted, unless MNRE has given a general exemption from the requirement of online submission for any specific period of time.

Proposals for new installations will only be considered by the Screening Committee. Proposals wherein the systems have already been installed/ under installation will not be considered for approval under the Programme by the Screening Committee.

MNRE may specify either a centralized procurement of equipment or procurement by the State Implementation Agencies. Implementation agency (central or state as the case may be) will carry out tendering process as per the standard bidding document and standards and specifications issued by MNRE. Any deviation shall normally be not permissible except in specific cases with the approval of Screening Committee

In case centralized procurement is opted for panels/controllers/pumps, the same may be done through agencies like SECI, EESL or any other Central/ State Agency. In such a case, while selection of beneficiaries and implementation of scheme would be the responsibility of the State Implementation Agency, the procurement and installation of pumps would be the responsibility of the Central Agency. For this purpose, the Central Agency would float a centralized tender for procurement of the equipment. This tender could be a single one across the country or may be state specific tenders. The Procurement Agency would also be responsible for carrying out publicity of the scheme so as to increase awareness amongst potential beneficiaries.

In case procurement is done by the State Implementation Agency, the same must be done as per the Standard Bidding Guidelines issued by MNRE for the same. State Implementation Agency may also request any Central agency to do the procurement on its behalf. The Implementation Agency would also be responsible for carrying out publicity of the scheme so as to increase awareness amongst potential beneficiaries.

In all cases, the bids shall require the successful bidder to provide for AMC for five years from the date of installation, real time monitoring, helpline, district level service centres and standards of performance in dealing with complaints.

b. Installation timeline and Penalties

Projects for installation of solar Agriculture pumps systems shall be completed within 12 months from the date of sanction by MNRE. However, for North Eastern States including Sikkim, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Lakshadweep and A&N Islands this time limit will be 15 months from the date of sanction. Extension

in project completion timelines, up to a maximum period of three months, will be considered at the level of Group Head in MNRE and upto 6 months at the level of Secretary in MNRE on submission of valid reasons by the implementing agency. However, such extension will attract reduction in service charges to implementing agency as under:

- a. 10% reduction in applicable service charges for delay of more than one month in completion of project.
- b. Further reduction of 10% of service charges for delay of more than two month and up to three months.
- c. Further reduction of 10% of service charges for delay of more than three month and up to six months
- d. No service charges for delay in completion of more than six months.

No extension will be granted beyond six months and only the systems which are installed in all respects and commissioned within stipulated time period will be considered for release of CFA.

c. Release of funds

Funds up to 25% of the MNRE benchmark cost or cost discovered through tenders, whichever is less, for the sanctioned quantity would be released as advance to the implementing agency only after placement of letter of award(s) to the selected vendors. The implementing agencies may pass on this fund to the selected vendors in different stages on achievement of various milestones as per terms and conditions of letter of award(s). The balance eligible CFA along with applicable service charges would be released on acceptance of the Project Completion Report in the prescribed format, Utilization Certificates as per GFR and other related documents by the Ministry.

d. Monitoring and maintenance

Selected vendors shall be responsible for design, supply, installation and commissioning of solar agriculture pumps. Vendors will mandatorily provide AMC for a period of 5 years from the date of commissioning of the systems. AMC will include inspection once in a quarter and submission of quarterly inspection report of the installation as per prescribed format. To ensure timely maintenance of the systems the vendor shall have one authorised service centre in each operational district and a helpline in local language in each operational State.

All solar Agriculture pumps sanctioned under the Programme shall be provided with remote monitoring system. It will be mandatory to submit performance data of solar power plant online to MNRE in format prescribed by MNRE. In order to ensure timely maintenance of solar power plants, SNAs may opt for deposit of bank guarantee by the vendor.

Monitoring of the Scheme and its implementation will be carried out during the period of implementation of the Scheme as is given below:

- i. The implementing agency would be responsible for monitoring parameters such as end-use verification and compilation of statistical information.
- ii. Implementing agencies will submit monthly progress report for the sanctioned projects.
- iii. Funds may be released by implementing agency to the vendor on submission of bank guarantee equivalent to 10% of the cost of systems installed by that vendor for a period of five years. Alternatively, BG may be provided initially for a period of one year which may be extended on year to year basis thereafter.
- iv. The Ministry officials or designated agency may inspect the ongoing installation or installed plants. In case the installed systems are not as per standards, non-functional on account of poor quality of installation, or non-compliance of AMC, the Ministry reserves the right to blacklist the vendor. Blacklisting may inter-alia include the following:
 - a. The Vendor/Firm will not be eligible to participate in tenders for Government supported projects.
 - b. In case, the concerned Director(s) of the firm/company joins another existing or starts/ joins a new firm/company, the company will automatically be blacklisted.

e. Responsibilities of Implementation Agency

The Implementing Agencies will be responsible for the following activities:

- i. Demand aggregation for solar Agriculture pumps.
- ii. Prepare proposal and submit to MNRE for sanction
- iii. Conduct tendering process as per SBD and MNRE guidelines
- iv. Oversee installation of systems.
- v. Inspection of installed systems and online submission of completion reports to MNRE.
- vi. Submission of utilization certificates and audited statement of expenditure through EAT module and disbursement of MNRE CFA.
- vii. Online submission of monthly and quarterly progress reports.
- viii. Ensure project completion within the given timelines and compliance of MNRE Guidelines and Standards.
- ix. Online and offline maintenance for records.
- x. Real time monitoring through dedicated web-portal
- xi. Ensure compliance of AMC and training of locals by the vendors.

- xii. Carrying out publicity of the scheme so as to increase awareness, for which purpose advice of MNRE may also be adopted apart from its own publicity.
- xiii. Any other activity to ensure successful implementation of the programme.

iii. Component C: Solarisation of 10 Lakh Grid Connected Agriculture Pumps

Under this Component, individual farmers having grid connected agriculture pump will be supported to solarise pumps. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme. However, State may specify lower solar PV capacity in kW, which in any case shall be not be less than pump capacity in HP e.g. for 2 HP pump it will not be less than 2 kW. The farmer will be able to use the generated solar power to meet the irrigation needs and the excess solar power will be sold to DISCOMs. It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan.

However, in North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. The State Government will give a subsidy of 30%; and the remaining 20% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 10% of the cost as loan.

Further, the CFA will be limited to Solar PV capacity up to two times of pump capacity in kW or 15 kW, whichever is lower. Solarisation of Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP.

This will help to create an avenue for extra income to the farmers, and for the DISCOMs to meet their RPO targets.

DISCOMs /GENCO/ any other Department designated by State Government will be the implementing agencies. 2% of the eligible CFA will be provided as service charges to Implementing Agencies. Implementation agency will carry out tendering process as per the standard bidding document and the specifications issued by MNRE. In case of centralised tendering, some percentage out of service charges (to be decided by MNRE) may be given to the central agency.

This component will be applicable to farmers already connected to grid. Feeder-wise implementation is proposed to be carried out. All agriculture pumps in a feeder will be

solarised, however, States may impose a minimum solarisation requirement for a feeder in terms of minimum % of pumps solarized on that feeder.

In case of dark zones/black zones only existing grid connected pumps will be solarised. Further, micro irrigation techniques will be encouraged to save water.

DISCOMs will purchase excess power from the farmer at the rate decided by the respective State/SERC. The DISCOMs will ensure “must-run” status to the solarised feeders and will keep such feeders ‘ON’ during sunshine hours of a day.

It will be mandatory for implementing agency to create remote monitoring system to monitor performance of the system post-installation.

States may also formulate state specific policy for grid connected solar pumps, customised to needs of the respective State, keeping the broad framework provided by MNRE intact.

a. Allocation of solarisation capacity and procurement

State-wise allocation for solarisation of pumps will be issued by MNRE once in a year, after approval by a Screening Committee under the chairmanship of Secretary, MNRE. In the beginning of every financial year during the Scheme tenure, MNRE will call for submission of feeder-wise demand for solarization. Based on overall target for the year and the demand received from implementation agencies, MNRE will allocate solarization capacity to the implementation agencies in the States. On acceptance of the allocated quantity by the implementation agencies and submission of detailed proposal as per MNRE format, with in a given time, final sanction will be issued by MNRE.

As per approval, the component is to be implemented on pilot mode for initial one lakh grid connected agriculture pumps and accordingly, initially this capacity will be allocated by MNRE to implementing agencies based on their demand and readiness for implementation of the component. Pilot projects will be continuously monitored during implementation and also on completion to evaluate the success of pilot run and a detailed report will be prepared for recommending further scaling up of the capacity under this component. Such evaluation may be done internally or through external agency as per decision of the MNRE.

Proposals for new installations will only be considered by the Screening Committee. Proposals wherein the pumps are already solarized prior to sanction of MNRE will not be considered for approval under the Scheme by the Screening Committee.

Implementation agency will carry out tender as per the standard bidding document and standards and specifications issued by MNRE. Centralised procurement of the panels/controllers may also be done by the agencies like SECI, EESL and State Government Agencies, if required.

In all cases, the bids shall require the successful bidder to provide for AMC for five years from the date of installation, helpline, district level service centres and standards of performance in dealing with complaints.

The Implementation Agency would also be responsible for carrying out publicity of the scheme so as to increase awareness amongst potential beneficiaries. For this purpose, apart from their own publicity content, they shall also be guided by advice of MNRE on this matter.

Implementing agencies will submit proposals through online portal to MNRE for approval. Offline proposals will not be accepted, unless MNRE has given a general exemption from the requirement of online submission for any specific period of time.

b. Installation timeline and Penalties

Projects for solarisation of pumping systems shall be completed within 12 months from the date of sanction by MNRE. However, for North Eastern States including Sikkim, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Lakshadweep and A&N Islands this time limit will be 15 months from the date of sanction. Extension in project completion timelines, up to a maximum period of three months, will be considered at the level of Group Head in MNRE and upto 6 months at the level of Secretary in MNRE on submission of valid reasons by the implementing agency. However, such extension will attract reduction in service charges to implementing agency as under:

- e. 10% reduction in applicable service charges for delay of more than one month in completion of project.
- f. Further reduction of 10% of service charges for delay of more than two month and up to three months.
- g. Further reduction of 10% of service charges for delay of more than three month and up to six months
- h. No service charges for delay in completion of more than six months.

No extension will be granted beyond six months and only the systems which are installed in all respects and commissioned within stipulated time period will be considered for release of CFA.

The implementing agencies after submitting proposal to MNRE may choose to start the preparatory activities including tendering process. However, the Letter of Award/Purchase Order shall be placed to the selected vendor(s) only after the issue of sanction letter by MNRE. Further, MNRE will not be responsible for any liabilities arising out of a situation where the proposal is eventually rejected.

c. Release of funds

Funds up to 25% of the MNRE benchmark cost or cost discovered through tenders, whichever is less, for the sanctioned quantity would be released as advance to the implementing agency only after placement of letter of award(s) to the selected vendors. The implementing agencies may pass on this fund to the selected vendors in different stages on achievement of various milestones as per terms and conditions of letter of award(s). The balance eligible CFA along with applicable service charges would be released on acceptance of the Project Completion Report in the prescribed format, Utilization Certificates as per GFR and other related documents by the Ministry.

d. Monitoring and maintenance

Selected vendors shall be responsible for all aspects of solarisation viz., design, supply, installation and commissioning. Vendors will mandatorily provide AMC for a period of 5 years from the date of commissioning of the systems. AMC will also include maintenance of the pump along with solar component. AMC will include submission of quarterly inspection report of the installation as per prescribed format. To ensure timely maintenance of the systems the vendor shall have one authorised service centre in each operational district and a helpline in local language in each operational State.

Under the Programme along with solarisation, the vendor shall also provide a remote monitoring system. It will be mandatory to submit quarterly maintenance report along with performance data of solar power plant online to MNRE in format prescribed by MNRE. In order to ensure timely maintenance of systems, SNAs may opt for deposit of bank guarantee by the vendor.

Monitoring of the Scheme and its implementation will be carried out during the period of implementation of the Scheme as is given below:

- i. The implementing agency would be responsible for monitoring parameters such as end-use verification and compilation of statistical information.
- ii. Implementing agencies will submit monthly progress report for the sanctioned projects.
- iii. Funds may be released by implementing agency to the vendor on submission of bank guarantee equivalent to 10% of the cost of systems installed by that vendor for a period of five years. Alternatively, BG may be provided initially for a period of two years which may be extended on year to year basis thereafter.
- iv. The Ministry officials or designated agency may inspect the ongoing installation or installed plants. In case the installed systems are not as per standards, non-functional on account of poor quality of installation, or non-compliance of AMC, the Ministry reserves the right to blacklist the vendor. Blacklisting may inter-alia include the following:

- a. The Vendor/Firm will not be eligible to participate in tenders for Government supported projects.
- b. In case, the concerned Director(s) of the firm/company joins another existing or starts/ joins a new firm/company, the company will automatically be blacklisted.

e. Responsibilities of Implementation Agency

The Implementing Agencies will be responsible for the following activities:

- i. Issue additional instructions/ conditions such as minimum solarisation level of feeder.
- ii. Issue connectivity standards and facilitate connection to the grid.
- iii. Selection of feeder for solarisation and demand aggregation for solarisation of pumps.
- iv. Prepare proposal and submit to MNRE for sanction
- v. Conduct tendering process as per SBD and MNRE guidelines
- vi. Oversee installation of systems.
- vii. Inspection of installed systems and online submission of completion reports to MNRE.
- viii. Disbursement of MNRE CFA and submission of utilization certificates and audited statement of expenditure through EAT module.
- ix. Online submission of monthly and quarterly progress reports.
- x. Ensure project completion within the given timelines and compliance of MNRE Guidelines and Standards.
- xi. Online and offline maintenance for records.
- xii. Real time monitoring through dedicated web-portal
- xiii. Ensure compliance of AMC and training of locals by the vendors.
- xiv. Carrying out publicity of the scheme so as to increase awareness, for which purpose advice of MNRE may also be adopted apart from its own publicity.
- xv. Any other activity to ensure successful implementation of the programme.

4. Quality Assurance and Evaluation Mechanism

Systems installed under this Programme should meet technical specification and construction standards as specified by BIS and MNRE from time to time. Pumps installed under the scheme shall have minimum 4 stars rating. Non-compliance will be taken seriously to the extent of blacklisting of the vendor, in the same manner as specified, apart from taking action under any other law in force.

5. Interpretation of the Guidelines

In case of any ambiguity in interpretation of any of the provisions of these guidelines, the decision of the Ministry shall be final.

The Guidelines would be reviewed by the Committee constituted for formulation of these Guidelines and necessary modifications would be incorporated after getting approval of Minister, NRE.
