

MUKHYAMANTRI SAUR KRUSHI VAHINI YOJANA STAGE - II

1) Preamble

As a part of India's commitment to increase the share of renewable energy in the total installed power generation capacity to 40% by 2030, Government of India has encourage and enable development of solar and other renewable energy projects in the country. The GoI 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. Government of Maharashtra has also undertaken development of grid – connected solar PV power projects in the state through its Mukhyamantri Saur Krushi Vahini Yojana. It has been planned to simultaneously develop decentralized Solar energy capacity to 2 MW to 10 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. It will also help to give day time supply to farmers. Such plants near 33/11 kV sub-station can be developed by marginal farmers, giving them an opportunity to increase their income by utilising their barren and uncultivable land for solar 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. In line with this, Government of Maharashtra intends to enable development of grid-connected solar PV project of capacity 2 MW to 10 MW at 11 kV, above 10 MW at 33 kV level in the state on the unutilized land of Lift Irrigation Scheme consumers.

2) Need for Development of Solar Projects for LIS Consumers

- a) Considering the status of availability of coal, pollution levels due to thermal generation and the losses due to concentrated thermal generation in one area of the state, it is essential to promote the de-centralised solar generation in the state. Adequate lands are available in the state near the Lift Irrigation schemes which may be utilized for the solar generation, which helps to reduce the capital of the solar projects due to availability of land which indirectly reduce the burden on Government.
- b) Also in line with the initiatives of the Government of India by introducing the scheme like KUSUM, The Government of Maharashtra is intended to formulate the scheme on the development of solar power projects on the land available with the Lift Irrigation schemes of Water Resource Department and land available with Co-operative private LIS consumers
There are 153 Nos of HT AG lift irrigation schemes of the Water resource department and private co-operative societies etc in the State having connected load of around 405 MW.
- c) Private Co-operative or other LIS can install solar plant on other private land also and can sell of Solar energy to Discom through PPA.
- d) LIS consumer may opt to develop the solar plant with the help of solar power developer and have PPA with MSEDCL or

- e) LIS Consumer may allot its land or any leased land to the developer which will enter into the PPA with MSEDCL along with the condition of adjustment of generation with the consumption of LIS Consumer
- f) If the project is installed on available lands of LIS land, Generation from these projects will be utilized for the consumption of these LIS schemes and the excess generation will be fed in the distribution network for meeting local load requirement. Introduction of such Distributed solar generation scheme on LIS Lands will help to provide day time power to LIS schemes.

3) Proposed Scheme Details

i. Scheme -

1. Maharashtra Government intends to enable development of solar power projects of capacity 2 MW to 10 MW at 11 kV level and above 10 MW at 33 kV level by Lift Irrigation Scheme (LIS) consumers under Mukhyamantri Saur Krushi Vahini Yojana (MSKY) Stage II.
2. The solar power projects to be developed by LIS consumers can be undertaken under either of the two routes:
 - a) LIS Consumers can develop the solar project on their own and shall be the project owner and sell power to discom;
 - b) A third party Solar Power Generator may develop the project on LIS consumer land and shall be the project owner. The Solar Power Generator can take the land from the LIS Consumer on lease basis for the entire term of the PPA.
3. The solar power projects to be developed under this scheme are to be commissioned within a period of 9 months from the date of execution of the Power Purchase Agreement with discom. The LIS Consumers or the Solar Power Generator developing the project shall ensure that their project achieves a minimum Capacity Utilisation Factor (CUF) of 15% per annum.

ii. Tariff & GoM Subsidy -

1. The electricity generated from such solar power projects shall be sold by the Generators as per 3 (i) 1 to MSEDCL at Feed – in – Tariff (FiT) of INR 3.30 per kWh (unit) at 11kV for period of 25 years. The Feed – in – Tariff applicable for solar projects connected at 33kV shall be INR 3.00 per kWh (unit) for a period of 25 years.
2. For promotion of distributed solar generation through LIS Consumer, the Government of Maharashtra shall provide financial support in the form of a onetime capital support of INR 33 Lakhs per MW or support in the form of tariff of INR 0.40 per kWh for first 5 years.

iii. Payment Mechanism -

1. A MoU based Distribution Franchisee Agreement will be signed between MSEDCL and the LIS consumer which will be a part of the PPA.
2. The monthly billed amount of LIS solar power generator shall be adjusted against monthly billed amount of LIS Consumer for energy supplied by MSEDCL and balance payment if any shall be recovered / paid to the LIS consumers by MSEDCL.
3. As per the present tariff structure approved by the Hon'ble MERC, LIS consumers fall under the HT V (A) i.e. HT Agriculture category of consumers. The Average Billing Rate of HT Agriculture consumer is currently INR 4.46 per kWh. Out of this tariff, the LIS Consumers pay

INR 1.16 per kWh as per the current Lift Irrigation Scheme and balance tariff of INR 3.30 per kWh is provided by the Government of Maharashtra (GoM) in the form of subsidy.

4. The list of substations shall be provided by MSEDCL around which the solar power projects shall be developed on the land of LIS consumer.

4) Selection of Successful Solar Power Developer (LIS Consumer):

- In case, the aggregate capacity offered by LIS consumers / Solar Power Generators is more than notified capacity for a particular sub-station, competitive bidding route will be followed by MSEDCL to select Solar 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.
- A Draft PPA (Power Purchase Agreement) to be executed between LIS Consumer / Solar Power Generator and MSEDCL shall be issued as part of the tender document.
- The duration of PPA will be 25 years from Commercial Operation Date (COD) of the project.
- In case the LIS Consumer / group of LIS Consumers are not able to arrange equity required for setting up the solar power project, they can opt for developing the project through Solar Power Developer(s) / Generators, which will be considered as LIS Solar Power Generator in this case.
- If the land is provided by LIS Consumer, the land owner will get lease rent as mutually agreed between the consumer and developer.
- The lease rent in such a case may be in terms of Rupees per year per acre of land or in terms of Rupees per unit energy generated per acre of land area between developer and LIS Consumer.

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