

Agriculture-cum-Solar Farm Scheme in NCT of Delhi

1. Background

The Government of National Capital Territory of Delhi in its 2018-19 Green Budget has announced an innovative scheme named Agriculture-cum-Solar Farm Scheme. Accordingly, Department of Power, GNCTD, has proposed Agriculture-cum-Solar Farm Scheme, that apart from enhancing income of farmer engaged in agricultural activities in Delhi also aims to achieve solar targets as per Delhi Solar Policy 2016 in Delhi, without affecting the normal farming activities that will continue below the solar panels. The salient points of the scheme are as:

- 1.1 In this scheme Solar Panels shall be placed on raised structures and spaced enough to allow unhindered farming and aims to provide a source of additional earning to farmers starting from Rs.8333/- per month per acre with increment @ 6% p.a., amounting to Rs. 33741/- per month per acre of land in 25th year. **(Annexure-I)**. This will amount to a Five Times additional income in the first year from solar along which will further increase to 20times by 25th year, as presently the farmer is estimated to earn Rs.20000/- per acre per year.
- 1.2 Scheme shall be applicable only for farms in green belt, which are to remain agricultural land in Master Plan and peripheral villages.
- 1.3 Minimum structure height for placing Solar will be 3.5 meters for allowing passage for tractors and other farming equipments.
- 1.4 The maximum of 1/3rd of surface area of the land can be used for Solar Installations in such a way that Agriculture Activity is not affected.
- 1.5 The Solar Plant shall be installed at a minimum height of 3.5 Metre from the Ground Level

- 1.6 The Bhumidar / Farmer would continue to carry out agriculture activities without any hindrances for the entire period of 25 years of Agreement.
- 1.7 Farmers will not have to invest anything in this scheme for capacity building. It will be done on RESCO model. RESCO shall mean Renewable Energy Service Companies. RESCO model shall mean where the Solar Power Developer (SPD) intends to take a farm/land owned by some other entity on mutually agreed term and conditions from the farm/land owner(s) and enters into PPA for supply of Solar Power.
- 1.8 For a 06 acre land, the plant potential is 01 MW which could generate approximately 13 lakhs units of electricity annually.
- 1.9 Earning for farmer would be approximately Rs. 8333/- per month per acre for first year with increment @ 6% p.a., amounting to Rs. 33741/- per month per acre of land in 25th year. This is in addition of their agricultural income. The details of income is in Annexure-I.
- 1.10 In addition above income, the farmer will get free electricity from the solar plant subject to ceiling limit of 6000 units per annum per MW Plant capacity.
- 1.11 The minimum capacity of each plant will be 1 MW i.e. land area of minimum 06 Acre for each farmer(s).
- 1.12 Farmers will have right to continue farming activities.
- 1.13 The Revenue Department or Power Department, as the case may be can act as confirming party to the MOU/Agreement between Farmer/SPD so as to ensure protection of rights of both parties.
- 1.14 Solar development to be taken up on virtual net metering policy (to be notified by DERC). Government Departments like Health Deptt, PWD, DJB which are bulk power consumers will be power purchasers under the scheme.

- 1.15 Rate of electricity so generated will be beneficial to government departments mostly buying power on Commercial rates or in higher tariff slabs. Delhi Government departments would be required to sign an MOU with bid coordinator for purchase of this power.
- 1.16 The Developer shall undertake 100% insurance of the project. However, if an intentional damage is established on the part of the Farmer, the same shall be recovered from the Farmer.

2. Role and Responsibilities

2.1 Land Owner (Farmer): The Land Owner (Farmer) will submit his request for entering into the scheme to Dy. Commissioner (Revenue)'s Office. Land Owner (Farmer) has to furnish the certified copy of the land ownership documents as proof of land holding of the total required land for the applied capacity. The minimum land required is 6.0 acres for 1MWp proportionately of higher capacity. If the land holding is held jointly each of the joint holder is individually also eligible to apply for minimum 1MW to maximum 2.5 MW depending upon the extent of required land, provided that Husband and Wife will be individually or jointly eligible to apply for max 2.5 MW only.

2.2 After due verifications all the applications will be forwarded to DC (Revenue), HQ.

2.3 Developer:

2.3.1 The Developer shall enter into an agreement with Land Owner (Farmer).

2.3.2 The Developer can make changes to the land only for the purpose of installing the solar panels, their maintenance and efficient working.

2.3.3 The developer shall enter into Power Purchase Agreement (PPA) with Delhi Government Departments for sale of Solar Power.

2.3.4 The developer shall complete solar installations within nine months of placement of order.

2.4 **Revenue Department:**

The DC(Revenue), HQ will aggregate all the requests of the Farmers. The Revenue Department or any of its officers may act as the appropriate authority to solve any disputes.

2.5 **Power Department:**

i. EE&REM Centre under Department of Power, through their Executing Agency (Indraprastha Power generation Company Limited) will do tendering on behalf of Farmers interested in the scheme in the RESCO Model.

ii. Evacuation Facilities:

The role of the developer will be limited to providing evacuation at HT Level near the Solar Plant. Any expenditure involved in creating evacuation infrastructure beyond the solar plant will not be in the scope of the Developer. Power Department shall facilitate evacuation of energy generated under this scheme by Discoms who shall be responsible for providing connectivity of the solar PV power generating station at the nearest grid sub-station with the grid. SLDC will act as Nodal Agency on behalf of Power Department for evacuation of Solar Power.

- iii. IPGCL, the bid co-ordinator, will invite tenders, will oversee implementation of solar plant, will facilitate execution of Power Purchase Agreements by Government Departments, DJB, Health, PWD, etc. with developer.

2.6 DERC :

DERC will pass appropriate order about expenditures incurred and method of sharing expenditure in creating evacuation facilities.

3. Termination of agreement between Farmer and Developer

3.1 The Agreement between the parties shall be limited to 25 years from the date of Commercial-Operation-Date, unless and until terminated earlier pursuant to the provisions of the agreement. After the term ownership of the system shall be transferred to the farmer free of cost.

3.2 Purchase Option (Flexibility to exit) : So long as a Land Owner(s) default shall not have occurred and be continuing, Land Owner has -the option to purchase the System by paying the Power Producer the Purchase price as per Schedule III to this Agreement. To exercise its purchase option, the Land Owner shall not less than Ninety (90) days prior to the proposed Purchase Date, provide written notice to the Power, Producer of Land Owner's intent to exercise .its option to purchase the System on such purchase date: In the event Land Owner confirms its intention to exercise the purchase option in writing to the Power Producer.

- (i) Land Owner shall pay the applicable purchase price to the Power Producer on the Purchase Date, and such payment shall be made in accordance with any written instructions delivered to Land Owner by the Power Producer for payments under the Agreement, and

- (ii) the Parties shall promptly execute all documents necessary to
- (A) cause title to the System to pass to Land Owner on the Purchase Date, free and clear of all liens and
- (B) assign all vendor warranties for the System to Land Owner. Upon execution of the documents and payment of the applicable purchase price in each case as described in the preceding sentence, the agreement shall terminate automatically and the Land Owner shall become the owner of the System. Upon such termination, the Power Producer shall offer its operations and maintenance ("O&M") services to the Land Owner and the Parties may enter into an O&M agreement in this regard. The terms and conditions of the O&M agreement will be negotiated in good faith between the Parties. The draft AGREEMENT is attached herewith as **Annexure-II**.

4. Successors and Assigns

This Agreement and the rights and obligations under the Agreement shall be binding upon and shall inure to the benefit of the Power Producer and Land Owner and their respective successors and permitted assigns.

5. Applicability of scheme

5.1 Scheme shall be applicable only for farms in green belt, which are to remain agricultural land in Master Plan and peripheral villages..

5.2 The agreement between the parties will be limited to 25 years only, unless it is renewed by the parties involved.

5.3 The applicant has to furnish the certified copy of the land ownership documents as proof of land holding of the total required land for the applied capacity.

5.4 The minimum land required is 6.0 acres for 1MWp proportionately of higher capacity. If the land holding is held jointly each of the joint holder is

individually also eligible to apply for minimum 1MW to maximum 2.5 MW depending upon the extent of required land, provided that Husband and Wife will be individually or jointly eligible to apply for max 2.5 MW only.

- 5.5 The farmer shall not lose his right of ownership on the land or his right to cultivate on it, during and after the completion of the Agreement. The land will continue to remain agricultural. The Change of Land use allowed for Agriculture/ Horticulture land for installation of SPV shall revert back to Agriculture / Horticulture on completion of the Project period or in the event the Project is removed from the site.

6. Mandatory use of Solar generation under scheme in Government Offices:

It shall be mandatory to use Green Power generated through this Agriculture Solar Scheme in Delhi Government offices/ buildings mainly Delhi Jal Board, Health Department, Public Works Department etc.

7. Power Purchase Agreement:

The Power Purchase Agreement shall be signed between Solar Power Developer and Delhi Government Departments like Delhi Jal Board, Health, PWD etc.

8. Billing :-

The Solar Power Developer will raise the solar energy bills directly to the Government Departments inclusive of grant to Farmers /Bhumidars. The Solar Grant shall be directly be passed on Farmers/ Bhumidars at the approved rate.

9. Budget Provision

The entire investment for development of solar plant to be made by solar Power Developer. This scheme will not involve any budgetary allocation/support from Govt. of NCT of Delhi.

10. Settlement of Disputes:

10.1 Agreement between land owner(s) & Solar Power Developer: The Revenue Department or any of its officers may act as the appropriate authority to solve any disputes.

10.2 Implementation of Scheme by IPGCL through Solar Power Developer selected through bidding process: Mechanism adopted by IPGCL for their Grid Connected Rooftop Solar Scheme shall be applicable.

10.3 Power Purchase Agreement: Mechanism adopted in Model Power Purchase Agreement of MNRE for Grid Connected Rooftop Solar Scheme as adopted by IPGCL shall be applicable.