

# GOA ENERGY DEVELOPMENT AGENCY (GEDA)



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## **GOA STATE SOLAR POLICY-2017**

### **1. PREAMBLE:**

Solar energy is the most secure of all energy sources. It is abundantly available. It can be easily converted into electrical energy. Production of electrical power and its easy availability at regulated rates is an established benchmark of development. No major economic activity can be sustained without adequate and reliable sources of power. The challenges of Climate Change and Global Warming resulting from burning of fossil fuels are continuously threatening the world community. Solar Power generation offer an environmentally safe and sustainable alternative.

Goa is richly endowed with moderate climate and bright sunshine for almost 8-9 months in a year for generating solar power. The State of Goa entirely depends on thermal energy generated in other States. Goa being eco-sensitive, no Thermal Energy generation is possible in the State. Hence in order to attain self-reliance in Power generation and to promote clean source of Power, Solar Policy is being adopted. This would result in reduction of carbon emissions.

The challenge before the State Government is not only to meet the ever growing demand for power but also to progressively increase the share of Renewable Sources in the energy - mix so as to achieve overall energy security and also to meet the Renewable Purchase Obligation (RPO) as per the target fixed by appropriate authorities from time to time. It can be done by promoting the systematic tapping of the solar energy potential to the maximum. Technological improvements have now made generation of solar energy economically viable and would lead to reduction of expenditure of the State in purchase of Conventional Power from the Grid.

An appropriate policy framework is therefore essential to promote the Solar Energy generation initiatives. Therefore, the State Government is pleased to introduce the **“Goa State Solar Policy - 2017”**, as under:

**2. TITLE OF THE POLICY:**

This policy shall be known as the **“Goa State Solar Policy - 2017”**.

**3. LEGISLATIVE FRAMEWORK FOR POLICY:**

Several provisions under the Electricity Act, 2003 mandates the Electricity Regulatory Commissions and the Government’s to take the necessary steps for promotion of renewable energy. The Section 108 and Section 109 of the Electricity act 2003 mandates the Government to give directions to the State Commission in the matter of policy involving public interest. Accordingly, the state Government in exercise of its powers has formulated this Policy.

**4. OPERATIVE PERIOD:**

This policy shall come into effect from the date of notification in the official gazette in the state of Goa and shall remain in operation up to 7 (seven) years. However, this is subject to modifications as may be made by Government of Goa from time to time, without jeopardizing the already signed Agreement or MOU. Even though, the policy will be in operation for 7 years, all Agreements and PPAs signed under this policy shall be valid for the period of Agreement / PPA.

**5. CATEGORY FOR GENERATING SOLAR POWER**

**(5.1) Category I: Prosumer**

“Prosumer” is a Consumer having an already connected load with the Goa Electricity Department (GED) and is also a Producer of Solar Power. Prosumer is categorised into two types namely Small and Large.

- a) **Small Prosumer** is a person already having an LT connection i.e. connected load upto 100kW with GED. It will include Residential, Commercial, Institutional or Industrial consumers. They are allowed to go for Gross metering upto 100kW or the connected load, whichever is lower. The feed in tariff will be as per the Joint Electricity Regulatory Commission (JERC) approved solar tariff rates for that year. The solar power plant can be installed on rooftop or ground based within the same premises. The area/boundary of the premises will be as existing on date of Notification of this policy. However, the Small Prosumer is also allowed to opt for Net metering, if he chooses so.
- b) **Large Prosumer** is a person having an HT connection i.e. connected load above 100 kW with GED. It will include Residential, Commercial, Institutional or Industrial consumers. All large prosumer shall be allowed to go for Net metering only. The feed in tariff will be as per JERC approved solar tariff rates for that year for the surplus energy exported as per the net metering mechanism of JERC. The solar power plant can be installed on rooftop or ground based within the same premises. The area/boundary of the premises will be as existing on date of Notification of this policy.

## **(5.2) Category II : Producer**

The Producer is an entity intending to set up a Solar Power plant with a capacity of more than 100kW exclusively for sale of power to the Distribution Licensee under gross metering as per the tariff discovered by **Reverse Bidding**. The solar power plant can be installed on rooftop or ground based. Producers are allowed to participate in reverse bidding for four sizes of installation i.e. i) 100kW to 1MW, ii) 1MW to 5MW, iii) 5MW to 10MW and iv) 10MW & above. The producer will be selected through Reverse Bidding on the basis of the maximum discount offered on the levellised tariff fixed by the JERC for the solar power plant for that year. At the above discovered price of Solar tariff for that slab/size, the GED will enter into a Power Purchase Agreement (PPA) with all intending producers subject to availability of infrastructure for evacuation of power.

## **I. Norms / Conditions Applicable for Reverse Bidding**

In order to keep away speculative bidding and to ensure participation of only serious power producers, following conditions for bidding shall apply:-

- i.** Price : Price for supply of solar power shall be as per the discount offered on the levellised tariff rate as declared by JERC and duly notified as on the last date of responding to the Expression of Interest (EOI)/bidding.
- ii.** Eligibility: Besides other General Condition of EOI/bidding, only those who have firm proof of land in their ownership or NOC/confirmation from the owner of the land regarding his intention to lease out the land to the bidder (in case of bidder being successful in the bid) for a period equal to or more of the period of PPA shall be considered.
- iii.** The term for starting of supply from completion of bidding process & execution PPA shall be as mentioned at point no. 12 of this policy.
- iv.** The solar capacity to be approved for each year for all the 04 slabs as mentioned above at para 5.2 shall be separately notified by the Government at the time of bidding. However, an information on future requirement for 5 yrs will be indicated. The lowest bidder in each slab shall have the right to go for PPA for the whole capacity allocated to that slab. In case he desires to restrict to only his quoted capacity in the bid, then other bidders in that slab will be given the option to match the L1 rate. In case they agree for the same, then PPA at L1 rate upto allocated capacity of that slab will be entered with them. In case there are more bidders than the allocated capacity in that slab, then priority will be given in terms of next lowest bidder and so on i.e. from L1 to L2 to L3 and so on till the whole capacity in the slab is exhausted. In case even after signing of PPA with all bidders in that slab, the capacity is still left, then only non-bidders will be given the option to enter into PPA at L1 rate at the discretion of the Government.

**v. Permissible delays and Penalty thereof:-**

- a)** Any delay though condoned, shall not increase the period of PPA. Thus while delay could be permitted to the extent permissible on payment of penalty, the total time frame of PPA shall remain unaltered.
- b)** Maximum delay permissible to start the supply shall be 12 months. However, the State Government at its discretion may permit further delay of upto 12 months on payment of twice the penalty levied for the 1<sup>st</sup> delay permitted, prorata to the delay time on day basis. Provided that inspite of delays of first 12 months as permitted and subsequent discretionary delay, if permitted by Government of Goa, do not result in supply, then the PPA stands null & void and all Bank Guarantees shall be encashed.
- c)** The supplier shall give notice of his intention of supply three months prior to date as scheduled in PPA. Failure to give this notice will automatically be considered as delay until the notice is received for 90 days for intention to begin supply. Delay accordingly will be calculated in days and penalty will be imposed as per rules.
- d)** For supply to be considered as valid supply, atleast 50% of power as per PPA should be made available. Failure will be treated as breach of contract & one month supply value equivalent BG will be encashed or penalty imposed. However the supply will be paid at the contract rate.
- e)** Upto 10% lower supply quantum will not attract penalty. Anything above 10% & upto 50% will be levied penalty at 5% of value of supply that is missing above the 10% threshold.

- f)** For delay upto 12 months, the bidders shall pay penalty equal to 5% of value of energy committed for every day of delay. For delay upto next 12 months (if approved by Government), the penalty will be at twice the rate as already mentioned at point (b) above.
- g)** The bidder will have to provide 6 BGs each equivalent to 30 days supply for the capacity of the plant size he has quoted based on his own expectation of generation. The bidder shall clearly mention the size of the plant he plans to install and the minimum average units per KW per month that he commits to be generated from the same. This will be the basis for calculation of his value of BGs and penalties, if any, in case of default.
- h)** PPA shall not take into consideration the rainy season wherein supply as available will be considered for payment and above clauses a) to g) shall not be applicable. The start of rainy season shall be date of onset of monsoon as declared by Meteorology or the day in June when seasons rains cross 15cms whichever is early & will last for purpose of this PPA for 75 days from that date.
- i)** The BG submitted shall be valid for atleast 02 years. Out of six BG two BG (of one month each) shall be kept valid throughout the period of PPA, failing which equivalent amount of billing will be frozen. The B/L BG shall be returned after 6 month of successful operation (6 month of Non default operation after commissioning) or validity of BG whichever is later and the operator is required to extend the BG till such condition is achieved in case the same happens after 02 years.
- j)** Both the penalties i.e. for delay in supply or for short supply, shall be levied simultaneously if there is a default on both the accounts. However, in case one month BG is encashed in any month because of short supply, then no other penalty in that month shall be imposed to save the bidder from double whammy.

**6. Solar Power Plants under Renewable Energy Certificate (REC) Mechanism**

The State Government shall promote the development of solar power plants under the Renewable Energy Certificate mechanism specified by the Central Electricity Regulatory Commission. Under the REC mechanism the producer will set up the solar plant and sell the power to GED at average power purchase cost. The solar power generator will be permitted to sell the REC as per the market mechanism. The State shall not claim any benefit for REC.

**7. Third Party Sell Solar Power**

The State shall promote development of solar power plant sale of electricity to third party other than GED. The producers who are intending to set up the solar power plant within the State and sell the solar power so generated to the third party beside GED would have their own private power purchase agreement with any third private party. The producer will have to pay the wheeling charges as per JERC rates. However, the State Government/GED reserve the right to procure 10 percent of the power so generated at the agreed price between solar producer and third party buyer or at JERC tariff for that year or the reserve bidding price identified for that plant size, whichever is lower.

**8. Roof top Solar Power Generation through RESCO**

Under the Renewable Energy Service Company (RESCO) model instead of prosumers the RESCO will invest on behalf of one or more roof top owner in the housing colony, towns, etc., on their roof tops and will sell the power so generated to GED. The owners of the rooftops will have their own agreement with the RESCO. The GED will enter into the power purchase agreement with the RESCO for 25 years for the purchase of power at JERC approved solar tariff rates in that year.

## 9. **LAND**

Producer should identify suitable Rooftop or Private land for atleast 25 years for their projects within the state of Goa.

- a) To generate solar power, conversion of land is not needed. However, the Rooftop identified shall be a legally approved structures only.
- b) 2% of the total area can be used for construction, operation and Office set up subject to a maximum of 200 Sq. mtrs./per MW.
- c) No Town & Country Planning (T&CP) permission will be required for setting up of solar farm including construction for operational space as mentioned at (b) above.
- d) For the rooftop installation of 100kW and above, the building structure needs stability certificate from PWD/Chartered Engineers. Apart from structural stability certification, nothing else is required.
- e) No Gram Panchayat/Urban Local body/T&CP Department Construction licence/NOC/Completion certificate will be required.
- f) For Comunidade land, the lease rent agreed to between the solar power producer and the Comunidade will have to be approved by General Body of the Comunidade and the State Government.
- g) Separate Policy will be formulated for the allotment of Government land and or buildings.

## 10. **SUBSIDY/INCENTIVES:**

- a) The Subsidy received from the Government of India will be credited to the prosumer/developer as per the guidelines of Ministry of New & Renewable Energy (MNRE).



- b) For Small Prosumers i.e. for solar plants of upto 100kW size, the State Government shall grant 50 % of the Capital Cost or the benchmark cost provided by MNRE whichever is lower, as interest free loan, which will be recovered in instalments after six months onwards, from the time power flows into grid. The recovery will be made from the payment to be made to the generator for every kWh supplied to the grid. The recovery will be at Rs. 4 per kWh or JERC feed in tariff rate whichever is less.
- c) The State Government shall provide a subsidy of 30% of capital cost or the benchmark cost provided by MNRE, whichever is lower, for plants of size upto 100kW for the standalone systems including the cost of battery (Off-grid Systems) which will be released by way of Rupee 1 for every unit of power generated and will be paid once in six months. A sealed tested Energy meter form GED is required to be installed at the generation side to measure the solar power generation. No payment shall be made to such producer under Net/Gross metering to avoid possibility of Double benefit.
- d) For Small Generators, the meters will be rented out on payment of monthly fees. In case of Large Generators, the certified/approved meters shall be procured at their cost.

#### **11. GRID CONNECTIVITY, SAFETY AND BILLING CYCLE**

The cumulative solar capacity allowed at a particular Distribution Transformer (DT) shall not exceed the 30% of the peak capacity of the DT. GED will undertake power cable connectivity and charge it to the installer with due installation charges.

The Billing cycle for large prosumers will be monthly and the settlement period will be six months basis. However for the educational institutions, it will be annual from April onwards. The billing cycle for small prosumers and for producers shall be on monthly basis and their settlement will be within next 30 days.

For all the grid connected and battery backup stand-alone installations, all the instrumentation, operating unit specifications and safety norms will as per the guidelines of JERC and MNRE but State specific. These will be specified, reinforced and checked periodically by GED.

## **12. ADMINISTRATIVE MODALITIES**

Every Prosumer and Producer in the state will have to enter in PPA with the GED for the period of 25 years and the tariff will remain fixed for the period and required to submit account of the power generated annually before year end.

The disputes related to the power sale to GED will have to be settled through the empowered committee constituted by the State as notified.

The Prosumer shall have the right to terminate the PPA at any time by serving a written notice of 90 days in advance to the GED.

All the Solar/RE power projects will have to be initiated through GEDA, the MNRE nodal agency which will serve as single window dealing with projects.

## **13. ROLL OF STATE NODAL AGENCY GEDA**

- a) Announcement of Scheme: The Nodal Agency shall bring out a comprehensive scheme to implement the targets of Renewable Energy (RE). The scheme should elaborate the appropriate process for invitation of bids/applications, incentives and central financial assistance, if any, targets, implementation mechanisms etc.
- b) Allotment of the Solar Power Capacities : The Nodal Agency shall, from time to time, undertake the process for allotment of solar power capacities to the project developers. The Nodal Agency in consultation with the related stakeholders shall announce the process for allotment of solar power capacities.

- c) Facilitation in Development of Solar Power Plant : The Nodal Agency shall, facilitate the project developers in Setting up of solar projects including sanctions/clearances from number of Government agencies/departments. The State Government will provide requisite clearances through a “Single Window Clearance Mechanism”. It will be operated through GEDA.
- d) Identification of Government Land and Facilitation of its allotment for Solar Power Plant Development : The Nodal Agency shall identify government land and shall coordinate with the Government departments, prepare transparent procedure, take necessary approvals and clearances for the allotment of Government Land to the project developers for the development of power plant subject to policy formulated by Government as per 9(g).
- e) Support in availing the Subsidy : The Nodal Agency shall facilitate the prosumer/producer to avail the subsidy, if any, available from Central and/or State Government.
- f) Capacity Building & Awareness : The Nodal Agency shall organize Capacity Building & Training Sessions for participation by the segment stakeholders. The Nodal Agency shall also take necessary steps in creating awareness among the citizens of the State.
- g) Coordination with MNRE for Technical Specification : The State shall follow the technical specifications and standards as specified by the MNRE, from time to time. The Nodal Agency shall provide its inputs to the MNRE for specifying new standards or amending existing technical specifications for different component of solar plant photovoltaic.

#### **14. ROLE OF DEPARTEMENT OF ELECTRICITY, GOA**

The Department of Electricity, Goa State also referred as GED shall extend their support and guidance to the eligible entities installing solar power plant and their connectivity with their electricity system.

The Dept. shall comply with the regulatory framework specified by JERC and provisions contained in this policy only if they are not contradicting the JERC regulations. Its role includes:

- a) To provide banking facility for solar energy, incentives in the form of exclusion from open access charges, wheeling charges, T & D loss for solar power.
- b) To conduct feasibility study for evacuation facility and connectivity with the local grid facility.
- c) The voltage of evacuation of electricity generated, from the solar power plant shall be governed by the directions of the JERC. The evacuation infrastructure for the solar power plant wherever necessary shall be developed and augmented, by the Department of Electricity as per the JERC regulations in force.
- d) Electricity Department will conduct supervision, safety check and extend technical support to Developers wherever the evacuation line is laid from site of power production to the nearest grid connectivity point as per the JERC regulations in force.

**15. TIME FRAME FOR IMPLEMENTATION OF PROJECT**

For solar projects beyond 100kW capacity proposed under Reverse Bidding, the time schedule of completion will be from the date of approval by the GED is as follows:

<b><u>Plant Capacity</u></b>	<b><u>Time Schedule</u></b>
100kW - 1MW	240 Days
1MW – & above	1Year

unless specifically provided for in the bid document.

**16. EMPOWERED COMMITTEE**

To oversee, monitor and resolve various issues arising out of this policy and disputes settlements, an Empowered committee will be constituted under the Chairmanship of the Secretary (NCES) of the state. The committee shall have following members.

Secretary, NCES	: Chairman
Jt. Secretary (Finance) or Rep. not below Under Secretary	: Member
Chief Electrical Engineer, GED	: Member
Director, WRD	: Member
Director Science & Technology or his Rep. not below Dy. Director	: Member
Director (Accounts)	: Member
Member Secretary, GEDA	: Member Secretary

The Chairman of the Committee is empowered to co-opt subject matter experts if required. The committee shall be authorized to deliberate and decide on aspects related to implementation of this policy on its own motion or on the written representation by the stakeholders. It can take help/assistance of Technical experts as Consultants on payment basis for the same. The Government reserves the right to change any of the provisions of this policy giving 30 days public notice. However, the said changes will not have any retrospective effect and will not have any effect on the agreements already entered in by Solar producers with GED or any other State Government Department/Organisation.

In case of any dispute with regard to this policy wherein the policy is silent, then provision of Indian Electricity Act as amended from time to time shall apply.

## **17. POWER TO REMOVE DIFFICULTIES**

In case of any difficulty arising in implementing this policy the Government [Min (Power) with approval of Chief Minister] may clarify subject to condition that no such clarification will impact already signed contracts.

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