

**Proposed Draft Guidelines for Rooftop PV and other small Solar Power Plants
connected to distribution network (below 33 kV) under Jawaharlal Nehru
National Solar Mission (JNNSM).**

1. About the Programme

In order to give a thrust to rooftop PV and other small solar power plants connected at distribution network at voltage levels below 33 KV envisaged under Phase I of the Jawaharlal Nehru National Solar Mission (JNNSM), the Ministry of New and Renewable Energy (MNRE) proposes to launch a programme on generation based incentives. Hereinafter, the programme shall be referred to as 'Rooftop PV & Small Solar Generation Programme' (RPSSGP). The key features of the programme are as under:

- The Project Proponents would be selected as per these guidelines for development of solar power projects to be connected to distribution network at voltage levels below 33 kV.
- The projects should be designed for completion before March 31, 2013.
- The local distribution utility in whose area the plant is located, would sign a Power Purchase Agreement (PPA) with the Project Proponent at a tariff determined by the appropriate State Electricity Regulatory Commission (SERC).

Explanation: Project schemes from States wherein Tariff tenure for duration of 25 years with Tariff structure on levellised basis has been determined by SERCs shall alone be considered to be eligible to participate in this Programme (RPSSGP).

- Generation Based Incentive (GBI) will be payable to the distribution utility for power purchased from solar power project selected under these guidelines. The GBI shall be equal to the difference between the tariff determined by the Central Electricity Regulatory Commission (CERC) and the Base Rate, which will be Rs 5.50 per kWh in the first fiscal year of commissioning to be escalated by 3% every year.

Explanation: Base Rate once determined for a particular project for the purpose of computation of GBI, shall remain constant over duration of 25 years. Thus, GBI determined for a project (which is the difference of CERC determined tariff and Base Rate) shall remain constant for entire duration of 25 years.

The applicable Base Rate for projects to be commissioned during each subsequent year shall be modified at escalation factor of 3% p.a. and such escalated Base Rate shall remain constant over duration of 25 years. The projects which are registered in FY 2010-11 and gets commissioned in FY 2011-12, shall be eligible to avail GBI considering Base Rate of Rs 5.50 per unit.

- GBI shall be payable to the distribution utility for period of 25 years from the date of commissioning of the project.
- IREDA has been designated as 'Programme Administrator' for administering the generation based incentive programme for rooftop PV and other small solar power plants.

2. Classification of Project Scheme(s) and Eligibility Conditions:

The Projects under these guidelines fall within two broad categories i.e. (a) the projects connected to LT voltage i.e. 400 volts (3-phase) or 230 volts (1-phase) and (b) the projects connected to HT voltage at distribution network (i.e. below 33 kV). Accordingly, the projects have been divided into following two categories.

2.1. Category 1: Projects connected at HT level (below 33 kV) of distribution network

The Projects with proposed installed capacity of 1 MW and upto 3 MW and connected at below 33 kV shall fall within this category. The projects will have to follow appropriate technical connectivity standards in this regard.

2.2. Category 2: Projects connected at LT level (400 Volts-3ph or 230 Volts-1ph)

The Projects with proposed installed capacity of less than 1 MW and connected to the grid at LT level (400 Volts for 3-phase or 230 V for 1-phase) shall fall within this category.

2.3. Capacity allocation to different project categories

It is proposed to develop solar PV capacity of 100MW under these guidelines. This capacity addition shall be achieved by developing the projects in the abovementioned two categories in the following manner.

Sr. No.	Project Category	Capacity Limit
1	Projects connected at HT level of distribution network with installed capacity of 1 MW and upto 3 MW	80 MW
2	Projects connected at LT level of distribution network with installed capacity lower than 1 MW	20 MW

2.4. Applicability of these guidelines

The issues related to grid integration, metering, measurement and energy accounting for projects to be connected at LT level with installed capacity lower than 1 MW are complex. It is understood that the Central Electricity Authority is in the process of developing appropriate standard for grid interface of such very small solar generators connected at LT level. As a result, detailed guidelines for such Project Schemes will have to be developed once the clarity on such grid integration standard emerges.

As a result, the present Guidelines are applicable to Category 1 projects i.e. with installed capacity of 1 MW and upto 3MW having grid connectivity at HT level (below 33 kV) of the distribution network.

3. Methodology for Registration and Ranking of Project(s):

3.1. Pre-Registration with the Competent Authority at the State level

3.1.1. The Project Proponent fulfilling the 'Eligibility Criteria' as outlined under Clause - 5 of these Guidelines shall submit Application for Pre-Registration to Competent Authority (as defined in Clause - 4) at the State level, along with requisite supporting documents to establish fulfillment of Eligibility Conditions. The Competent Authority shall adopt the standard procedures for Pre-registration of Applicants and Pre-registration as provided in these guidelines. Pre- registration shall be carried out on first-cum-first served basis.

- 3.1.2. The process of Pre-Registration at State level by Competent Authorities shall be open from date of publication of these Guidelines upon due stakeholder consultation (say, April 30, 2010). The Competent Authority shall issue 'Certificate of Pre-Registration' to these projects. The Pre Registration may continue until Programme Administrator announces the closure of programme after receipt of applications aggregating to 150 MW capacity.
- 3.1.3. Upon pre-registration with the Competent Authority, the Project Proponent shall enter into MOU with the concerned distribution Utility for sale/deemed sale of power from the proposed project.
- 3.1.4. The date for commencement of Registration process by Programme Administrator (as elaborated under Para 3.2 below) has been proposed as July 1, 2010 to provide sufficient time period to States to undertake preparatory activities at State level such as designation of the Competent Authority, regulatory process for determination of Tariff for rooftop/small solar generation systems by the concerned SERC, etc.
- 3.1.5. The Competent Authority shall charge Processing Fee of Rs. 25,000 per MW or part thereof, for every application received by it.

3.2. Registration with the Programme Administrator (IREDA)

- 3.2.1. The Project Proponents shall submit applications for registration with Programme Administrator under the 'RPSSGP'. Programme Administrator shall provide format for application. The Application for Registration shall be accompanied by a copy of MOU between the Project Proponent and the local Distribution Utility and Certificate of Pre-Registration issued by the Competent Authority. The applications from the Project Proponents from a any State shall be considered only if the concerned SERC has issued the order determining tariff for rooftop/small solar generating systems for purchase of electricity by the distribution utilities in that State.

- 3.2.2. The Project Proponent shall have to submit the Board Resolution clearly stating the intention of the Company to develop the project for which application is being made to the Programme Administrator.
- 3.2.3. The Project Proponent shall also provide the Commitment Guarantee (in the form of irrevocable Bank Guarantee from scheduled commercial bank) to Programme Administrator along with the Application for Registration in the form of Bank Guarantee calculated on the basis of Rs 10 Lakh/MW or part thereof, for the total Project Capacity valid for period of 24 months from date of filing application for registration before Programme Administrator.
- 3.2.4. All applications fulfilling four conditions viz. (a) Issuance of relevant Tariff Order from concerned SERC (b) MOU with Utility, (c) Pre-Registration Certificate from Competent Authority and (d) Commitment Guarantee of requisite amount shall be eligible for registration with the Programme Administrator.
- 3.2.5. The Initial list of shortlisted Projects for Registration shall be prepared based on projects fulfilling above conditions considering principle of 'first-cum-first served'. Further, the order of precedence amongst the shortlisted projects shall be based on date of signing of MOUs between Project Proponent and concerned Distribution Utility followed by date of issuance of 'Pre-registration Certificate' to Project Proponent by the Competent Authority.
- 3.2.6. The process for Initial Shortlisting of Applications for Registration with Programme Administrator shall be closed upon reaching shortlist of proposed installed capacity of 150 MW for projects under Category - 1.
- 3.2.7. The Initial List (Shortlist-M0) of shortlisted projects shall be updated on monthly basis depending on accomplishment of following milestones by shortlisted Project Proponents:
- Milestone-1: Signing of PPA with the concerned Distribution Utility
 - Milestone-2: Financial Closure
 - Milestone-3: Project Commissioning

3.2.8. Only those projects, which feature in Shortlist-M0 shall be considered during subsequent process for Registration. No new projects will be considered even if the project has achieved multiple milestones subsequently. This is being done to provide certainty to the Project Proponents already part of Shortlist - M0. Upon accomplishment of Milestone-1, a Registration Certificate and letter confirming eligibility to avail GBI for the Project shall be issued by Programme Administrator to Project Proponent not later than one month from intimation by Project Proponent about accomplishment of Milestone-1 (i.e. execution of PPA), to facilitate accomplishment of Financial Closure, subject to the condition that Project Proponent submits Additional Commitment Guarantee of Rs 40 lakh per MW, or part thereof (to be submitted in the form of four BGs of equal value) with validity co-terminus with validity period of BG submitted at the time of Application for registration. The issuance of Registration Certificate and letter confirming GBI sanction for the Project shall be undertaken on first-cum-first served basis as evidenced by date of signing of PPA by Project Proponent with concerned DISCOM until cumulative capacity of projects under Category-1 reaches 80 MW. The Programme Administrator shall ensure that registration of Projects per State shall normally not exceed 20 MW so as to ensure wider participation in the Programme from multiple States.

Explanation: For the purpose of operationalisation of capacity limit of 20 MW per State, if the last project being considered for registration results in aggregate capacity of that State to exceed 20 MW, the project will be considered for registration.

3.2.9. The Commitment Guarantee for Projects not selected for inclusion within the 'Registered List' (80 MW) shall be returned after the date of announcement of selected projects, if so desired by the Project Proponent. Projects where Commitment Guarantees are not withdrawn, would be considered for continued participation in the Programme, subject to availability of capacity arising due to removal/withdrawal of any project out of 'Registered List'.

- 3.2.10. The Project Proponent shall accomplish Milestone-2 (Financial Closure) within six months from date of issuance Registration Certificate and subsequently accomplish Milestone-3 (Project Commissioning) within six months from accomplishment of Financial Closure.
- 3.2.11. Upon accomplishment of the each milestone, the Project Proponent shall intimate the Programme Administrator with supporting documentary evidence for accomplishment of such milestone.
- 3.2.12. The Programme Administrator shall undertake verification of the intimations received by 5th every month and update the List of shortlisted Projects by 15th of every month (Shortlist-M1). The Programme Administrator shall maintain such Shortlist of Projects on its website in transparent manner along with appropriate Ranking. The shortlisted projects accomplishing higher level of milestones (i.e. milestone-2 shall be preferred over milestone-1) shall be ranked topmost in ranking. Within the category of the same milestone, the earlier date of accomplishment of such milestone would result in higher ranking than the projects accomplishing the same milestone at a later date.
- 3.2.13. In case of delay in accomplishment of Milestone-2 (Financial Closure) within one month from stipulated time limit, 20% of the BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Delay in accomplishing FC within two months from stipulated time limit, another 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Failure to accomplish Milestone-2 (Financial Closure) for three months beyond stipulated time limit of 6 months from execution of PPA shall disqualify the Project Proponent from further participating in the Programme and the Programme Administrator shall invoke the all the BGs (total Commitment Guarantee) of such Project Proponent and as a consequence, the project shall be removed from the list of the registered projects and shall not be eligible for GBI under this scheme.

Explanation: Issuance of letter from lender (or lead lender in case of consortium) confirming Financial Closure.

3.2.14. In case of delay in accomplishment of Milestone-3 (Project Commissioning) within one month from stipulated time limit, 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Delay in accomplishing Milestone-3 (Project Commissioning) within two months from stipulated time limit, another 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Failure to accomplish Milestone-3 (Project Commissioning) for three months beyond stipulated time limit of 6 months from Financial Closure shall disqualify the Project Proponent from further participating in the Programme and the Programme Administrator shall invoke all the BGs (total Commitment Guarantee) of such Project Proponent and as a consequence, the project shall be removed from the list of the registered projects and shall not be eligible for GBI under this scheme.

Explanation: The Project Commissioning shall mean entire capacity of the project as per PPA shall be commissioned to be evidenced by confirmation letter from Distribution Utility.

3.2.15. Upon invoking of BG at any time, the Project Proponent shall provide additional BG of equivalent amount except in the case of dis-qualification of the Project as per Clause 3.2.13 and Clause 3.2.14.

3.2.16. Upon elimination of a project from Registered List, new Project with valid Commitment Guarantee (BG) shall be considered out of initial shortlist (Shortlist-M0) for inclusion in Registered List in accordance with rules for milestone based ranking as outlined above.

4. Roles and Responsibilities of various Entities:

4.1. Role of State Government

The programme has been designed taking into account active participation by the State Governments in earlier GBI Programme of MNRE. As a first step, the State Government is required to designate a 'Competent Authority' under this programme, empowered to

issue certificate required for registering the projects with IREDA and subsequently reporting progress on implementation of these projects.

4.2. Role of Distribution Utility

The distribution utility shall enter into Memorandum of Understanding (MoU) with the Project Proponent (as defined in the subsequent paragraph) for purchase of power at rates to be determined by the concerned SERC. The MOU shall clearly specify the rate of purchase of power and tenure of the proposed PPA. Further, the distribution utility shall provide necessary approvals and infrastructure for evacuation of the power generated. The Power Purchase Agreement (PPA) would supersede MOU at an appropriate time.

The distribution utility will have to enter into an Agreement with IREDA for availing GBI. The distribution utility will make payments for the power purchased directly to the the Project Proponent as per the terms and conditions of the Power Purchase Agreement.

The distribution utility shall provide certificate of power purchased from the Project to the Programme Administrator on monthly basis. It may be noted that this scheme envisages purchase by the distribution utility of entire energy generated by the solar system. The certificate shall be based on the joint meter reading taken by the Project Proponent and the distribution utility.

4.3. Role of Programme Administrator (IREDA)

Under this programme, IREDA would act as a 'Programme Administrator'. IREDA shall enter into MOU with concerned DISCOMs for disbursement of GBI as per conditions outlined for operationalising this programme. IREDA shall be responsible for following activities under this programme:

1. Registration of the projects seeking GBI.
2. Maintenance of a transparent ranking system of the registered projects based on progress made by them against specified milestone events.
3. Issuance of Certificates confirming GBI
4. Disbursement of GBI to the distribution utilities.

4.4. Role of Project Proponent

Project Proponent shall mean developer/owner of the rooftop PV or other small solar generation project who wishes to participate in the 'Rooftop PV & Small Solar Generation Programme' (RPSSGP).

The Project Proponent shall be responsible for the following activities:

1. Apply for pre-registration with the Competent Authority at State level
2. Apply for registration with the Programme Administrator to participate in the RPSSGP.
3. Execute documents such as Memorandum of Understanding (MOU) and Power Purchase Agreement (PPA) with the concerned distribution utility where its solar power generation facility is situated.
4. Intimate the Programme Administrator about the achievement of milestones, along with supporting documents.
5. Comply with all its obligations and reporting requirements as desired by Competent Authority and Programme Administrator from time to time.
6. Fulfill its financial obligations in terms of payment of registration fees, provisioning of security/bank guarantees, as necessary.
7. Operate the solar power plant as envisaged under PPA

5. Eligibility Conditions for Project Proponent:

5.1. Technical Criteria

Under Phase I of the JNNSM, it is proposed to promote only commercially established operational technologies to minimize the technology risk and to achieve the commissioning of the Projects. The new technology projects may be considered under the demonstration projects. The project schemes proposing to deploy PV modules and Inverter systems complying with relevant IEC standards and/or compliant with applicable standards as specified by Central Electricity Authority shall alone be considered to be technically qualified and eligible for participation on RPSSGP scheme. It is proposed that all deployment under the scheme should use Module manufactured in Indian and it is also proposed to mandate the use of the cell manufactured in India (*The pros and cons of this could be debated.*) Project Proponent should submit the documentary evidence and undertaking in this regard along with application to the Competent Authority.

5.2. Financial Criteria

The Project Proponent shall submit the letter of commitment along with Board Resolution for equity investments in the Project calculated on the basis of Rs 4 Crore/MW.

5.3. Infrastructure Criteria : Land Requirement

The Project Proponent should have made arrangements for at least 50% of the area of the land required for the project at the time of submitting application for pre-registration to Competent Authority. For this purpose, the land requirement shall be considered as 2 Ha/MW. Fulfillment of any one of following conditions shall be sufficient to meet this criterion:

- a. In case of Government Land, allotment letter issued by State Government
- b. In case of Private Land, Solar Project Developer should have entered into 'Agreement for Sale of land' with the owner of the land
- c. In case of lease, the long term lease arrangement towards lease hold rights (for at least 30 years)

5.4. Infrastructure Criteria : Grid Connectivity Requirement

The plant should be designed for interconnection with the grid at distribution network at the voltage level depending on installed capacity of rooftop PV or small solar system generator

- Less than 1 MW : LT- single/ three phase
- 1 MW and upto 3 MW : HT level (below 33kV) at distribution network

Further, the interconnections should be at the nearest distribution substation. In this regard, the Project Proponent shall submit a letter from the concerned Distribution Utility confirming technical feasibility of connecting the plant to the distribution substation.

6. Modalities of Disbursement of GBI by Programme Administrator:

6.1. Certification of Generation

For claiming the Generation Based Incentive (GBI), the Distribution Utility shall submit the Certificate of Generation to the Programme Administrator. The basis for claim for GBI shall be in accordance with the GBI scheme envisaged under these Guidelines for RPSSGP. The Certificate of Generation shall pertain to monthly meter readings, however the claim for GBI may be submitted on quarterly basis, by 15th July (for Q1), 15th Oct (for Q2), 15th Jan (for Q3) and 15th Apr (for Q4). The claim for GBI by Utilities shall be accompanied by documentary evidence of payment of electricity bill to the Project Proponent for the relevant monthly period.

6.2. Processing and Disbursement of Claims for GBI

The Programme Administrator shall disburse to the concerned DISCOM, 90% of the claimed amount for current quarter after preliminary scrutiny on an ad-hoc basis and settle/adjust claims of previous quarter after verification of documents. The payments for the current quarter alongwith adjustments of previous quarter shall be released within a period not exceeding 15 days from date of receipt of the claims for GBI along with necessary documents by the Programme Administrator.

To ensure release of timely payment to DISCOMs, MNRE shall provide funds in advance to the Programme Administrator, based on the estimated Fund Requirement at the beginning of each fiscal year from the budgetary allocation. This would facilitate timely release of funds by Programme Administrator to Utilities towards their GBI claim.

The Programme Administrator shall be entitled to receive service charges/fund administration charges as per the prevalent norms of the Ministry. The interest earned on surplus funds, if any, shall be credited to the fund account by Programme Administrator.

7. Proposed Timelines for Programme Management

Publication of Draft Guidelines*	15 th Mar 2010
Publication of Final Guidelines upon due stakeholder consultation	30 th Apr 2010
Commencement of State level Pre-registration activities (incl. appointment of Competent Authority, Tariff orders by SERCs)	1 st May 2010
Commencement of Registration by Programme Administrator	1 st Jul 2010
Announcement of Initial Shortlist	31 st Jul 2010
Registered List (Execution of PPA within 3 months: Milestone-1)	31 st Oct 2010
Milestone-2 (Financial Closure) within 6 months from PPA execution	30 th Apr 2011
Milestone-3 (Project Commissioning) within 6 months from Financial Closure	31 st Oct 2011

** Various documents such as Application forms, draft MOU shall be published for consultation before finalization of Guidelines.*

8. Power to remove difficulties

If any difficulty arises in giving effect to any provision of these guidelines or interpretation of the guidelines, the Committee to be constituted under the chairmanship of Secretary, Ministry of New and Renewable Energy shall meet and take decision, which will be binding on all parties.

9. Glossary

- (i) CERC or Central Commission** shall mean Central Electricity Regulatory Commission;
- (ii) Competent Authority** shall mean a 'Designated Agency' appointed by State Government for pre-registration of the Rooftop PV projects or Small Solar Power Projects at State level to be eligible to participate in this programme.
- (iii) GBI** shall mean Generation Based Incentive to be paid by Programme Administrator to local Distribution Utility under this Programme;
- (iv) Local Distribution Utility** shall mean distribution licensee within whose area the rooftop PV or Small Solar Power plant is located and interconnected with distribution network of such distribution licensee.
- (v) MOU** shall mean Memorandum of Understanding to be entered into between Project Proponent and local Distribution Utility for sale/purchase of electricity generated from proposed Rooftop PV or Small Solar power project subsequent to pre-registration of the Project with Competent Authority but prior to Registration of Project with Programme Administrator;
- (vi) MNRE** shall mean Ministry of New and Renewable Energy, Government of India;
- (vii) PPA** shall mean Power Purchase Agreement to be entered into between Project Proponent and local Distribution Utility for sale/purchase of electricity generated from proposed Rooftop PV or Small Solar power project;
- (viii) Project Proponent** shall mean developer of the rooftop PV and/or small solar power project, who shall own and operate such solar power generation project and wishes to participate in the Rooftop PV and Small Solar Generation Programme (RPSSGP) in accordance with these Guidelines;

(ix) Programme Administrator shall mean Indian Renewable Energy Development Agency (IREDA) for administration of RPSSGP Programme in accordance with these Guidelines;

(x) RPSSGP shall mean Rooftop PV and Small Solar Generation Programme as outlined under these Guidelines;

(xi) SERC or State Commission shall mean State Electricity Regulatory Commission;

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