
**Proposed Guidelines for Small Solar Power Plants
connected to 11 KV Grid
under
Jawaharlal Nehru National Solar Mission**

A Presentation by IREDA



Solar Mission Targets

- Total target for 1st Phase (2013) : 1,300 MW
 - Grid Connected (33 kV) : 1,000 MW
 - **“Rooftop PV and Small Solar” : 100 MW**
 - Off-Grid Applications : 200 MW

Classification of Project Schemes

- **Two categories of Project Schemes**
 - **Category-1:** HT level (1 MW and upto 3 MW)
 - Typically connected at HT distribution network (below 33 kV)
 - **Category-2:** LT level (< 1 MW)
 - Typically connected at 440 V (3-ph) / 230 V (1-ph)

- **Capacity allocation amongst two categories**
 - Category-1 : 80 MW
 - Category-2 : 20 MW

- **Applicability of Proposed Guidelines**
 - Proposed Guidelines to address Category-1 schemes.
 - Issues of Grid integration, metering, energy accounting at LT level are complex. CEA to formulate appropriate standards for grid integration of all RE technologies incl. RE system connectivity at LT level.

Features of Roof Top PV and Small Solar Generation Based Incentive (GBI) Scheme

- Programme would be led by the States.
- States to declare a Competent Authority for the scheme.
- Competent Authority to ascertain fulfillment of Eligibility Conditions.
- Projects to be designed for completion before March 31, 2013.
- PPAs to be entered into by Project Proponent and concerned DISCOM where power plant is interconnected with distribution network.
- Applicable Tariff Rate under PPA shall be as determined by SERC.

Normative Generation Based Incentive

- Generation based incentive will be payable to the utilities equivalent to CERC tariff less Rs. 5.50 per kwh (Base Rate) with 3% annual escalation.
- Base Rate once determined for particular project shall remain constant over duration of 25 years.
- GBI shall be available for period of 25 years from the date of commissioning.
- The metering and billing arrangement between the utilities and Project Proponent will be as per state level regulations.
- DISCOMs to agree to pay to Project Proponent, based on energy units generated, as per terms of PPA, at the Tariff Rate determined by SERC.
- DISCOMs to enter into MoU with IREDA for availing GBI.

Methodology for Selection of Project Schemes-1/4

- **Pre-registration by Competent Authority at State level**
 - Following criteria shall apply for scrutinising Applications by Project Proponents:
 - **Technical:** PV modules & Inverter systems proposed to be deployed shall be compliant with IEC /CEA standards. (*Module & cells manufactured in India*) Undertaking from Project Proponent to that effect.
 - **Financial:** Equity commitment equiv. to Rs 4 Cr/MW
 - **Land availability:** Confirmation of at least 50% land availability (out of total land requirement estimated at 2 Ha/MW)
 - **Grid connectivity:** Confirmation letter by concerned DISCOM.
 - Pre-registration Certificate to be issued by Competent Authority to Project Proponent.
 - Project Proponent shall enter into MOU with concerned DISCOM for sale/purchase of power.

Methodology for Selection of Project Schemes-2/4

- **Registration by Programme Administrator (IREDA)**
 - **Eligibility Conditions for Registration:**
 - MOU with DISCOM
 - Pre-registration Certificate from Competent Authority
 - Issuance of Tariff Order by concerned SERC for Rooftop/small Solar systems
 - Commitment Guarantee (in the form of irrevocable BG from scheduled commercial bank) of Rs 10 L/ MW or part thereof valid for duration of at least 24 months.
 - **Publishing of Initial List of shortlisted projects for Registration**
 - Ranking of shortlisted projects to be based on principle of 'first-come-first-served'.
 - For order of precedence, date of MOU followed by date of pre-registration certificate shall be considered.
 - **Process of registration to be closed upon reaching capacity of 150 MW projects under category-1.**
 - **Registration process to commence from July 1, 2010 to enable States to undertake preparatory activities such as designation of Competent Authority at State level, issuance of relevant Tariff Order by SERC.**

Methodology for Selection of Project Schemes-3/4

- **Registration by Programme Administrator (IREDA)**
 - **Sequencing under shortlist to be modified based on accomplishment of Milestones.**
 - Milestone-1: Signing of PPA with concerned DISCOM
 - Milestone-2: Financial Closure
 - Milestone-3: Project Commissioning
 - **Confirmation Letter for Registration & eligibility for GBI to be issued upon accomplishment of Milestone-1 for projects until cumulative capacity of 80 MW.**
 - **Project Proponent to submit Additional Commitment Guarantee of Rs 40 L/MW (four BGs of equal value).**
 - **Programme Administrator to ensure that registration of projects per State shall normally not exceed 20 MW per State.**
 - **Updation of List to be carried out on monthly basis (15th of month) based on information received from Project Proponents until 5th of month.**
 - List to be maintained by Programme Administrator on Website.
 - Amongst same milestone, earlier date of accomplishing milestone to be ranked higher in queue.

Methodology for Selection of Project Schemes-4/4

- **Registration by Programme Administrator (IREDA)**
 - **Delay in accomplishment/Non-accomplishment of Milestone-2 (Financial Closure)**
 - Milestone-2 to be accomplished within 6 months from execution of PPA
 - For each month delay beyond 6 months, 20% of commitment guarantee (1 BG) to be forfeited
 - Failure to accomplish Milestone-2 within 3 months beyond stipulated time limit of 6 months from execution of PPA shall disqualify the Project from Registered List and result in forfeiting of entire BGs.
 - **Delay in accomplishment/Non-accomplishment of Milestone-3 (Project Commissioning)**
 - Milestone-3 to be accomplished within 6 months from accomplishment of Milestone-2
 - For each month delay beyond 6 months, 20% of commitment guarantee (1 BG) to be forfeited
 - Failure to accomplish Milestone-3 within 3 months beyond stipulated time limit of 6 months from FC shall disqualify the Project from Registered List and result in forfeiting of entire BGs.
 - **Upon elimination of project from Registered List, new projects to be considered out of Initial shortlist with valid BG on similar principles.**

Role of IREDA

- Designated Agency (Programme Administrator) for:
 - Registration of projects seeking GBI.
 - Maintain a transparent ranking system of applicant based on progress against milestone events.
 - Issuance of Registration Certificate for entitlement of GBI
 - Disbursement of generation based incentive to DISCOMs.

Modalities of disbursement of GBI

■ Certificate of Generation

- ❑ To claim GBI, DISCOM to submit Certificate of Generation to Programme Administrator based on monthly meter readings.
- ❑ Claim to be lodged on quarterly basis by 15th Jul (for Q1), 15th Oct (for Q2), 15th Jan (for Q3) and 15th Apr (for Q4).
- ❑ To claim the GBI, DISCOM to enclose documentary evidence of payment of electricity bills to Project Proponent for relevant monthly period.

■ Processing and disbursement of GBI

- ❑ At least 90% of the claimed amount for current quarter to be released to concerned DISCOM on ad-hoc basis along with settlement/adjustment of claims for previous quarter within 15 days from claim date.
- ❑ To ensure timely payment to DISCOMs, MNRE to provide funds to Programme Administrator in advance based on estimated fund requirement at beginning of fiscal year out of budgetary allocation.

Proposed timelines for Programme Management

| List of Activities | Tentative timelines |
|---|---------------------|
| Publication of Draft Guidelines | 15-Mar-2010 |
| Publication of Final Guidelines upon due stakeholder consultation | 30-Apr-2010 |
| Commencement of State level Pre-Registration Activities (incl. appointment of Competent Authority, Tariff Orders by SERC) | 1-May-2010 |
| Commencement of Registration by Programme Administrator | 1-Jul-2010 |
| Announcement of Initial Shortlist (M0) | 31-Jul-2010 |
| Registered List (Execution of PPA within 3 months:Milestone-1) | 31-Oct-2010 |
| Milestone-2: (Financial Closure) within 6 months from PPA execution | 30-Apr-2011 |
| Milestone-3: (Project Commissioning) within 6 months from Financial Closure | 31-Oct-2011 |

Thank You

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