Finalisation of the Scheme for ROOFTOP PV & OTHER SMALL SOLAR POWER PLANTS CONNECTED TO DISTRIBUTION NETWORK

The policy framework provided in the National Solar Mission document is to enable solar technology penetration in the country, both at a centralized and decentralized level. The Ministry had started processes on all the major components through a process of consultation with various Ministries as well as other stakeholders including industry and investors shortly after the Cabinet approval.

2. In the Phase 1, there are 2 main components viz., the large utility scale systems as well as the smaller ground mounted/rooftop systems under the grid connected solar plants. While the former would start with capacities of 5 MW and be evacuated into the 33kV and above grid, the latter would not be more than 1-2 MW and would feed into the distribution network below 33 kV grid.

3. The guidelines for the Scheme for Grid-connected Rooftop PV and other small Solar Power Plants are now ready for final notification. The salient features of the scheme are as under:

3.1 *Background*

Under the Jawahar Lal Nehru National Solar Mission, it is proposed to promote small rooftop and ground mounted solar systems connected to a distribution voltage levels below 33 kV. The target set for the Phase-I of the mission, ending on March 2013, has been kept at 90 MW and 10 MW have been kept aside for smaller installations ranging from1 kW to 100 kW. . IREDA has been designated as Programme Administrator for the scheme.

3.2 *Essence of the Scheme*

The programme has been designed taking into account active participation by the State Governments, wherein, they shall select projects meeting certain eligibility criteria. MNRE would provide a Generation Based Incentive (GBI) to the state utilities, who would in-turn provide a Solar Tariff, as determined by respective SERC' to the Solar project developers. This shall be payable for a period of 25 years from the date of commissioning of the project. GBI shall be constant for a particular project.

3.3 *Eligible Systems*

The Projects with proposed installed capacity of minimum 100 kW and up to 1 MW will be covered under the scheme. At the state level, a capacity restriction of 20 MW shall be made to ensure wider participation amongst different States.

3.4 *Implementation Mechanism at State Level*

State Governments are required to designate a 'Competent Authority' under this programme, empowered to issue pre-registration certificate required for registering the projects with the Programme Administrator and subsequently reporting progress on implementation of these projects. The eligibility criteria to apply for pre-registration certificate would be as under

- Technical Criteria pertaining to technology standards as per IEC/ BIS and metering as per CEA
- Financial Criteria pertaining to equity requirements @ Rs 4 Cr/ MW
- Infrastructure Criteria pertaining to land & evacuation arrangements for the Project

will apply on a web-portal maintained by the Programme Administrator. Projects will be shortlisted in based on first-come-first-served basis subject to physical verification of documents. Initial short listing will be done for an aggregate capacity of 110 MW.

- Step2: The initial shortlisted projects will go for PPA with the distribution utility. These projects will again apply through the web-portal along with the requisite details of PPA and additional commitment guarantee of Rs. 40 lakhs/MW (in 4 equal parts).The first few projects aggregating to 90 MW would then be allowed to move ahead with commissioning.

3.6 *Timelines*

Projects selected under the scheme would be required to complete the entire project within 12 months from the date of obtaining registration certificate. In case of any delay in Project Commissioning within stipulated time limit, BGs would be invoked at the end of every 2 months, twice upto 4 months. Failure to commission the project within 6 months beyond stipulated time limit of 12 months shall disqualify the Project from participating in the scheme and the administrator shall invoke all BGs. However, in case of part commissioning of any project, the commissioned capacity shall be considered for GBI.

3.7 *GBI Disbursement Mechanism*

- Distribution utility shall enter into an MoU with Programme Administrator
- Solar project developer would get a tariff from the utility as per SERC' tariff order
- GBI shall be payable to distribution utility by the Programme Administrator for power purchased from solar project, including for captive consumption
- GBI shall be equal to the difference between CERC determined tariff and Base Rate
    - Base rate shall be Rs 5.50/ kWh for FY 2010-11, to be escalated by 3% p.a. for projects commissioned in later years.
    - GBI shall be constant for a particular project
- GBI shall be payable to the distribution utility for a period of 25 years

3.8 *Processing of GBI Claims*

The claim for GBI by state distribution utility shall be submitted on a monthly basis to the Programme Administrator, which shall disburse the claimed amount to the concerned state distribution utility after preliminary scrutiny, within a period not exceeding 15 days. All payments made against monthly bills shall be subject to quarterly reconciliation.

3.9 *Funding Support to Programme Administrator*

To ensure release of timely payment to the state distribution utilities, MNRE would place 50% of the estimated annual requirement of funds with IREDA upfront at the beginning of each financial year. The balance 50% would be released as second tranche of the annual requirement to IREDA within a reasonable period of time, after receipt of Utilisation Certificate, of not less than 50% of the first tranche released to IREDA. In the eventuality of delay in receipt of funds from MNRE, the Programme Administrator shall ensure access to an alternative funding source so that GBI to the state distribution utilities is disbursed within the specified timeframes. The mechanism of a standby facility would entail additional costs which would entitled to receive service charges/ fund administration charges @ 2% of the funds handled under the programme. The interest earned on surplus funds, if any, shall be credited to the fund account by Programme Administrator.

4. The consultative process followed for finalizing the guidelines was very elaborate and comprised of large stakeholder discussions held on 9th February 2010 and 1st April 2010. Apart from these, a meeting with 15 State governments was held on 22nd March 2010 in the ministry, wherein, the views of the States were heard and taken into consideration and suitably incorporated in the guidelines presently under consideration. The draft guidelines were uploaded on MNRE & IREDA website for inviting comments for a period of 3 weeks from 10 March onwards till 31st March 2010, after obtaining the approval from the Minister.

5. Large number of comments were received on the draft guidelines, which have been examined & taken into consideration in the present guidelines under consideration.

The major comments which were received from this process are as follows:

- Extending the scheme to enable lower capacity projects upto 100 kW even as the smaller rooftop scheme gets developed.
- Provision for Deemed generation, in case of non-availability of grid for evacuating power.
- Extending completion period from 12 month period after PPA with 6 month as grace period, but with lower tariff.
- Doing away with Financial Closure milestone.
- Allowing imported cells.

These issues have been taken into consideration while finalizing the scheme. Even as the guidelines for smaller rooftop installations upto 100 kW get developed, the present set of guidelines have been broadened to incorporate 100 kW – 1 MW systems connected to the distribution network at voltage levels of 11 kV and below 33 kV and would be governed by practice of the respective states. The deemed generation aspect would be addressed in the model PPA which is under development. The completion period for the project has been accepted as 12 months after the PPA and a grace period of six months is also being added. The interim milestone of financial closure has now been done away with. In so far as the local content is concerned, it has been decided that the guidelines could contain provisions similar to those being formulated for the larger utility scale projects. It is hence, proposed that the condition of modules made in India for crystalline silicon PV technology be a part of the conditions for phase-I.

6. The main concern voiced by the States was with respect to the flow of funds for GBI and the determination of the GBI. In this context, it may be mentioned that the approved note of the cabinet has the following –

> "For the rooftop solar and other small solar power plants, connected to LT/11 KV grid, it is envisaged that distribution utility will pay the tariff determined by the State Electricity Regulatory Commission for the metered electricity generated from such applications (whether consumed by the grid connected owner of the rooftop/ground mounted installation or fed into the grid). Under the Solar Missi

Rs. 5.50/kWh with 3% annual escalation. Funds will be disbursed through Indian Renewable Energy Development Agency (IREDA), a PSU under MNRE. The distribution utilities will be entitled to account such electricity generated and consumed within their license areas for fulfillment of RPOs."

In view of the directions provided, it was clarified to the States that the 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 and would be payable by MNRE. 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. It was further clarified that IREDA would make payment to Utility on reimbursement mode only.

7. A meeting was held under the chair of the Secretary, MNRE on 15.04.10 to take stock of all the processes followed and the final guidelines which have emerged thereafter. The final scheme has been placed below at Flag A for kind perusal