F. No. 32/8/2013-14/GSP
Government of India
Ministry of New and Renewable Energy
Grid Solar Power Division

Block No,. 14, C.G.O. Complex
Lodi Road, New Delhi-110003

Dated: 16/07/2014

Subject: **Draft Guidelines for selection of 1500 MW Grid Solar PV power projects under National Solar Mission, Phase-II Batch-II Scheme of Bundling with Thermal Power- invitation of comments, reg.**

Draft Guidelines for selection of Grid Solar PV power projects of an aggregate capacity of 1500 MW under National Solar Mission, Phase-II, Batch-II are attached. Interested Stakeholders may send their comments on the same to the undersigned latest by 23rd July, 2014.

Sd/-

A. K. Varshney
Director (Solar Power)
Tel/Fax: 011-24360885
E-mail: akvarshney@nic.in

NATIONAL SOLAR MISSION

Phase-II (2013-17)

Guidelines for Selection of 1500 MW Grid-connected Solar PV Power Projects under Batch-II

Government of India

Ministry of New and Renewable Energy

July 2014

SECTION-I

BACKGROUND AND INTRODUCTION

Preamble

The National Solar Mission (NSM) launched in January 2010 is a major initiative of the GoI with active participation from States to promote utilization of solar energy to supplement the country's energy needs. It aims at establishing India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible. The Mission has set a goal, amongst others, for deployment of 20,000 MW grid connected solar power capacity by 2022 in 3 phases (1000MW in first phase up to 2012-13 -, 9000MW in second phase from 2013 to 2017and 10000MW in third phase from 2017 to 2022-).

In order to facilitate grid connected solar power generation in the first phase, a mechanism of "bundling" relatively expensive solar power with thermal power from the unallocated quota of the Government of India (Ministry of Power) generated at NTPC coal based stations, which is relatively cheaper, and onward sale of the bundled power to Distribution Utilities at an affordable price, was adopted. A scheme for selection of 1000 MW Grid-connected Solar power projects based on this mechanism was implemented through NVVN. In the second phase, it is envisaged to select solar power projects of an aggregate capacity of 3000 MW under Central Schemes under various schemes. These include the Viability Gap Funding scheme for Batch-I of 750 MW capacity Solar PV projects that has already been introduced and is being implemented through SECI.

Status and achievement against 1000 MW Capacity Grid-Connected Solar Power Projects under Phase-I Bundling Scheme implemented through NVVN:

Solar PV as well as Solar Thermal power projects with an aggregate capacity of 970 MW (besides 84 MW selected under migration scheme) were selected in two batches (batch-I during 2010-11 and batch- II during 2011-12) through a process of tariff based reverse bidding. The resulting tariffs in Batch-I for SPV projects ranged between Rs.10.95 and Rs.12.76 per unit, with average of Rs.12.12 per unit and for Solar Thermal Projects the tariff ranged between Rs.10.49 and Rs.12.24 per unit, with

average tariff being Rs.11.48 per unit. In Batch-II, for Solar PV Projects, the tariff ranged between Rs.7.49 and Rs.9.44 per unit, with average tariff being Rs.8.77 per unit. The Solar Power from these plants is being purchased by NVVN and is being sold to Distribution Utilities/ Discoms after bundling with power from the unallocated quota of power from Coal Based Stations of NTPC on equal capacity (MW) basis, thus effectively reducing the average per unit cost of solar power. A total capacity of 568 MW has been commissioned so far under Phase-1.

Phase-II Batch-I: 750 MW Viability Gap Funding (VGF) Scheme:

This scheme for setting up of 750MW of Grid Connected Solar PV Projects with VGF support from National Clean Energy Fund (NCEF) is being implemented through Solar Energy Corporation of India (SECI). It entails purchase of power from developers at a fixed tariff of Rs.5.45/ unit (Rs.4.95/unit in case benefit of Accelerated Depreciation is availed) and payment of VGF to the developers as per their bids, limited to a maximum of Rs.2.5crore/MW). Bids for the same (reverse bidding on the VGF) were invited by SECI in October, 2013 in two Categories: 375MW Capacity under DCR (Domestic Content Requirement) and 375 MW Capacity under Open Category. Power Purchase Agreements with the successful bidders/ developers have since been signed in March 2014. The Projects have a Schedule of Commissioning of 13 Months from the Date of Signing of PPA.

Phase-II Batch-II : 1500 MW Scheme:

Under Batch-II, Solar PV projects with a total capacity of 1500 MW capacity are proposed to be selected under the scheme of Bundling with Thermal power as in Phase-I, to be implemented through NVVN. The present Guidelines lay down the framework for implementation of this scheme.

Scope of the Guidelines

The scope of these guidelines is limited to providing the necessary policy and operational framework for development of projects under the above mentioned “Bundling Scheme”. These guidelines are independent and will have no bearing on the projects already selected under earlier schemes of NSM Phase-I & Phase-II.

SECTION-II

NSM Phase-II Batch-II Bundling Scheme for 1500 MW Solar PV Projects

The 1000 MW Bundling Scheme introduced under NSM Phase-I has been successful in incentivizing setting up of a large number of Solar Power Projects and minimizing the impact of tariff on the distribution companies. The same approach is now proposed for 1500MW Solar PV projects to be selected under Batch-II of NSM Phase-II scheme, which will be implemented by NVVN on similar lines as carried out under NSM Phase-I.

Objectives:

The main objectives of the scheme are as follows:

- To facilitate the scale up of solar capacity addition under NSM Phase-II and achieve economies of scale
- To supplement grid power
- To facilitate fulfilment of RPO requirement of the obligated entities.
- To facilitate speedier implementation of the new projects to be selected to meet the Phase II target of NSM;
- To promote manufacturing in the Solar PV sector in India.

Mechanism of Operation:

Specifically, the selection of Grid Connected Solar PV Projects of 1500 MW total capacity shall be carried out by NVVN through a transparent, tariff based reverse bidding process. NVVN will purchase the power from the successful developers at their bid tariff and sell bundled power to Distribution Companies Utilities/ other Bulk Consumers after adding Trading Margin. In this regard, NVVN shall enter into suitable Power Purchase Agreement (PPA) with Solar Power Developers and Power Sale Agreement (PSA) with Distribution Companies/ Utilities/ other Bulk Consumers.

Total Capacity and Portfolio of Solar PV Technology Projects

The total aggregated capacity of the grid connected solar projects to be developed under the bundling scheme shall be 1500 MW. This scheme provides for deployment of only Solar PV Technology Projects. However, the selection of projects would be technology agnostic and crystalline silicon or thin film or CPV, with or without trackers can be installed.

Already commissioned projects cannot be considered under this scheme. Projects under construction or projects which are not yet commissioned will, however, be considered, in case these projects are not already accepted under any other Central or State Schemes.

In order to avoid the difficulty that may arise in achieving financial closure of projects, selection of PV projects shall be done in a phased manner. The total capacity of Solar PV projects to be selected in First Tranche i.e., in FY 2014-15 will be 750 MW. The Projects for remaining capacity of 750 MW for Solar PV Projects will be selected in Second Tranche i.e., in FY 2015-16.

Definitions

"Act" or "Electricity Act, 2003" shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;

"Affiliate" shall mean a company that, directly or indirectly,

i. controls, or
ii. is controlled by, or
iii. is under common control with, a Company developing a Project or a Member in a Consortium developing the Project and control means ownership by one company of at least 26% (twenty six percent) of of the paid up share capital of the other company.

"Benchmark CERC Tariff" shall mean the Tariff as notified by Central Electricity Regulatory Commission for Solar PV Project applicable for the financial year in which the bidding process is conducted. In case, the Solar PV Project seeks to avail accelerated depreciation, the net applicable tariff as approved by CERC

after adjusting accelerated depreciation shall be applicable as Benchmark CERC Tariff for such Projects. The Benchmark CERC Tariff shall be used as reference Tariff for discount bidding.

"Applicable Tariff" shall be Benchmark CERC Tariff less discount offered by the selected project developers.

"Company" shall mean a body corporate incorporated in India under the Companies Act, 1956 or the Companies Act, 2013 as applicable.

"Commissioning" the Project will be considered as commissioned if all equipment as per rated project capacity has been installed and energy has flown into grid.

"Control" The control shall mean holding more than 50% of paid-up share capital.

"Financial Closure"as defined in clause 2.11

'Project Financing Arrangements" means arrangement of necessary funds by the Project Developer either by way of commitment of funds by the company from internal resources and/or tie up of funds through a bank / financial institution by way of sanction of a loan.

"Group Company" of a company means (i) a company which, directly or indirectly, holds 10% (ten percent) or more of the paid up share capital of the company or (ii) a company in which the company, directly or indirectly, holds 10% (ten percent) or more of the paid up share capital of such company or (iii) a company in which the company, directly or indirectly, has the power to direct or cause to be directed the management and policies of such company whether through the ownership of securities or agreement or any other arrangement or otherwise or (iv) a company which, directly or indirectly, has the power to direct or cause to be directed the management and policies, of the Company whether through the ownership of securities or agreement or any other arrangement or otherwise or (v) a company which is under common control with the company, and control means ownership by one company of at least 10% (ten percent) of the paid up share capital of the other company or power to direct or cause to be directed the management and policies of such company whether through the ownership of securities or agreement or any other arrangement or otherwise.

Provided that a financial institution, scheduled bank, foreign institutional investor, non banking financial company, and any mutual fund shall not be deemed to be Group Company, and its shareholding and the power to direct or cause to be directed the management and policies of a company shall not be

considered for the purposes of this definition unless it is the Project Company or a Member of the Consortium developing the Project.

“Inter-connection point / Delivery/Metering point” shall mean the point at 33kV or above where the power from the solar power project is injected into the CTU/STU transmission system (including the dedicated/common transmission line connecting the power project/pooling point with the CTU/STU system). Metering shall be done at this interconnection point where the power is injected into the CTU/ STU system I e Delivery Point. For interconnection with grid and metering, the developers shall abide by the relevant CERC Regulations, Grid Code, and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time.

"Joint Holding" companies definition to be notified.

"Paid-up share capital" means such aggregate amount of money credited as paid-up as is equivalent to the amount received as paid up in respect of shares issued and also includes any amount credited as paid-up in respect of shares of the company, but does not include any other amount received in respect of such shares, by whatever name called;

Paid-up share capital includes:

1. Paid-up equity share capital and
2. Fully, compulsorily and mandatorily convertible Preference shares and
3. Fully, compulsorily and mandatorily convertible Debentures.

“**Parent”** shall mean a company, which holds at least 26% of paid up share capital either directly or indirectly in the Project Company or a Member in a Consortium developing the Project.

“Pooling Point” shall mean a point where more than one solar PV projects may connect to a common transmission line built and operated by the developer or any third party or by STU on behalf of the developer. This common transmission line may further connect with the interconnection/metering point. In this case, metering will be done at the interconnection point along with subsidiary meters at the pooling point to determine the generation by each project.

"Project" is defined by separate points of injection into the grid at interconnection/metering point or in case of sharing of transmission lines by separate injection at pooling point including common transmission line up to delivery point. Each project must also have a separate boundary, control systems and metering.

Project Developer: shall mean Bidding Company or a Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Company / Bidding Consortium/ Consortium, Member of a Bidding Consortium including its successors, executors and permitted assigns and Lead Member of the Bidding Consortium jointly and severally, as the context may require";

"Solar PV Project" means the Solar Photovoltaic power project that utilize direct conversion of sunlight into electricity through Photovoltaic technology.

"Technology Partner" shall mean an entity from which the Bidder proposes to take technology support. The word entity means any entity in case it is not providing share capital commitment to a bidding company or consortium. However in case share capital commitment is being provided by the technology provider to a bidding company or consortium then it shall only be a company. This entity can be a Member in more than one Bidding Consortium provided that', it has less than 10% of paid up share capital commitment in each Consortium;

"Trading Margin" shall mean the difference between purchase price of bundled power by NVVN from SPDs and NTPC and sale price of bundled power by NVVN to State Utilities/ Discoms/ other Bulk Consumers.

"Ultimate Parent" shall mean a company, which owns at least twenty six percent (26%) of paid up share capital either directly or indirectly in the Parent and Affiliates.

SECTION-III

GUIDELINES FOR SELECTION OF SOLAR PV PROJECTS

Capacity of Each Project

Given the requirement to connect the project to the transmission utility substations at 33kV and above, the Project capacity shall be at least 10 MW and the maximum capacity of the Project shall be up to 50 MW. The plant capacity shall remain in multiples of 10 MW. The Project Capacity in MW is the installed Capacity of the Power Plant / Maximum Power Output (AC) at the Plant Bus-bar located within the Plant premises.

Request for Selection for Short-listing of Projects

NVVN shall invite project developers to participate in the Request for Selection (RfS) for installation of Solar Photovoltaic Power Plants on B-O-O basis under this scheme. The Project Developer shall submit the RfS within 30 days of the invitation by NVVN.

Processing Fees

The SPDs shall submit non-refundable processing fee of Rs. 2 Lakh for each Project upto 20 MW capacity and of Rs.3 Lakh for each project above 20 MW capacity along with the RfS.

Number of Applications by a Company

The total capacity of Solar PV Projects to be allocated to a Company including its Parent, Affiliate or Ultimate Parent-or any Group Company shall be limited to 100 MW per tranche. The Company, including its Parent, Affiliate or Ultimate Parent-or any Group Company may submit application for a maximum of five projects at different locations subject to a maximum aggregate capacity of 100 MW per tranche. The Company shall submit one single application in the prescribed format detailing all projects at same/multiple locations for which the developer is submitting the application.

Qualification Criteria for Short-Listing of Bids/ Projects

A. Financial Criteria

Net Worth: The Net Worth of the company should be equal to or greater than the value calculated at the rate of Rs 2 Crores or equivalent US$ per MW of the project capacity. The computation' of Net Worth shall be based on unconsolidated audited annual accounts of the company. For companies incorporated on or before 1.4.2010:The Company would be required to submit last four financial years annual audited accounts i.e. 2010-11, 2011-12, 2012-13, and 2013-14 (if available) (or Calendar Years 2010, 2011, 2012 and 2013 or the accounting years as adopted by the Company and acceptable as per the laws of the respective Country)indicating the year which should be considered for evaluation, along with a certificate from the Chartered Accountant to demonstrate the fulfilment of criteria. (ii) For companies incorporated after 1.4.2010:The company would be required to submit the annual audited accounts for all the Financial Years starting from the financial year in which the company was incorporated and till the financial year ended 31st March 2013 and for the financial year 2013-14 (if available) (or starting from the first accounting year, after incorporation uptil 2013, as adopted by the company and acceptable as per the laws of the respective Country)indicating the year which should be considered for evaluation, along with a net worth certificate from a Chartered Accountant to demonstrate fulfilment of the criteria. Further, Bank statement starting from Day 1 of incorporation of the Project Company (if incorporated within a period of six months prior to submission of RfS application) or starting from the date six months prior to submission of RfS application. However, for new as well as existing Companies, the Net Worth criteria can also be met as on day not more than seven days prior to the date of submission of RfS by the Company. To demonstrate fulfilment of this criteria, the Company shall submit a certificate from a Chartered Accountant certifying the availability of Net Worth on the date not more than seven days prior to submission of RfS along with a Certified copy of Balance Sheet, Profit & Loss Account, Schedules and cash flow statement supported with bank statement. A foreign company can participate on standalone basis or as a member of consortium at RfS stage. Before signing of PPA it has to form an Indian Company registered under the Indian Companies Act. {Note: For the Qualification Requirements, if data is provided by the Project Developer in foreign currency, equivalent rupees of Net Worth will be calculated using bills selling exchange rates (card rate) USD / INR of State Bank of India prevailing on the date of closing of the accounts for the respective financial year as certified by the Project Developer's banker. For currency other than USD, Project Developers shall convert such currency into USD as per the exchange rates certified by their banker prevailing on the relevant date and used for such conversion. }

Net Worth:

Paid up share capital

Add: Free Reserves

Subtract: Revaluation Reserves

Subtract: Intangible Assets

Subtract: Miscellaneous Expenditures to the extent not written off and carry forward losses

** Share premium will form an integral part of Net worth provided it is realized in cash or cash equivalent. However, this condition will not apply in case of listed Companies.

For the purposes of meeting financial requirements only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Company may be used for the purpose of financial requirements provided the Project Developer has at least twenty six percent (26%) paid-up share capital in each Company whose accounts are merged in the audited consolidated account and provided further that the financial capability of such Companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

If the RfS is submitted by a Consortium the financial requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each of them in the Project Company. Any Consortium, if selected, shall, for the purpose of supply of power to NVVN, incorporate a Project Company with equity participation by the Members before signing the PPA with NVVN. The Project Developer may seek qualification on the basis of financial capability of its Parent Company and / or it's Affiliate(s) for the purpose of meeting the Qualification Requirements. In case of the Project Developer being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its Parent Company and / or its Affiliate(s). An Indian company can form an SPV for execution of the project before signing of PPA.

Infusion: The required net worth is required to be infused on or signing of PPA in support of infusion of the net worth with the relevant bank statements.

B. Technical Criteria

Under this scheme, it is proposed to promote only commercially established and operational technologies to minimize the technology risk and to achieve the commissioning of the Projects. The detailed technical parameters for Solar PV Power Projects to be selected are specified in Annexure 1A.

C. Connectivity with the Grid

(i) The plant should be designed for inter-connection with the transmission network of STU/CTU or any other transmission utility at voltage level of 33 kV or above. The Project Developers should indicate to the transmission - licensee the location [Tehsil, Village and District, as applicable] of its proposed project. In this regard, the Project Developer shall submit a letter from the STU/CTU/Transmission Utility along with RfS confirming technical feasibility of connectivity of plant to substation and the state Discoms willingness to accept solar power till the long term access for interstate transfer of solar power is available.

(ii) The responsibility of getting connectivity and open access with the transmission system owned by the STU / CTU or any other Transmission Utility, as may be required, will lie with the Project Developer. The transmission of power up to the point of interconnection where the metering is done shall be the responsibility of the SPD at his own cost.

(iii) The arrangement of connectivity can be made by the SPD through a dedicated transmission line which the SPD may construct himself or get constructed by STU or Discom or any other agency. The entire cost of transmission including cost of construction of line, wheeling charges, losses etc. from the project upto the interconnection point will be borne by the Project Developer and will not be reimbursed by NVVN or met by the STU/Discom. This connectivity can also be achieved through a shared line with any agency or any existing line of Discom or STU, provided the energy accounts are bifurcated and clearly demarcated for the power generated at solar project and are issued by the STU/ SLDC concerned.

Note: SPDs shall be responsible for construction of transmission line to the delivery point at its own risk and cost. . As per CERC connectivity (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 (hereinafter referred to as "the principal regulations"), amendment dated 3rd Sep 2010:

"(b) Applicant" means

(i) The following in respect grant of connectivity:

(b) A Hydro Generating station or generating station using renewable source of energy, of installed capacity between 50 MW and 250 MW.

Final decision on connectivity whether on CTU, STU, or any other related system is yet to be taken by Ministry of New & Renewable Energy

D. Domestic Content Requirement

Out of the total capacity of 1500 MW under Batch-II Phase-II, a capacity of 500 MW will be kept for bidding with Domestic Content Requirement (DCR). Under DCR, the solar cells and modules used in the solar PV power plants must both be made in India.

In case of crystalline Silicon technology, all process steps and quality control measures involved in the manufacture of the Solar Cells and Modules starting from P-type (or N-type) wafers till final assembly of the Solar Cells into Modules shall be performed at the works of PV manufacturers in India. The requisite P-type (or N-type) wafers and other raw materials can be imported.

In case of Thin-film technologies, the entire Modules assembly comprising of Thin-film Solar Cells shall be manufactured in India. The starting substrate (without any semiconductor junction) and other requisite raw materials can be imported.

The Developers at the time of bidding may opt for either "DCR" or "Open" or both the categories. The Developers will submit separate Bids in case they wish to bid under both the categories. Each Bid/ Application can be for a maximum of five projects at different locations with aggregate capacity not exceeding 100 MW per tranche.

Short-listing of Projects

In the Second Batch Phase-II, for selection of projects, NVVN shall evaluate only those applications which are received by the appointed date and time at the head office of NVVN. NVVN will evaluate the Projects for short listing Projects/Developers based on the qualification criteria specified at Sr. No. …. of the Guidelines and all the projects meeting the criteria shall be short-listed by NVVN. In the event, the total aggregate capacity of the Solar PV Projects short-listed is up to **750 MW each in two tranches or the capacity available and disclosed at the time of short-listing** , all the short-listed Projects in the second

batch i.e. during **2014-15** would be selected and Letter of Intent (LoI) will be issued to all the short-listed Projects.

In the event, the total aggregate capacity of the Solar PV Projects short-listed by NVVN in Second Batch is higher than **750 MW in two tranches or the capacity available and disclosed at the time of short-listing**, the final selection of the Projects from the list of short-listed projects shall be done on the basis of discount to be offered by Project Developers on CERC Approved Tariff as applicable on the date of submission of bids as detailed in the next sub-section.

In case the Capacity of last Project selected under first tranche/ second tranche is higher than the capacity to be selected for meeting the cumulative capacity of all the Projects to be selected under these Guidelines, the Capacity of last Project selected shall be limited so as to meet the cumulative capacity of all the Projects to be selected under first tranche/second tranche of these Guidelines. However, the allocated Project Capacity of such selected Project shall not be less than 10 MW.

Selection of Projects in Second Batch based on Discount in Tariff

a. The Short-listed Projects/Project Developers who meet qualification criteria specified at Sr. No. ….. of this guidelines would be asked by NVVN to submit Request for Proposal (RfP) bid indicating the discount in paisa/kWh on CERC Approved Applicable Tariff.
b. The RfP containing format and detailed mechanism for Discount in Tariff will be issued by NVVN after short-listing of the Projects.
c. The Projects offering the maximum discount in paisa/kWh on the CERC Approved Applicable Tariff would be selected first and so on.
d. In order to discourage adventurous bids, Bid Bond on graded scale would need to be furnished along with the RfP bid in the manner detailed hereunder:.

Sl. No.	Discount offered on Benchmark CERC Tariff	Amount of Bid Bond applicable for every paise of discount on Benchmark CERC Tariff (per MW)
1	Up to 10% or 10%	Rs. 10,000/=
2	More than 10% & Upto 15%	Rs. 20,000/=
3	More than 15% & Upto 20%	Rs. 30,000/=
4	More than 20% & Upto 25%	Rs. 40,000/=
5	More than 25%	Rs. 50,000/=

e. In the eventuality of a tie in the bidding process, the applicant would be selected by draw of lots.

At the end of the selection process, a letter of intent will be issued by NVVN to the selected Solar Projects.

Power Purchase Agreement

A copy of Draft Power Purchase Agreement to be executed between NVVN and the Project Developer shall be provided by NVVN along with invitation for submission of RfS. Within one month of the date of issue of Letter of Intent (LoI), the Power Purchase Agreement between NVVN and the Project Developer for purchase of power from the project will be executed.

Bank Guarantees

The Project Developer shall provide the following Bank Guarantees to NVVN in a phased manner as follows:

- Earnest Money Deposit (EMD) of Rs. 20 Lakh/MW in the form of Bank Guarantee along with RfS.
- Bid Bond as per Clause 2.7 (d) in the form of Bank Guarantee along with RfP bid (as applicable)
- Performance Bank Guarantee of Rs. 30 Lakh/MW at the time of signing of PPA.

In addition to the Performance Bank Guarantee of Rs. 30 Lakh/MW to be provided at the time of signing of PPA, the Bank Guarantees towards EMD and Bid Bond (as applicable) will also be converted into Performance Bank Guarantee.

In case, NVVN offers to execute the PPA with the Project Developer and if the Project Developer refuses to execute the PPA within the stipulated time period, the Bank Guarantees towards EMD and Bid Bond shall be en-cashed by NVVN. In case the Project is not selected, NVVN shall release the Bank Guarantees within fifteen days of the issue of LoI to selected Projects. All the Bank Guarantees shall be valid for a period of 18 months from the date of signing of PPA for PV Projects.

Minimum Paid up Share Capital to be held by the Promoter

The Company developing the project shall provide the information about the Promoters and their shareholding in the company to NVVN indicating the controlling shareholding before signing of the PPA with NVVN.

No change in the shareholding in the Company developing the Project shall be permitted from the date of submitting the RfS till the execution of the PPA. However, this condition will not be applicable if a listed company is developing the Project.

After execution of PPA, the controlling shareholding (controlling shareholding shall mean more than 50% of the voting rights) in the Company developing the project shall be maintained for a period of (1) one year after commencement of supply of power. Thereafter, any change can be undertaken under intimation to NVVN.

Financial Closure

The Project Developer shall report Project Financing Arrangements within 210 days from the date of signing Power Purchase Agreement. At this stage, the Project Developer would also furnish the necessary documents to establish clear title and possession of the required land for project development in the name of the Project Developer (minimum 2 ha per MW) and the requisite technical criterion have been fulfilled. The Project Developer would also need to specify their plan for meeting the requirement for domestic content.

In case of delay in achieving above condition as may be applicable, NVVN shall encash performance Bank Guarantees and shall remove the project from the list of the selected projects.

Commissioning

Part Commissioning:

Part commissioning of the Project shall be accepted by NVVN subject to the condition that the minimum capacity for acceptance of first part commissioning shall be 50% of Project Capacity subject to blocks of 10 MW Units and in multiples of 10 MW thereafter. The PPA will remain in force for a period of 25 years from the date of acceptance of respective part commissioning of the project.

Commissioning Schedule and Liquidated Damages for Delay in Commissioning:

In case of Solar PV, the Project shall be commissioned within 13 months of the date of signing of PPA. In case of failure to achieve this milestone, NVVN shall en-cash the Performance Guarantee in the following manner:

a. Delay up to five month -NVVN will en-cash the total Performance Bank Guarantee on per day basis and proportionate to the Capacity not commissioned.

   In case the commissioning of project is delayed beyond 3 months, the Project Developer shall pay to NVVN the Liquidated Damages at the rate of Rs 1,00,000 / MW per day of delay for the delay in such remaining Capacity which is not Commissioned. The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee and payment of Liquidated Damages shall be limited to 24 months from the date of signing of PPA. The amount of liquidated damages worked out as above shall be recovered by NVVN from the payments due to the Project Developer on account of sale of solar power to NVVN. In case, the Commissioning of the Project is delayed beyond 24 months from the date of signing of PPA, the PPA capacity shall stand reduced / amended to the Project Capacity Commissioned and the PPA for the balance Capacity will stand terminated and shall be reduced from the selected Project Capacity.

   The funds generated from the encashment of the Bank Guarantees and levy of Liquidated Damages shall be used for working capital for payment of dues to SPDs.

Commercial Operation Date (CoD):

The projects commissioned during a month shall be entitled for payment of energy @Rs 3.00/kWh as infirm power till CoD. The CoD shall commence normally from 30 days from the actual date of commissioning or 1st of the subsequent month which ever is later. The 25 year tenure of PPA shall commence from Commercial Operation Date.

Excess generation:

Any excess generation over and above the contracted energy declared will be purchased by NVVN at a tariff of Rs.3/kWh, provided NVVN is able to get any buyer for sale of such excess generation. In case at any point of time, the peak of capacity reached is higher than the rated capacity and causes disturbance in the system at the point where power is injected, the developer will have to forego the excess generation and reduce the output to the rated capacity.

Time Schedule for Solar PV Projects

Selection of Solar PV Projects shall be carried out in two tranches of 750MW each according to the timeline given below:

Sl. No.	Event	Date
01	Notice for Request for Selection	Zero date
02	Submission of Applications with documents for Registration	Zero date + 30 days
03	Short-listing of Projects based on RfS Applications received and decision on tariff discounting	Zero date + 75 days
04	Tariff discounting process and submission of proposals by short-listed developers	Zero date + 90 days
05	Evaluation of Tariff discounting proposals	Within 30 days from submission of tariff discounting proposals (zero date +120 days)
06	Issue of Letter of Intent	Within 15 days from evaluation of tariff discounting proposals (zero date + 135 days)
07	PPA Signing	Within 30 days from the date of issue of letter of intent (LOI date + 30 days)
08	Financing Arrangement for the project	Within 210 days from the date of signing of PPA
09	Commissioning of the Project	13 months from the date of signing of PPA

The time gap between bidding of two tranches shall be 6 months

SECTION-IV
OTHER PROVISIONS

Role of State Level Agencies

It is envisaged that the State Government shall appoint any Agency as a State Level Agency, which will provide necessary support to facilitate the development of the Projects. This may include facilitation in the following areas:

- Access to Sites
- Water Allocation
- Land acquisition for the project
- Connectivity to the Transmission substation.
- Support during commissioning of projects
- Coordination among various state and central agencies for speedy implementation of projects

While it will be the endeavour of the State Nodal Agencies to facilitate support in their respective area of working but nevertheless, SPDs shall be overall responsible to complete all the activities related to Project Development at its own risk and cost.

Amendment to the Guidelines

Any modification to these guidelines, if necessary, shall be carried out so as to achieve the objectives of the Jawaharlal Nehru National Solar Mission.

Power to Remove Difficulties

If any difficulty arises in giving effect to any provision of these guidelines or interpretation of the guidelines or modification to the guidelines, the Secretaries of the Ministry of Power and the Ministry of New and Renewable Energy shall jointly decide the matter, which will be binding on all parties concerned.

Any inconsistencies, due to oversight, may be rectified, after obtaining the approval from the Secretaries of the Ministry of Power and the Ministry of New and Renewable Energy.

Payment Security Mechanism

NVVN shall set up a Payment Security Fund (PSF) for grid connected solar power projects to be selected under this scheme in order to ensure timely payment to the developers. This Fund will have a corpus to cover 3 months payment. The money received from encashment of any Bank Guarantees and levy of Liquidated Damages, interest earned on this Fund, incentives for early payment, and the grants from Government/ NCEF will be used to build this fund. The Ministry of New and Renewable Energy will frame Rules to operate this fund.

Other:

The elaborations issued during bidding for NSM Phase-I scheme shall be appropriately incorporated in the next version of these Guidelines.

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Annexure-1-A

Technical Requirements for Grid Solar PV Power Plants

The following are some of the technical measures required to ensure quality of equipment used in grid-connected solar photovoltaic power projects:

1. SPV Modules

1.1 The SPV modules used in the grid solar power projects must qualify to the latest edition of any of the following IEC PV module qualification test or equivalent BIS standards.

Crystalline Silicon Solar Cell Modules	IEC 61215
Thin Film Modules	IEC 61646
Concentrator PV modules	IEC 62108

1.2 In addition, SPV modules must qualify to IEC 61730 for safety qualification testing at 1000V DC or higher. The modules to be used in a highly corrosive atmosphere throughout their lifetime must qualify to IEC 61701.

2. **Power Conditioners/ Inverters**

The Power Conditioners/ Inverters of the SPV power plants must conform to the latest edition of IEC/ equivalent Standards as specified below :

Efficiency Measurements	IEC 61683
Environmental Testing	IEC 60068 –2
EM Compatibility (EMC)	IEC 61000 series –relevant parts
Electrical safety	IEC 62103/ IEC 62109–1&2
Anti-Islanding Protection	IEE1547/UL 1741

3. Other Sub-systems/ Components:

Other subsystems/components used in the SPV power plants (Cables, Connectors, Junction Boxes, Surge Protection Devices, etc.) must also conform to the relevant international/ national Standards for Electrical Safety besides that for Quality required for ensuring Expected Service Life and Weather Resistance. (IEC Standard for DC cables for PV systems is under development. It is recommended that in the interim, the Cables of 600-1800 Volts DC for outdoor installations should comply with the draft EN50618 for service life expectancy of 25 years).

4. Authorized Test Centres

The PV modules / Power Conditioners deployed in the power plants must have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the NABL Accredited Test Centres in India. In case of module types like Thin Film and CPV / equipment for which such Test facilities may not exist in India at present, test certificates from reputed ILAC Member Labs abroad will be acceptable.

5. Warranty

PV modules used in grid solar power plants must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

6. Identification and Traceability

Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.)

i. Name of the manufacturer of PV Module
ii. Name of the Manufacturer of Solar cells
iii. Month and year of the manufacture (separately for solar cells and module)
iv. Country of origin (separately for solar cells and module)
v. I-V curve for the module at Standard Test Condition (1000 W/m2, AM1.5, 25^0 C)
vi. Wattage, Im, Vm and FF for the module
vii. Unique Serial No and Model No of the module
viii. Date and year of obtaining IEC PV module qualification certificate
ix. Name of the test lab issuing IEC certificate
x. Other relevant information on traceability of solar cells and module as per ISO 9000

Site owners would be required to maintain accessibility to the list of Module IDs along with the above parametric data for each module.

7. Performance Monitoring:

All grid solar PV power plants must install necessary equipment to continuously measure solar radiation, ambient temperature, wind speed and other weather parameters and simultaneously measure the generation of DC power as well as AC power generated from the plant. They will be required to submit this data to SECI and MNRE or any other designated agency on line and/or through a report on regular basis every month for the entire duration of PPA. In this regard they shall mandatorily also grant access to *SECI* and MNRE or any other designated agency to the remote monitoring portal of the power plants on a 24X7 basis.

8. Safe Disposal of Solar PV Modules:

The developers will ensure that all Solar PV modules from their plant after their 'end of life' (when they become defective/ non-operational/ non-repairable) are disposed off in accordance with the "e-waste (Management and Handling) Rules, 2011" notified by the Government and as revised and amended from time to time.

Ministry of New and Renewable Energy

Block -14, CGO Complex

Lodhi Road, New Delhi -110 003, INDIA

For more information, visit our website: www.mnre.gov.in