

No. 32/8/2013-14/NSM

भारत सरकार Government of India /

नवीन और नवीकरणीय ऊर्जा मंत्रालय / Ministry of New & Renewable Energy
(Grid Solar Power Division)

Block NO. 14, CGO Complex, Lodi Road,
New Delhi-110 003, Dated: 05th March 2015

To,

1. The Chairman & Managing Director, NTPC
2. The Chief Executive Officer, NVVN

Subject: Implementation of Project for setting up of 15,000 MW of Grid-connected Solar PV Power plants through NTPC Ltd./ NTPC Vidyut Vyapar Nigam Limited (NVVN) under National Solar Mission

Sir,

I am directed to convey the sanction of the President of India for implementation of a Scheme for setting up of 15,000 MW of Grid-connected Solar PV Power plants through NTPC Ltd./ NTPC Vidyut Vyapar Nigam Limited (NVVN) under National Solar Mission in a span of 5 years from 2014-15 to 2018-19; through developers in three tranche of 3000 MW, 5000 MW and 7000 MW as detailed under.

2. The scheme will be implemented through the NTPC /NVVN (the power trading arm of NTPC Limited) under Ministry of Power. The scheme envisages setting up of Grid-connected solar PV power plants of 15,000 MW aggregate capacity in three tranches:

Tranche-I : 3,000 MW : 2014-15 to 2016-17

Tranche-II : 5,000 MW: 2015-16 to 2017-18

Tranche-III : 7,000 MW: 2016-17 to 2018-19

These projects will be developed through project developers who may be from private or public sector. NTPC is also setting up some solar plants on their own as generator or owner. This proposal does not include NTPC's own solar power plants.

2.1 In Tranche-I, which will be Batch-II of Phase-II of National Solar Mission, 3000 MW capacity of solar PV power plants will be based on bundling of solar power (3000 MW) with unallocated thermal power (1500 MW) in the ratio of 2:1 (in MW terms), for which the required 1500 MW unallocated thermal power has been made available by the Ministry of Power. The bundled power will be allotted to various States that come forward to (i) provide land for setting up the solar power projects and (ii) purchase a major portion of the bundled solar power for consumption within the State (iii) ensure connectivity to the solar power project. The capacity allotted to each such State will be set up through developers, to be selected through international competitive bidding by NTPC /NVVN. Both private and government companies would be free to bid for projects.

2.2 1000 MW capacity out of the 3000 MW under the bundling scheme will be set up on land already identified in Andhra Pradesh. The balance 2000 MW capacity under the Bundling Scheme will be allotted in other interested States that come forward.

2.3 The 3,000 MW capacity Solar PV plants under Tranche-I will be set up based on model of bundling of solar power with unallocated thermal power and fixed levellised tariffs. The mechanism of operation of this model shall be as enumerated below:

- (i) The eligible plant capacities will be minimum 10 MW and maximum may be fixed for each State Lot of projects on the basis of size of the lot, land availability and requirement. The plant capacities will therefore differ from State to State between these limits.
- (ii) The bidding will be State specific and conducted through e-bidding. NVVN/NTPC will develop detailed guidelines for e-bidding. It will be based on fixed levellised tariffs. The developers will submit bids quoting a fixed levellised tariff for the entire project duration of 25 years. They will then be committing to sell power from their plants to NTPC /NVVN at the quoted tariff over the 25 year period.
- (iii) There will be State specific tenders. The selection of bids will be done based on the tariff quoted by the bidders. Selection will be based on lowest quoted levellised tariffs. The tariff bid cannot be higher than the Applicable Tariff on the day bids are received as may be fixed by the State Electricity Regulatory Commission (SERC) for the State where the projects are to be set up/ Central Electricity Regulatory Commission (CERC). Once agreed, then the tariff will be applicable for 25 years and cannot be changed by the State Electricity Regulatory Commission for this period.
- (iv) The bidders will be free to avail fiscal incentives like accelerated depreciation, concessional customs and excise duties, tax holidays, etc. available for such projects. The same will not have any bearing on comparison of bids for selection. As equal opportunity is being provided to all bidders at the time of tendering itself, it is upto the bidders to avail various tax and other benefits.
- (v) Solar power generated from the selected plants shall be purchased directly by NTPC /NVVN at the quoted tariffs. NTPC /NVVN will bundle this solar power with unallocated Thermal Power from Coal based stations of NTPC on 2:1 basis (2 MW of solar with 1 MW of thermal), and sell the bundled power to willing State Utilities under 25 years Power Sale Agreements (PSAs), at weighted average tariff of the solar and thermal components plus their proposed trading margin of Rs.0.07/kWh, which is expected to be attractive for the utilities. The tariff for thermal power component will be as per rates fixed by CERC for power from the respective thermal power plant from which power is allotted.
- (vi) The developers will be free to reconfigure and repower their plants from time to time during the PPA duration. However, the NTPC /NVVN will be obliged to buy power only within the Capacity Utilisation Factor (CUF) range laid down in Power Purchase Agreement (PPA) as per guidelines. Excess power generated whether in normal course or through repowering will be purchased at a notional support price of Rs.3/kWh only. It will be at the option of the

developer to offer it (excess power) to NTPC/ NVVN or sell in open market. Further, the developer will be free to sell power to any one for period beyond 25 years of firm PPA offered by NTPC/ NVVN.

2.4 MNRE will devise suitable mechanism for implementation of 12,000 MW capacity Solar PV projects under Tranche-II and Tranche-III keeping minimum support from the Government, to be determined after getting some experience while implementing Tranche-I. This Government support could be in the form of low cost long-tenure loans or other means.

The time period indicated for these tranches can be fast tracked by MNRE based on experience of Tranche-I.

3. Implementation of the Project

MNRE will finalize detailed guidelines for implementation of the Project for setting up of 15,000 MW Solar PV power plants under the 3 tranches, covering both technical and financial aspects.

Only commercially established and operational technologies will be promoted under all the tranches to minimize technology risk and to achieve timely commissioning of the plants.

4. Domestic Content Requirement (DCR)

Some capacity will be earmarked out of the total procurement under this scheme with provisions of domestically manufactured solar cells as well as modules. MNRE will prescribe the quantity to be fixed with DCR in each tender based on the prevailing market conditions from time to time. Bids received under both the categories (one with DCR requirement and the other without any such requirement) will be evaluated and successful bidders selected independently. Further, this DCR will also be technology agnostic i.e., applied on both the crystalline silicon and thin film SPV cells and modules.

5. Role of NTPC Limited /NTPC Vidyut Vyapar Nigam Limited (NVVN)

The NTPC Limited /NTPC Vidyut Vyapar Nigam Limited (NVVN) shall issue the Request for Selection (RfS) document inviting developers to submit the bids quoting their fixed 25-year levellised tariffs for sale of power from the Solar PV power plants they propose to set up in specified States through e-bidding for which NVVN/ NTPC will develop detailed guidelines. Further, NTPC /NVVN will evaluate the bids received, issue Letter of Intent (LoI) to successful bidders, sign Power Purchase Agreements (PPAs) with them for purchase of the solar power and also sign back-to-back Power Sale Agreements (PSAs) with interested State Utilities/ Discoms for sale of solar power.

Apart from undertaking the trading of the solar power from the plants, NVVN will also coordinate with State agencies for subsequent activities related to monitoring of commissioning of plants, performance monitoring and reporting on regular basis during the tenure of the PPAs.

6. Role of State Governments/ Nodal Agencies

States will be requested to indicate the quantum of Bundled Solar Power they would be interested in procuring out of the total 4500 MW (3000 MW solar bundled with 1500 MW thermal) based on their Renewable Purchase Obligations (RPOs). MNRE will carry out the formulation for actual allocation of bundled power based on criteria in consultation with NTPC /NVVN, keeping their commercial interest in view. Any dispute can be referred to MNRE. If substantial quantity is requested by a State and if it is also willing to allocate land then state specific tenders may be done.

State Nodal Agencies will be responsible in providing support in several areas like grid connectivity, land acquisition, water availability, etc. monitoring of progress of the projects and their commissioning and related activities.

Land for the first lot of Tranche-I in Andhra Pradesh will be provided in the solar park being developed in Andhra Pradesh. Andhra Pradesh Government will make available land on lease/ ownership basis to the Solar Park Joint Venture Company. This company will then make land available to the developers on long-term lease (not less than 27 years) in accordance with the project requirement. In cases, where the land is to be acquired from private land owners, long-term lease arrangement will be preferred so that the land owner gets a regular return. The land for the projects may be on lease / ownership / any other legally valid instrument allowing the developers to raise loans if required. Developers may opt to bid on their own land. Alternatively, the scheme may allow developer to purchase land on their own subject to availability of evacuation.

7. Setting up of Payment Security Mechanism/ Working Capital Fund

A Payment Security Mechanism / Working Capital Fund with an estimated corpus of Rs. 2300 crore to cover 3 months payment for bundled capacity of 3000 MW of Solar Capacity with 1500 MW NTPC Coal Power, will be set up to ensure bankability of PPAs and timely payment to developers. This will be evolved through collaborative efforts of Government of India and Solar Project Developers. The modalities for setting up of Payment Security Mechanism / Working Capital Fund will be finalized subsequently. Accruals from encashment of Bank Guarantees, penalties on developers, etc. will also go into this fund.

8. Timelines for Implementation of the Project

NVVN will tender out and award the Solar PV Plants to be set up in Andhra Pradesh out of the first tranche. The remaining capacity of Tranche-I to be set up in other interested States will be completely bid out by December 2015 subject to confirmation from respective states for availability of land and connectivity and conformation for purchase of power. Around thirteen months subject to transmission system being built will be given for completing the projects as a definite time frame from the signing of their Power Purchase Agreements (PPAs) subject to provisions of the PPAs and the guidelines of the scheme to be issued by MNRE in consultation with NTPC /NVVN.

9. If there is need for making any changes in provisions/ guidelines as may be required for smooth implementation, MNRE will be competent to make such changes with the approval of Minister-in-charge.

This issues in exercise of powers delegated to this Ministry and with the approval of competent authority.

Yours faithfully,


05/03/15

(Dr. A.K. Tripathi)

Sr. Director

Phone: 011-24363035

Copy for information and necessary action to:-

1. Cabinet Secretariat, Rashtrapati Bhawan, New Delhi
2. Secretary, Ministry of Power, Government of India
3. Central Government Ministries/Departments concerned;
2. Principal Director of Audit, Scientific Audit-II, DGACR Building. I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
- 6.

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05/03/15

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