#### TENDER DOCUMENT

**FOR** 

#### SUPPLY, ERECTION & COMMISSIONING

OF

# SOLAR PV POWER PLANT (50 KW CAPACITY) AT VIKAS BHAWAN, Dehra dun

### INCLUDING 5 YEARS WARRANTEE, OPERATION & MAINTENANCE

Tender Notice No. 01/UREDA/Dehra Dun/2012-13

NAME OF FIRM
SIGNATURE OF TENDER ISSUNIG OFFICER

Uttarakhand Renewable Energy Development Agency (UREDA)
(25 B Mahant Road, Laxman Chowk, Dehradun
Phone & Fax 0135 2729676 and email aj63@rediff.com)

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#### UTTARAKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY.

(25 B Mahant Road, Laxman Chowk, Dehradun ) Phone & Fax 0135 2729676 and email aj63@rediff.com)

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## PART-I

GENERAL DETAILS

#### **Tender Notice**

UTTARAKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY 25 B Mahant Road, Laxman Chowk, Dehradun, Phone & Fax 0135 2729676 email aj63@rediff.com))

Tender Notice No. .01/UREDA/Dehradun/2012-13

Sealed & separate tenders are invited from eligible manufacturers (as per the eligibility criterion of Ministry of New and Renewable Sources of Energy, Govt. of India) for Supply, Erection and Commissioning/ Maintenance of following systems at Vikas Bhawan Dehradun.

Sl	Particulars	Solar PV Power Plant
1	Tender Cost	Rs 10,000/-
2	Amount of Earnest money	Rs 2.70 Lacs
3	Tentative Quantity	50 KW (1 No)
4	Last date of submission	30-11-2012 12 Noon
5	Notification of received tenders on website	01-12-2012
6	Date of opening (Tech. Bid)	30-11-2012

The tenderer must have valid test report of the system as per JNNSM guidelines of MNRE. The tender documents can be seen & downloaded from http://tenders.gov.in/department.asp?id=1307 or can be obtained on any working day during office hours from the above mentioned office.

Technical bids of the tenders shall be opened on the dates as mentioned above. The date of opening of financial bid shall be communicated after scrutiny of technical bids. The financial bid of only those tenderer who qualify in technical bid shall be opened. In future all the notices/corrigendum/ amendments etc. related to this tender shall only be uploaded on http://tenders.gov.in/ department.asp?id=1307

For any clarification regarding the submission of tender, Project Officer UREDA, Distt. Dehradun may be contacted on the above mentioned telephone number. The undersigned reserves all the rights to reject any or all the tenders without assigning any reason.

PO UREDA

FROM	A:- (Full name and address of the tenderer)
	M/s
То,	
	The SPO/PO
	Uttarakhand Renewable Energy Development Agency
	25 B Mahant Road, Laxman Chowk, Dehradun
Subject.	et: -Offer in response to Tender Notice No. 01/UREDA/Dehradun/2012-13
Sir,	
	We hereby submit our offer in full compliance with terms & conditions of the attached tender. The
tender	is being submitted in two separate and sealed envelopes marked Part-I & Part-II.
	(Signature of Tenderer)
	Seal

#### **PARTICULARS OF TENDER**

1	Tender Notice No.	01/UREDA/Dehradun/2012-13
2	Particulars of the work	Supply, Erection & Commissioning of SOLAR PV POWER PLANT (50 KW CAPACITY) AT (Vikas Bhawan, Dehradun) including 5 Years Warrantee, operation & Maintenance
3	Tentative Quantity	50 KW (1 No)
4	Period of contract	Till the completion of all proposed works.
5	Cost of tender document	Rs. 10000/- (inclusive of trade tax)
6	Last date/ time of submission	30-11-2012 up to 12.00 PM
7	Amount of Earnest money	Rs. 2.70 Lacs
8	Validity of offer for acceptance	Three Months from the date of opening of the Technical bid
9	Date and Time of opening of tender	30-11-2012 at 2.00 PM
10	Place of opening of tender	25 B Mahant Road, Laxman Chowk, Dehradun Phone & Fax 0135 2729676 email aj63@rediff.com

#### Note:-

- 1- The tender document can be obtained on any working day during office hours from the Project office of UREDA, Dehradun, till 29-11-2012 up to 4:00 PM after paying the cost of tender document through Bank draft in favour of SPO/PO UREDA Distt..Dehradun
- 2- It can be downloaded also from http://tenders.gov.in/department.asp?id=1307 and the cost of tender document can be deposited along with the technical bid of the tender document.
- 3- Tender document issued by UREDA or downloaded from the above website will only be considered valid.
- 4- The list of tenders received till due date and time of submission shall be notified on the website on 01.12.2012.

#### GENERAL PARTICULARS OF TENDERER

Sl	Particulars	Details
1	Name of Tenderer/Firm	
2	Postal Address	
3	E-mail address for communication	
4	Telephone, Fax No.	
5	Name, designation & contact	
	number of the representative of the tenderer to whom all references	
	shall be made.	
6	Nature of the firm (Individual/	
	Partnership/ Pvt. Ltd /Public Ltd.	
	Co. /Public Sector etc.) The Association of various firms like	
	Consortium /Joint Venture/	
	Special Purpose Vehicle etc. is not	
	allowed to participate in this	
	tender.	
	Please Attach attested copy of	
7	Registration/ Partnership deed etc.  Amount and particulars of the	
,	earnest money deposited.	
8	Annual Turn over for last two years	
	(Attach balance sheets from CA in	
_	this regard)	
9	Name and address of the	
10	Indian/foreign collaboration if any.  Sales Tax Registration no.(Copies	
10	of Registration Certificates of trade	
	tax/ sales tax to be enclosed)	
11	Has the tenderer/firm ever been	
	debarred by any institution for undertaking any work?	
12	Any other information attached by	
	the tenderer (Details and Annexure /	
	page no. where its enclosed)	
13	Does tenderer have any relative	
	working in UREDA? If yes state the	
	name and designation.	

Tenderers are requested to give their full particulars and legal and financial status.

(Signature of tenderer with Seal)

#### **DECLARATION BY THE TENDERER**

I. /We .....

(Hereinafter referred to as Tenderer) being desirous of tendering for the work, under this tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document do hereby declare that-

- 1. The tenderer is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.
- 2. The tenderer is fully aware of all the relevant information for proper execution of the proposed work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.
- 3. The tenderer is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The tenderer is sufficiently experienced and competent to perform the contract to the satisfaction of UREDA. The tenderer gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
- 4. The tenderer has no collusion with other tenderers, any employee of UREDA or with any other person or firm in the preparation of the tender.
- 5. The tenderer has not been influenced by any statement or promises by UREDA or any of its employees but only by the tender document.
- 6. The tenderer is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
- 7. The tenderer has never been debarred from similar type of work by any Government undertaking /Department. (An undertaking on Stamp paper in this regard shall have to be submitted)
- 8. The tenderer accepts that the earnest money may be absolutely forfeited by UREDA if the tenderer fails to sign the contract or to undertake the work within stipulated time.
- 9. This offer shall remain valid for acceptance for 3 (Three) months from the proposed date of opening of the Technical Bid.
- 10. All the information and the statements submitted with the tender are true.

(Signature of Tenderer)

**SEAL** 

# PART-2 INSTRUCTIONS TO TENDERERS

#### SECTION 1 INTRODUCTION

#### **ELIGIBLE TENDERERS**

The tenderer shall provide sufficient documentary evidences to satisfy the following conditions that the tenderer:

- Is a registered manufacturing firm in India and is operational for more than last two years. The Use of completely imported PV systems will not be permitted.
- 1.1 The tenderer fulfills the terms and conditions of eligibility as an indigenous manufacturer of Solar PV Power Plant strictly in accordance with the directions of Ministry of New and Renewable Energy Government of India.
- 1.2 Has adequate plant and manufacturing capacity available, to perform the works properly and expeditiously within the time frame specified in the tender document. The firm should have monthly production capacity for more than 10KW of Solar PV Power Plant. UREDA may inspect the manufacturing facility of the tenderer at any time during the evaluation of tender and incase the manufacturing facility is not found satisfactory, the tender shall be rejected.
- 1.3 Has established quality assurance systems and organization designed to achieve high level of equipment reliability in manufacturing of the Solar PV Power Plant.
- 1.4 Has adequate financial stability and status to meet the financial obligations pursuant to the scope of work. (The firm must have average annual turnover of minimum 135 Lacs during last two years. (calculate @Rs 2.70 lacs per KW)
- 1.5 Has experience of manufacturing, supply and maintenance/after sale services in the field of supply/installation of Stand alone/ Off grid Solar PV systems of more than 50 KW cumulative capacity in the last three years (Should be kept at least equal to the required capacity) The details must be submitted in the Performa given in Technical- Bid section of tender document.
- 1.6 Has adequate field service setup to provide good after sale services including necessary repair and maintenance and has provided good after sale services for the supplies made by him during past years.
- 1.7 Has Valid Test Reports for installation of Solar PV Power Plant as specified and required in the Technical- Bid of this tender document.
- 1.8 Fulfills all requirements under Jawaharlal Nehru National Solar Mission of MNRE, Govt. Of India

The above stated requirements are compulsory to be fulfilled by the tenderer and UREDA may also ask for any additional information as may be deemed necessary in public interest.

### SECTION 2 THE TENDER DOCUMENT

#### 2.1 CONTENT OF TENDER DOCUMENT

- 2.1.1 The tender procedure and contract terms are prescribed in the tender document. In addition to the invitation of tender, the tender document includes the various other documents as given in the table of contents at page no-2.
- 2.1.2 The tenderer is expected to examine all instructions, terms and conditions, specifications, forms and formats etc as mentioned/ enclosed in the tender document. Failure to furnish all information required in the tender document or submission of a tender not substantially responsive to the tender document in every respect will be at the tenderers risk and is likely to result in out-right rejection of the tender.

#### 2.2 INFORMATION REOUIRED WITH THE PROPOSAL

- 2.2.1 The tender must clearly indicate the name of the manufacturer, the types and model & make of each principal item of equipment proposed to be supplied. The tender may also contain details of specifications and other comprehensive descriptive materials in support of technical specifications.
- 2.2.2 The above information may be provided by the tenderer in the form of separate sheets, specifications, catalogues etc.
- 2.2.3 Any tender not containing sufficient descriptive material to describe the proposed equipment may be treated as incomplete and hence may be rejected. Such descriptive materials and specifications submitted by the tenderer will be retained by UREDA. Any deviations from these will not be permitted during the execution of contract, without specific written permission of UREDA.

#### 2.3 AMENDMENTS IN TENDER DOCUMENT

- 2.3.1 At any time prior to the due date for submission of the tender or even prior to the opening of the financial bid, UREDA may for any legal reason, whether at its own initiative or as a result of a request for clarification/ suggestion by a prospective tenderer, amend the tender document by issuing a notice.
- 2.3.2 In case any amendment due to legal reason is required to be done, it shall be notified on the website at least 3 days before the proposed date of submission of the tender. UREDA will bear no responsibility or liability arising out of non-receipt of the information in time or otherwise. If any amendment is required to be notified within 3 days of the proposed date of submission of the tender, the last date of submission shall be extended for a suitable period of time.
- 2.3.3 In case any amendment due to legal reason is required to be done after submission of the tender (prior to the opening of financial bids), all the tenders received by UREDA shall be returned in sealed condition to the concerned tenderer through registered post or courier, for getting their offer revised according to the amended terms and conditions.
- 2.3.4 In Future all the notices/ corrigendum/ amendments etc. Related to this tender shall only be uploaded on http://tenders.gov.in/department.asp?id=1307. UREDA will not bear any responsibility or liability arising out of non-receipt of the information regarding any amendment in time or otherwise. Tenderers must check the website for any such amendment before submitting their tender.

#### SECTION 3 PREPARATION OF TENDER

#### 3.1 LANGUAGE OF TENDER AND MEASURE

The tender prepared by the tenderer along with all the related documents shall be in English. Any printed literature furnished by the tenderer may be in another language so long as it is accompanied by an English translation of its pertinent passages. Unit measurements shall be metric in accordance with International system. All correspondence between the tenderer and UREDA shall also be in English.

#### 3.2 EARNEST AND SECURITY MONEY

- 3.2.1 The tenderer shall furnish earnest money as mentioned in the 'Particulars of Tender' in the form of FDR/CDR/ Bank guarantee from any nationalized bank pledged in favour of SPO/PO UREDA, Distt Dehradun as a part of his tender. The bank guarantee should be valid for a period of 45 days beyond the validity of offer. Tenders without EMD shall be rejected by UREDA as being non-responsive. No interest shall be paid by UREDA on the amount of earnest money deposit.
- 3.2.2 The earnest money may be forfeited:
  - a) If a tenderer withdraws his tender during the specified period of validity of offer.
  - b) If the successful tenderer fails to sign the contract agreement within stipulated period

The earnest money of the successful lowest tenderer shall be released at the time of signing of the agreement with UREDA. At this time, the tenderer shall have to deposit security money amounting to 5% of the contract value in the form of FDR/CDR/TDR pledged in favour of SPO/PO UREDA, Distt – Dehradun

3.2.3 The earnest money of all other tenderers shall be released after signing the agreement with the lowest bidder.

#### 3.3 PERIOD OF VALIDITY OF TENDER

- 3.3.1 Validity of the offer should be Three (03) months from the proposed date of opening of the Technical bid. Tenders without this validity the will be rejected.
- 3.3.2 In exceptional circumstances, UREDA may solicit the consent of the tenderers to an extension of the period of validity of offer. The request and the response there of shall be made in writing.

#### 3.4 FORMATS AND SIGNING OF TENDER

- 3.4.1 The tender must contain the name and places of business of the firm/person/persons participating in the tender and must be signed and sealed by the tenderer with his usual signature. The name and designation of all persons signing the tender document should be written below every the signature. Tender by a partnership firm must be furnished with full name of all partners with a copy of partnership deed.
- 3.4.2 The original copy of the tender should be typed or written in indelible ink and must be signed with the legal name of the corporation/ company by the President/ Managing Director/ Secretary of the firm or a person duly authorized to bid. In case of authorized person the letter of authorization by

written power-of-attorney should be enclosed with the technical bid of the tender. The person or persons signing the tender shall initial all pages of the tender document.

3.4.3 The tender shall contain no interlink actions, erasers or overwriting except as necessary to correct the errors made by the tenderer in the preparation of tender. The person or persons signing the tender shall also sign at all such corrections.

#### 3.5 PRICE AND CURRENCIES

The tenderer shall submit his rates in Indian Rupees only, on the format for Financial Bid attached to this tender document. The rates should include all applicable taxes, duties & surcharges.

3.6 The tenderers are suggested to collect all relevant data regarding the proposed place of work/ site, its local environment, approach road and connectivity, actual prevailing working conditions, availability of required materials and labour and all other information/ data required for proper completion of the proposed work. If required, the tenderer must pre-visit the site before submitting his tender. UREDA shall not entertain any request of contractor for clarifications related to such local conditions and shall bear no responsibility in this regard.

#### SECTION 4 SUBMISSION OF TENDER

#### 4.1 SEALING AND MARKING OF TENDER

- 4.1.1 The tender must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the tender document.
- 4.1.2 First sealed envelope (Part-I) should contain cost of the tender document (In case it's downloaded from website), requisite earnest money, brochures, literature and other documents regarding technical specifications. It should be subscribed with TENDER NO. 01 & 'Earnest Money and Technical Bid'.
- 4.1.3 The complete tender document in original (excluding financial bid) issued by UREDA or downloaded from the website should be submitted by the tenderer in the first envelope (Part-I) after furnishing all the required information on relevant pages. Each page of the tender document should be signed & stamped. Tenders with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers may be attached by the tenderer to furnish/ submit the required information.
- 4.1.4 Second sealed envelope (Part-II) should contain financial bid only. It should be subscribed with TENDER NO. 01 and "Financial bid". The tenderer should submit his duly signed and stamped financial bid on the financial bid format attached with this tender document, after writing the price only.
- 4.1.5 Any term/condition proposed by the tenderer in his technical bid which is not in accordance with the terms and conditions of the tender document or any financial conditions, payment terms, rebates etc. mentioned in financial bid shall be considered as a conditional tender and will make the tender invalid.
- 4.1.6 Both the above sealed envelopes i.e. Part-I and Part-II will be sealed in another one envelope, subscribed with TENDER NO. 01 and 'Name of Work'......... This envelope shall be addressed to the SPO/PO, Uttarakhand Renewable Energy Development Agency (UREDA) (25 B Mahant Road, Laxman Chowk, Dehradun

#### 4.2 DEADLINE FOR SUBMISSION OF TENDER

- 4.2.1 Tender must positively submitted till the date & time of submission as specified in tender document.
- 4.2.2 Any tender received after the specified date & time of submission will be rejected and returned unopened to the tenderer.

### SECTION 5 TENDER OPENING AND EVALUATION

#### 5.1 OPENING OF TENDER

The procedure of opening of the tender shall be as under:

- 5.1.1 First envelop (Part-I) bearing TENDER NO. 01 and subscribed 'Earnest Money and Technical Bid' shall be opened by UREDA's representatives at the time and date mentioned in the 'Particulars of Tender', in the presence of tenderers who choose to be present. The financial and technical suitability of offers will be examined by UREDA in detail. If required, clarifications regarding the suitability of the offers will be obtained.
- 5.1.2 Second envelope (Part-II) bearing TENDER NO. 01 and subscribed "Financial bid" of only those tenderers shall be opened whose technical bid is found responsive, suitable and in accordance with the various requirements of the tender.
- 5.1.3 In case it is not possible to open second envelop (part-II) on the same date, then a suitable date for this purpose shall be announced or shall be communicated to tenderers by letter/ fax/ email (Either Mode). To avoid postponement of opening of financial bid, it is in the interest of the tenderers to send their authorized representatives who are well conversant with the tender and competent enough to take decisions on technical and financial matters at the time of opening of bids.

#### 5.2 CLARIFICATIONS REGARDING THE SUBMITTED TENDERS

5.2.1 During the process of evaluation of the tender, UREDA may at its discretion ask the tenderer for a clarification of his tender. The request for clarification and the response shall be in writing. Any query regarding any clarification required by UREDA on the information submitted by the tenderer, must be replied by the tenderer within 3 days.

#### SECTION 6 AWARD OF CONTRACT

#### 6.1 EVALUATION CRITERION

- 6.1.1 The tender shall be finalized on the basis of total cost of Solar PV Power Plant including 5 years Warrantee, operation and Maintenance.
- 6.1.2 Price./Purchase preferences up to 10%, on the rates quoted by lowest bidder (incase of medium or large scale category) shall be provided to Small/Cottage /Khadi /Tiny enterprises established in Uttarakhand, on the systems produced within the state. This Price/ Purchase preference shall be applicable to only those enterprises who are registered with Industry Department, Govt. of Uttarakhand under Price./Purchase preference policy of this state. No other relaxation shall be allowed to any bidder.

#### 6.2 NOTIFICATION OF AWARD

Prior to the expiry of validity period of offer, UREDA will notify the successful tenderer by registered Letter/Email/ Fax that his tender has been accepted.

#### 6.3 AWARD OF WORK CONTRACT

- 6.3.1 Before placement of supply orders, an agreement shall be signed between UREDA and the lowest successful tenderer.
- 6.3.2 Contract should ordinarily be awarded to the lowest evaluated bidder whose bid has been found to be responsive and who is eligible and qualified to perform the contract satisfactorily as per the terms and conditions incorporated in the corresponding bidding document.

#### 6.4 RIGHT TO VARY QUANTITIES

UREDA may increase or decrease the size/quantity mentioned in the tender notice at the time of award of contract without any change in price or other terms and conditions & without assigning any reason thereof.

#### 6.5 RIGHT TO ACCEPT/REJECT ANY OR ALL TENDERS.

UREDA reserves all the rights to reject any or all the tenders, accept any tender in total or in part.

#### 6.6 EXPENSES OF AGREEMENT

The respective suppliers shall pay all the expenses of stamp duties and other requirements for signing the agreement with UREDA.

## PART-3

# GENERAL CONDITIONS OF CONTRACT

#### GENERAL CONDITIONS OF CONTRACT

#### 1. DEFINITIONS

In the deed of contract unless the context otherwise requires:-

- 1.1 'UREDA' shall mean The SPO/PO or his representative of 'Uttarakhand Renewable Energy Development Agency. (Complete address of the project office, Distt. Dehradun) with its Head office at Energy Park Campus, Patel Nagar Dehradun and shall also include its successors in interest and assignees. The 'Contractor' shall mean the Firm/ Person (whose tender has been accepted by UREDA) and shall include his legal representatives, successor in interest and assignees
- 1.2 The contract shall be for Supply, Erection & Commissioning of SOLAR PV POWER PLANT (50 KW CAPACITY) AT Vikas Bhawan, Dehradun including 5 Years Warrantee, operation & Maintenance and shall be valid till the completion of all related works.
- 1.3 However the validity of rates may further be extended to a specified period of time and/or to other locations in Uttarakhand on the mutual consent of both the parties.
- 1.4 The contractor shall be deemed to have carefully examined all the papers, drawings etc. attach to the contract deed. If he shall have any doubt as the meaning of any portion or any condition(s)/specifications etc.

#### 2. COMPLETION PERIOD

- 2.1 The total work assigned to the contractor shall have to be completed by him within 04 months from the date of signing the agreement. The work shall have to be completed within time and shall be binding on the contractor. In case of any urgency, the contractor may be asked to complete the work even earlier and contractor will be bound to fulfill the requirements.
- 2.2 In case the contractor fails to execute the said work or related obligations within stipulated time, UREDA will be at liberty to get the work executed from the open market at the risk and cost of the contractor, without calling any tender and without any notice to the contractor. Any additional cost incurred by UREDA during such execution of the work shall be recovered from the contractor.
- 2.3 If the cost of executing the work as aforesaid shall exceed the balance payments due to the contractor and the contractor fails to make good the 'additional cost', UREDA may recover it from the contractor's pending claims against any work in UREDA or in any other lawful manner. All risks & responsibilities related to the execution of the said work and fulfillment of related obligations directly or indirectly connected with the performance of the contract shall be the sole responsibility of contractor.
- 2.4 The calculation of aforesaid 'additional cost' will be finalized by the UREDA at its sole discretion. The contractor shall have no right to challenge the mode or amount relating to calculation at any forum. For completion of the work through any other agency, in case some changes are required in terms and conditions of the contract; the contractor shall not have any right to challenge the decision of UREDA.

#### 3. LIOUIDATED DAMAGES

If the contractor fails to perform the work within the time periods specified in the work orders or within the extended time period if any, UREDA shall without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damage, a sum equivalent to 1% of the price of the un-performed work / services for each week of delay until actual completion of work, up to a maximum deduction of 10%. Once the maximum is reached, UREDA may consider termination of the contract.

#### 4. PERFORMANCE SECURITY

The amount of the performance security as mentioned in the 'Payment Terms' shall be forfeited in case of breach of any term or condition by the contractor. If required, the other balance payments may also be forfeited, depending on the liabilities on the part of the contractor.

#### 5. FORCE MAJEURE

- 5.1 Notwithstanding the provisions of clauses contained in this deed; the contractor shall not be liable for forfeiture of its performance security, liquidated damages, termination for default, if he is unable to fulfill his obligation under this deed due to force majeure circumstances.
- 5.2 For purpose of this clause, "Force majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by the Chief Project Officer of UREDA & his decision shall be final and binding on the contractor and all other concerned.
- 5.3 If a force majeure situation arises, the contractor shall notify UREDA in writing promptly (at the most within 10 days from the date such situation arises). After examining the cases UREDA shall decide and grant suitable addition time for the completion of the work.
- 5.4 For other justified cases also, not covered under force majeure conditions, UREDA may consider the request of contractor and additional time for completion of work may be granted.

#### 6. QUALITY, WARRANTEE AND ANNUAL MAINTENANCE

- 6.1 The contractor shall warrant the Solar PV Power Plant as per applicable standards of quality. Anything to be furnished shall be new, free from all defects and faults in material and workmanship. The manufacture shall be in accordance with the specified technical parameters and should be of the highest grade and consistent with established and generally accepted standards for material. It shall be in full conformity with the drawing or samples if any and shall operate properly if operable.
- After erection of the Solar PV Power Plant at site, the contractor shall ensure satisfactory performance of the equipments for a period of time as specified in the scope of work.

- 6.3 The contractor shall rectify defects developed in the Systems within Warrantee, operation /Maintenance period promptly. In case the contractor does not rectify the defects within 7 days of the receipt of complaint, UREDA may restore the System in working condition on contractor's expenses.
- Frequent and unjustified delays in rectifying defects may lead to cancellation of the contract, recovery of losses and imposing of additional penalty. In such circumstance UREDA shall have the full liberty to recover the losses/penalty from the contractor pending claims, security deposit or in other law full manner. The amount of losses/penalty shall be decided be SPO/PO UREDA and will be binding on the contractor.

#### 7. STANDARDS

The goods supplied and works executed under this contract shall confirm to the standards mentioned in the technical specification and where no applicable standard is mentioned, the latest version of Indian Standard Institution or Bureau of Indian Specification shall be applicable.

#### 8. INSPECTION AND TESTS

- 8.1 UREDA or its duly authorized representatives shall have the right to inspect and /or to test the goods to confirm their quality according to the contract and shall have access to the contractor's works premises and the power to inspect and examine the materials and workmanship of the Solar PV Power Plant at all reasonable times during their manufacture.
- 8.2 The contractor shall inform UREDA through a written notice regarding any material being ready for testing at least 7 days in advance. The conditions of contract and/or the technical specifications shall specify what inspections and tests shall be conducted by UREDA. All the arrangements of necessary equipments and expenses for such tests shall be on the contractor's account excluding the expenses of the inspector.
- 8.3 UREDA's Inspector, unless the witnessing of the tests is virtually waived off, will inspect and attend such test within 7 days from the date on which the equipments are notified as being ready for test /inspection. MNRE officer may also be present at the time of such testing.
- 8.4 UREDA shall within 7 days, give written notice to the contractor, about any objection regarding the quality of the system. The contractor shall either make the necessary modifications to remove the cause of such objection or shall clarify the objections in writing if modifications are not necessary to comply with the contract.
- 8.5 After satisfactory testing of the systems during inspection, UREDA's Inspector shall issue of dispatch clearance for the supply of material at site.
- 8.6 The inspection by UREDA and issue of dispatch instruction there on shall in no way limit the liabilities and responsibilities of the contractor in respect of the agreed and specified quality. Nothing in clause 8 shall in any way relieve the contractor from any Warrantee or other obligations under this contract.
- 8.7 In case any time the system is not found in accordance with the required technical specifications, the work order(s) shall be canceled and all the payments made by UREDA to the contractor shall be recovered. Such contractor shall also be blacklisted from participating

in any tender in URDEA in future. MNRE and other State Nodal Agencies of MNRE shall also be informed for the necessary action against such contractor.

#### 9. SPARE PARTS

The contractor shall make arrangement to maintain a sufficient stock of essential spares and consumable spare parts to ensure proper maintenance of the system promptly.

#### PACKING FORWARDING

- 10.1 Contractors, wherever applicable shall properly pack and crate all materials in such a manner as to protect them from deterioration and damage during transportation. The contractor shall be responsible for all damage due to improper packing.
- 10.2 The contractor shall inform the district level project office of UREDA regarding the probable date of each shipment of materials from his works.

#### 11. TRANSPORTATION

The contractor is required to deliver the goods at (Name of the Place) as defined in the scope of work.

#### 12. DEMURRAGE WHARFAGE, ETC

All demurrage, wharfage and other expenses incurred due to delayed clearance of the material or any other reason shall be on the account of the contractor.

#### 13. INSURANCE

- 13.1 The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition; transportation and the expenses shall be borne by the contractor.
- 13.2 The contractor shall arrange security & storage of their materials to avoid any theft or losses during execution of work. UREDA will, in no case, shall be responsible for providing any security/storage for the materials & equipments lying at site during execution of work. Under the contract contractor shall be responsible for any loss or damage until the systems/ supplies are taken over.

#### 14. LIABILITY FOR ACCIDENTS AND DAMAGES

During the Warrantee, Operation & maintenance period, the contractor shall assume all responsibilities for direct damages covering all type of accident, injury or property damage caused by manufacturing defects or faulty erection on the systems.

#### 15. DUTIES AND TAXES

The rates/ prices mentioned in the price-schedule include all applicable taxes, duties & surcharges. No additional payments shall be made by UREDA on this account.

#### 16. PATENT RIGHT AND ROYALTIES:

The contractor shall indemnify UREDA against all third party claims of infringement of patent, royalties, trademark or industrial design rights arising from use of the goods supplied/erected by the contractor or any part thereof.

#### 17. RIGHT TO VARY QUANTITIES

UREDA reserves all the rights to increase or decrease the quantity of goods mentioned in the contract, at the time of placement of orders without any change in price or other terms and conditions.

#### 18. LOCAL CONDITIONS

- 18.1 It will be imperative on contractor to have full information of all local conditions and factors which may have any effect on the execution of the works. The contractor shall be deemed to have collected all the relevant information regarding the proposed place of works/ site, its local environment, approach road and connectivity etc. and be well acquainted with actual working and other prevailing conditions.
- 18.2 If required, the contractor should pre-visit the site before starting the work. UREDA shall not entertain any request of contractor for clarifications related to such local conditions and shall bear no responsibility in this regard.

#### TOOLS & TACKLES

The contractor shall provide all necessary tools & tackles for proper execution of work and operation/ maintenance of systems after erection. UREDA shall in no way, responsible for supply of any tools & tackles.

#### 20. TERMINATION FOR DEFAULT

UREDA without prejudice to any other remedy for breach of contract, by written notice of default sent to the contractor, may terminate the contract in whole or in part:

- 21.1 If the contractor fails to deliver the Services within the allocated time period(s).
- 21.2 If the contractor fails to perform any other obligation(s) under the contract. However in the event of termination of the contract in part, the contractor shall continue performance of the contract to the extent not terminated.

#### 21. TERMINATION FOR INSOLVENCY

UREDA may at any time terminate the contract by giving written notice to the contractor without compensation to the contractor if he becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to UREDA.

#### 22. TERMINATION FOR CONVENIENCE

UREDA may vide a written notice sent to the supplier; terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the purchaser's convenience in the interest of UREDA.

#### 23. COMPLETION OF WORK

On completion of the work, the contractor shall submit 5 sets of "As Executed Report" to UREDA which will include photographs, drawings and as executed reports of various systems containing details of erection form the point of view of future operation & maintenance of the installed systems. This report must also contain all Technical Details, Detailed Circuit Diagram of the Electronic/ Electrical components of all the system.

#### 24. OTHERS CONDITIONS

- 24.1 The contractor shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of UREDA in writing.
- 24.2 UREDA may at any time either stop the work all together or reduce or cut it down by sending notice in writing to the contractor. If the work is stopped all together, the contractor will only be paid for work done and expenses distinctly incurred by him as on preparation or the execution of the work up to the date on which such notice is received by him. The decision of UREDA regarding assessment of such expenses shall be final and binding on the contractor. If the work is cut down, the contractor will not be paid any compensation what to ever for the loss of profit which he might have made if he had been allowed to complete all the work awarded to him.
- 24.3 Fulfillment of various requirements, not particularly mentioned in the specifications or drawings but necessary for satisfactory and proper completion of the work shall be the contractor's responsibility within the prices offered by him. But additional works beyond the scope and essence of this contract shall be carried out by the contractor as extra items. For such works the rates shall be decided by UREDA and shall be binding on the contractor.
- 24.4 Work carried out without UREDA's approval shall not be accepted and UREDA shall have rights to get it removed and to recover the cost so incurred from the contractor.
- 24.5 The contractor shall not display the photographs of the work and not take advantage through publicity of the work without written permission of UREDA.
- 24.6 The contractor shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- 24.7 UREDA will not be bound by any Power of Attorney granted/ issued by the contractor or by any change in the composition of the firm made during or subsequent to the execution of the contract. However recognition to such Power of Attorney and change (if any) may be given by UREDA after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

#### 25. STATUTORY ACTS

- 25.1 All legal formalities/clearances are to be obtained by the contractor regarding the execution of the said work.
- 25.2 In respect of all labour directly or indirectly employed on the work by the contractor, the contractor shall comply with all the provisions of hiring the contract labour and rules of State/ Central Government or any other authority framed from time to time. The rules and other statutory obligations in this regard will be deemed to be the part of this contract.

25.3 The contractor shall comply with the all the Acts & rules and regulations, laws and by-laws framed by State/ Central Government/ organization in whose premises the work has to be done. UREDA shall have no liabilities in this regard.

#### 26. APPLICABLE LAW

The contract shall only be interpreted under Indian laws. The station of UREDA Distt Dehradun shall have exclusive jurisdiction in all matters arising under this contract.

#### 27. RESOLUTION OF DISPUTES / ARBITRATION

- 27.1 The purchaser and the supplier shall make every effort to resolve any disagreement or dispute arising between them under or in connection with the contract, amicably by direct informal negotiation.
- 27.2 If after thirty (30) days from the commencement of such informal negotiations, the purchasers and the supplier are unable to resolve a contract dispute amicably; the matter may be referred in writing by either party to the sole arbitration of the Chairman of UREDA, Dehradun or to a person nominated by him.
- 27.3 Subject to aforesaid, the arbitration and conciliation Act 1996 and rules made thereafter or any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings. Under this cause, the 'Award' given by the Arbitrator shall be binding on all the parties. The contractor shall not have right to challenge the Award.
- 27.4 Work under the contract shall if reasonably possible, continue during the arbitration proceedings and dues if any, payable by UREDA to the contractor with respect to the work not in dispute shall not ordinarily be withheld on account of such proceedings unless it becomes necessary to withhold the same.
- 27.5 The proceedings, if any, in relation to the arbitration referred to above, shall be held by the arbitrator aforesaid at Dehradun and courts at Dehradun shall have jurisdiction to entertain and decide the matter involved.
- 27.6 No decision given by the officer in charge of the work under this contract, in accordance with the forgoing provisions shall disqualify him as being called as a witness or giving evidence before the arbitrators on any matter whatsoever relevant to the dispute of difference referred to the arbitrator as aforesaid.
- 27.7 In case during the Arbitration proceedings the appointed Arbitrator becomes unable, due to any reason whatsoever, to continue with the proceedings or making of Award; it will be prerogative of UREDA to nominate any other person as sole Arbitrator instead thereof. The contractor shall not raise any objection to such appointment having been made by UREDA.
- 27.8 The High court of Uttarakhand at Nainital or Courts subordinate to it as the case may be, shall alone have jurisdictions to the exclusion of all other courts.

#### 28. NOTICES

Any notice to be given by one party to the other, pursuant to the contract shall be sent in writing. A notice shall be effective when delivered or from the effective date mentioned in the notice, whichever is later.

Notices, statements and other communications sent by UREDA to the contractor at his specified addresses through registered post/ email/ fax shall be deemed to be delivered to the contractor.

#### 29. APPLICATION

These general conditions shall apply to the extent that provisions in other parts of the contract do not supersede them.

#### 30. PAYMENT TERMS

- 30.1 70% amount of the work value shall be paid after installation and commissioning of the Solar PV Power Plant at site..
- 30.2 10% amount of the work value shall be paid after 3 months from the date of installation and commissioning of Solar PV Power Plant at site.
- 30.3 Balance 20% of the contract value shall be treated as performance security and shall be paid against satisfactory performance of the Solar PV Power Plant during Warrantee, operation and maintenance period. This amount shall be paid in 5 equal annual installments, starting from completion of one year from the date of Commissioning at site. The contractor shall have to submit annual performance & functionality report from user agency for the release of annual payments.
- 30.4 5% Security money deposited by the contractor at the time of signing of contract agreement will be released after completion of 5 years Warrantee, operation and maintenance period, after handing over of the Solar Power Plant to UREDA/USER in satisfactory running condition.

#### Note

- 1. No price escalation due to any reason (including any change in the applicable taxes, duties, surcharge etc.) shall be considered by UREDA during the validity/ extended validity of the contract agreement
- 2. All the bank guarantees should be made from nationalized bank.

## PART-4

# GENERAL TECHNICAL SPECIFICATIONS

#### PART-4

#### GENERAL TECHNICAL SPECIFICATIONS

Details of Required Solar Photovoltaic Power Plant

Sl No	Particular	Requirement
1	Location	Vikas Bhawan, Dehradun
2	Size of Solar PV Array	Minimum 50,000 Wp
3	Size of battery Bank	Minimum 24 Volts, 1500 AH at C/10 rate or equivalent.
4	Power Conditioning Unit	63 KVA Nominal Output Rating

#### 1. PV MODULES:

1.1 The PV modules must conform to the latest edition of any of the following IEC / equivalent BIS Equivalent IS Standards for PV module design qualification and type approval:

Crystalline Silicon Terrestrial PV Modules : IEC 61215 / IS14286

Thin Film Terrestrial PV Modules : IEC 61646 /

Concentrator PV Modules & Assemblies : IEC 62108

- 1.2 In addition, the modules must conform to IEC 61730 Part 1-requirements for construction & Part 2 requirements for testing, for safety qualification or Equivalent IS (Under Dev.)
- 1.3 PV modules to be used in a highly corrosive atmosphere must qualify Salt Mist Corrosion Testing as per IEC 61701 / IS 61701.

#### 1.4 IDENTIFICATION AND TRACEABILITY

Each PV module must use a RF identification tag (RFID), which must contain the following information:

- (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
- (vi) Peak 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 series.

Until March 2013, the RFID can be inside or outside the module laminate, but must be able to withstand harsh environmental conditions. However from 1st April 2013 onwards; RFID shall be mandatorily placed inside the module laminate.

#### 2. BALANCE OF SYSTEM (BOS) ITEMS/ COMPONENTS:

The BOS items / components of the SPV power plants/ systems must conform to the latest edition of IEC/ Equivalent BIS Standards/ MNRE specifications as specified below:

BOS Item / System	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications			
	Standard Description	Standard Number		
Charge Controller/MPPT units (For Solar PV Systems of 100 Wp to 20 KWp capacity)	Environmental Testing	IEC 60068-2 (1,2,14,30)/ Equivalent BIS Std.		
Charge Controller/MPPT units (For Solar PV Systems above 20 KWp capacity)	Environmental Testing	Relevant IEC/BIS Std.		
Power Conditioners/ Inverters including MPPT & Protections (For	Efficiency Measurements	IEC 61683 / IS 61683		
Solar PV Systems of 100 Wp to 20 KWp capacity)	Environmental Testing	IEC 60068-2 (1, 2, 14, 30) / Equivalent BIS Std.		
Power Conditioners/ Inverters including MPPT & Protections	Efficiency Measurements	Relevant IEC/BIS Std.		
(For Solar PV Systems above 20 KWp capacity)	Environmental Testing	Relevant IEC/BIS Std.		
Storage Batteries	General Requirements & Methods of Testing Tubular Lead Acid / VRLA / GEL	As per relevant BIS Std.		
Storage Batteries	Capacity Test Charge/Discharge Efficiency Self-Discharge	As per relevant BIS Std. As per relevant BIS Std. As per relevant BIS Std.		
Cables	General Test and Measuring Method PVC insulated cables for	IEC 60227 / IS 694		
	working voltage up to and including 1100 V and UV resistant for outdoor installation	IEC 60502 / IS 1554 (Pt. I & II)		
Switches/Circuit Breakers /Connectors	General Requirements Connectors –safety	IEC 60947 part I,II, III / IS 60947 Part I,II,III		
	A.C. /D.C.	EN 50521		
Junction Boxes /Enclosures for Inverters/Charge Controllers/Luminaries	General Requirements	IP 54(for outdoor)/ IP 21(for indoor) as per IEC 529		

- In case if the Charge controller is in-built in the inverter, no separate IEC 62093 test is required.
- Various components of Solar Power Plant must additionally conform to the relevant national/international Electrical Safety Standards wherever applicable

#### 3. MODULE MOUNTING STRUCTURE

Modules shall be mounted on a non-corrosive support structures towards due south and at a suitable inclination to maximize annual energy output. Support structure design and foundation or fixation mounting arrangements should withstand horizontal wind speed up to 120 km/ hr. In snowbound areas the structure should be capable of withstanding load of snow.

Support structures shall be manufactured with steel angles & channels; spray galvanized to IS 1477 Part -1 with thickness of 70 microns as per IS 5905. All fasteners shall be of Stainless steel - SS 304.

The foundation for Module Mounting structures shall be 1:2:4 PCC Construction. There shall be minimum necessary clearance between ground level and bottom edge of SPV modules.

#### 4. DC DISTRIBUTION BOARD (DCDB)

A DCDB shall be provided in between PCU and Solar Array. It shall have MCCB of Suitable rating for connection and disconnection of array section. It shall have meters for measuring Array voltage and Array current.

#### 5. TEST REPORTS

For small capacity PV modules upto 50Wp capacity, STC performance must be tested and approved by one of the IEC / NABL accredited testing laboratories including Solar Energy Centre. However higher wattage regular PV modules must additionally qualify as per relevant IEC standard.

Enclose Test reports/ certificate from IEC/NABL accredited laboratory in this regard. The validity of the Certificates/Reports should be at least till March 2013.

#### 6. AUTHORIZED TESTING LABORATORIES/ CENTERS

Test certificates / reports for the BoS items/ components can be from any of the NABL/ IEC Accredited Testing Laboratories or MNRE approved test centers. Details of Test Labs are given in Annexure III.

#### 7. MAIN FEATURES & OPERATING MODE

- Clean regulated power to the load
- "No-break" transfers from renewable energy to battery and battery to grid.
- MPPT solar charge regulator.
- The PCU shall operate with solar priority for feeding load and charging batteries.
- Stored power from batteries shall be the second priority to feed the load.
- Grid power shall be the last priority to feed the load. During such time, the PCU shall feed the load directly through grid and shall also charge the batteries. Battery Charging through

Grid shall be taken up only when batteries are undercharged and solar is not available or insufficient.

#### 8. WARRANTY

PV modules used in solar power plant must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

The mechanical structures, electrical works including Power conditioners/ inverters/ charge controllers/ maximum power point tracker units/ distribution boards/ digital meters/ switchgear/ storage batteries, etc. and overall workmanship of the SPV power plants/ systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.

The Warrantee Card to be supplied with the Solar PV Power Plant must contain the details of the system supplied, as given in the Annexure- 1. The tenterers can provide additional information about the system.

#### 9. OPERATION MANUAL

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar PV Power Plant. The detailed diagram of wiring and connection diagrams should also be provided with the manual.

#### 10. OTHER FEATURES

Only indigenously manufactured Solar PV Power Plant which fully conform to the MNRE specifications shall be procured. All the technical & other requirements as per provisions under JNNSM of MNRE must be fulfilled. Use of imported Solar PV Modules is not permitted.

#### **Details of Load to be Connected**

Sl	Location of Load/	Type of Load/	Quantity	Wattage	Proposed	Required
	<b>Details</b> of	Name of			operating	watt
	rooms/Floor	Appliances			hours	hours
						Per day
1	Room	Computer	35	150	7	36750
2	Room	Lights	130	50	7	36400
3	Room	Fans	80	80	7	44800
4	Room	Photostat	8	400	1	3200
5	Room	CFL	18	18	7	2268
6	Room	Printers	10	200	1	2000
	•••••					
••					•••••	
					•••••	
					•••••	
			Total wat	t hours requ	iired per day	125728

#### Details of Space available for installation of Solar Modules

On Roof		
Area	: 750 Sqm	
Sunshine Availal	ble : From 9 AM to 5 PM	
	Photograph 1	Photograph 2
	Photograph 3	Photograph 4
On Ground		
Area	: 750 Sqm	
Sunshine Availal	ble : From 9 AM to 5 PM	
	Photograph 1	Photograph 2
	Photograph 3	Photograph 4

#### Details of Space/ Room available for Battery bank

Covered Area	: As per requirement			
	Photograph 1		Photograph 2	
Open Area	Photograph 1	: 4	As per requirement  Photograph 2	

The provision of necessary frame structure/ battery racks etc. for installation of the system must be made according to the availability of space and requirement at site. Bidders are advised to visit the sites before submitting the tender.

# PART-5 SCOPE OF WORK

#### PART-5

#### **SCOPE OF WORK**

The work shall include Design, Fabrication, Manufacturing, Supply, Installation, Testing & Commissioning of Solar PV Power Plant of 50 Kw Capacity, at Vikas Bhawan, Dehradun on turnkey basis. Scope of works shall include:

- A. All works required for proper installation of Solar PV Power Plant including necessary civil works for mounting structures of solar module, shall be done by the contractor. The entire work shall be performed on turnkey basis. All the works related to the proper installation and functioning of the systems shall have to be carried out by the contractor in the prices offered by him.
- B. The generated electricity from the Power Plant will be utilized in place of grid power. Necessary electric cable/connection shall be supplied/made by the bidder as per the requirement at site
- C. All the wiring required to energies the propose load shall have to be done by the contractor including supply of all required materials. The wiring shall have to be done in concealed conduits.
- D. All necessary electrical wiring from existing electrical distribution box up to PCU of Solar PV Power Plant and back from PCU to distribution box shall have to be done by the contractor including supply of all required materials.
- E. Necessary arrangements for storage of batteries of Solar PV Power Plant as per requirement for their proper protection shall have to be done by the contractor. Appropriate Cabinets for battery banks, with the provision of racks for batteries should also be done. If required, battery room of the adequate size with proper ventilation shall have to be prepared according to the direction of engineer in charge at site.
- F. After completion of the proposed works, clearances of all temporary works/ materials shall be the sole responsibility of the contractor and this shall be removed immediate after the requirement of such temporary work is completed.
- G. General Aesthetics & cleanliness in regard to the installation of various systems shall have to be maintained in accordance with the aesthetics of the site.

- H. Two numbers solar stills, each of 2.5 liter per day capacity should be supplied and installed at a safe place at site.
- I. Arrangement of proper earthing mechanism and lightening arresters should be done at site as per the requirements of the Solar Power plant.
- J. The contractor shall supply/ install the necessary tools/instruments required for proper operation of the plant and to measure PV array Voltage, Current, Power and solar radiation.
- K. Supply and Installation of Display board of 6' X 4' size showing all technical information of SPV plant shall be done by the contractor. The matter written on these boards shall be finalized with UREDA.
- L. The complete Solar PV Power Plant shall be warranted and maintained by the contractor against any manufacturing/ design/ installation defects for a minimum period of 5 years from the date of installation.
- M. Warrantee, operation and Maintenance period will include rectification /replacement of all the defective and consumable components/items including batteries. However all the non functional parts/ materials/ items replaced during the Warrantee, operation and Maintenance period shall be the property of the contractor.
- N. After commissioning of the plant, the contractor will conduct one on-site training of the purchaser's/user's personnel regarding assembly, start-up, operation, maintenance and repairs of the Solar PV Power Plant.
- O. During 5 year's Warrantee, operation & maintenance period, the contractor will have to make all necessary arrangements including placement of required manpower at site for satisfactory operation, maintenance and performance of the Power Plant.
- P. Rectification of all the defects developed in the Solar PV Power Plant during Warrantee, operation and Maintenance period shall have to be done by the contractor promptly, at the most within 7 days from the date of receipt of compliant.

- Q. During Warrantee, operation and Maintenance period, the contractor shall have to submit annual performance & functionality report from user agency.
- R. During the Warrantee, operation and Maintenance period, MNRE / UREDA / users will have all the rights to cross check the performance of the Solar PV Power Plant. UREDA may randomly pick up its components to get them tested at Govt. / MNRE approved any test center. If during such tests any part is not found as per the specified technical parameters, UREDA will take the necessary action to recover the losses and to black list the firm and the same may be communicated to MNRE and other nodal agencies. The decision of UREDA in this regard will be final and binding on the tenderer.

# PART-6 TECHNICAL BID

#### Part – 6 TECHNICAL BID

#### Tender No. 01/UREDA/Dehra Dun/2012-13

#### 1. Solar modules

Sl.	Details regarding	Proposed by tenderer
1	Name of the manufacturer & Make of	
	Solar Module	
2	Type of Solar Cell	
3	Type of Frame Structure (MS/SS)	
4	Enclosed supporting documents if any	From Page Noto
5	Details in case of any deviation from the	
	technical specifications as specified in	
	the tender document.	

#### 2. Battery

	<del>,                                      </del>	
Sl.	Details regarding	Proposed by tenderer
1	Name of the manufacturer & Make of	
	Battery	
2	Model Type	
3	Dimensions of Battery (size)	
4	Enclosed supporting documents if any	From Page Noto
5	Details in case of any deviation from the	
	technical specifications as specified in	
	the tender document.	

#### 3. BoS Items/Component

Sl	Details regarding	Proposed by tenderer
1	Name of the manufacturer & Make of	
	PCU/ Inverter	
2	Name of the manufacturer & Make of	
	Charge Controller/ MPPT Units	
3	Name of the manufacturer & Make of	
	Switches/Circuit Breaker/ Connectors	
4	Enclosed supporting documents if any	From Page Noto
5	Details in case of any deviation from the	
	technical specifications as specified in	
	the tender document.	

(Attach additional sheets if required)

(Signature of tenderer With Seal)

#### **DETAILS OF EXPERIENCE**

Please fill in information about off grid Solar PV Systems installed in last three years.

Details	Year						
	2009-10	2010-11	2011-12	Total			
Capacity of Solar PV Power Plants installed (in Kw)							
Total contract amount							

(Signature of Tenderer) Seal

NOTE: Above details without copies of work orders, completion certificates and satisfactory performance reports from the users will not be considered.

#### **Details of Sale/Service Centers in Uttarakhand**

Please provide district-wise details of Sale/Service Centers in Uttarakhand on the following format:-

S.N.	Name of District	Details of Sale/ Services Center with contact Nos.
1.	Dehradun	
2.	Haridwar	
3.	Tehri	
4.	Uttarakashi	
5.	Pauri	
6.	Rudraprayag	
7.	Chamoli	
8.	Pithoragarh	
9.	Champawat	
10.	Almora	
11.	Bageshwar	
12.	Nainital	
13.	US Nagar	

Signature and Seal of the Tenderer

# PART-7 FINANCIAL BID

### PART-7 FINANCIAL BID

#### Tender No. 01/UREDA/Dehra Dun/2012-13

S.	Name of Work	Qty.	Amount (in figures)	Amount (in words)
1	Design, Supply, Installation & Commissioning of Solar PV Power Plant of 50 Kilowatt capacity at Vikas Bhawan, Dehradun including 5 Years Warrantee, operation and Maintenance			

#### Certified that:

- 1- Above rates are in accordance with the all the specifications, various terms, conditions and requirements mentioned in this tender document, to perform the work satisfactorily.
- 2- The rates are inclusive of all taxes and duties what so ever.

(Signature of Tenderer)
Seal

#### FORMAT FOR WARRANTEE CARD TO BE SUPPLIED WITH SOLAR POWER PLANT

1	Name & Address of the Manufacturer/Supplier	
2	Name & Address of the Purchasing Agency	
3	Date of Erection of system	
4.	PV Module a) Make b) Model c) Serial No (List Enclosed) d) Wattage under STC e) Warrantee valid up to	
5	Battery a) Make b) Model c) Batch/Sl. No (List Enclosed) d) Rated Voltage at C/10 d) Rated AH capacity at C/10 e) Warrantee valid up to	
7	Electronics & Inverter a) Make b) Model c) Serial No d) Warrantee valid up to Other BOS	
,	a) Make b) Model c) Serial No d) Warrantee valid up to	
8	Designation & Address of the person to be contacted for claiming Warrantee obligations	

Place;
Date:

(Signature)

Name
Designation
Name & Address of the Manufacturer /Supplier
(SEAL)

#### Annexure –II

#### FORMAT FOR BANK GUARANTEE FOR - EARNEST MONEY DEPOSIT

TORWITT OR BITTER GOTTE TOR - LITTER MOTE TO DETOSIT
This deed of Guarantee made on
Whereas the FIRM is submitting its tender for Name of the work and this guarantee is being made for the purpose of submission of Earnest money deposit with the tender document.
Know all people by these presents that the GUARANTOR, hereby undertake to indemnify and keep UREDA indemnified up to the extent of Rsduring the validity of this bank guarantee and authorize UREDA to recover the same directly from the GUARANTOR. This bank guarantee herein contained shall remain in full force and effect till the expiry of its validity or till any extended period (if extended by the bank on receiving instructions from FIRM.). The liability under the guarantee shall be binding on the GUARANTOR or its successors.
Whereas the GUARANTOR further agrees that their liability under this guarantee shall not be affected by any reason of any change in the offer or its terms and conditions between the FIRM and UREDA with or without the consent or knowledge of the GUARANTOR.
Whereas the GUARANTOR further agrees to pay guaranteed amount hereby under or part thereof, on receipt of first written demand whenever placed by UREDA during the currency period of this guarantee. The GUARANTOR shall pay UREDA immediately without any question, demure, reservation or correspondence.
Whereas the GUARANTOR hereby agrees not to revoke this guarantee bond during its currency period except with the previous consent of UREDA in writing.
Notwithstanding anything contained herein -
Our liability under this bank guarantee shall not exceed Rs
2 This Bank guarantee shall be valid up to
We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only against the written claim or demand on or before
Sealed with the common seal of the bank on thisday of Month and Year
Witness
1(Signature and seal of the bank)

2.....

#### Accredited Test centers for MNRE Off-Grid Programme

Lab Organi	PV Module	Lighting Systems		Battery	Inverter >100 W		Charge Controller	
zation		As per MNRE Specifi cations	Environ mental		Efficiency	Environ mental	Protec tions	Environ mental
SEC	Yes (IEC61215 Up to 100WP) NABL Accredited	Yes MNRE Accredited	Yes (Includi ng IP) MNRE Accredit	Yes MNRE Accredite d	Yes (Up to 10KVA) MNRE Accredite d	Yes (Including IP) MNRE Accredite	Yes MNRE Accredite d	Yes (Including IP) MNRE Accredite
ERTL (east)	STC Test Facility MNRE Accredited	Yes NABL/ MNRE Accredited	ed Yes NABL/ MNRE Accredit ed	Yes Up to 1000AH	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d
ETDC (B)	Yes (IEC61215) under ICEEE- CB, IEC 61701 (Up to100WP) NABL Accredited	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredit ed	Yes Up to 100 AH	Yes (Up to 3KVA) NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE  Accredite d	Yes NABL/ MNRE  Accredite d
CPRI (B)	No	Yes NABL/ MNRE Accredited	Yes NABL/ MNRE Accredit ed	Yes Up to 500 AH	Yes (Up to 10KVA) NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE Accredite d	Yes NABL/ MNRE  Accredite d
ERTL (N)	No	Only Electronics & luminaries NABL Accredited	Yes NABL Accredit ed	No	Yes (Up to 5KVA) NABL Accredite d	Yes NABL Accredite d	Yes (Up to 5KW) NABL Accredite d	Yes NABL Accredite d

UL (B)	Yes (IEC61215 IEC 61730 Pt.II and IEC 61701) Up to400WP NABL Accredited	Yes (except battery) NABL Accredited	Yes NABL Accredit ed	No	Yes (Up to 6KVA) NABL Accredite d	Yes NABL Accredite d	Yes (Up to 6KW) NABL Accredite d	Yes NABL Accredite d
TUV Rhinela nd	Yes (IEC61215 & 61730 Pt- II) Up to400WP NABL Accredited	NO	Yes NABL Accredit ed	No	Yes (Up to 10KVA) NABL Accredite d	Yes NABL Accredite d	Yes (Up to 10KW) NABL Accredite d	Yes NABL Accredite d
Inter Tek	No	Only Electronics & luminaries NABL Accredited	Yes NABL Accredit ed	No	Yes (Up to 5KVA) NABL Accredite d	Yes NABL Accredite d	Yes (Up to 5KW) NABL Accredite d	Yes NABL Accredite d

<sup>\*</sup>Beyond 10KVA self certification by the manufactures is acceptable.