











**संपदा विभाग**  
Estate Department  
भारतीय रिजर्व बैंक भुवनेश्वर  
Reserve Bank of India, Bhubaneswar

**E-Tender – RBI/Bhubaneswar/Estate/19-20/ET/392**

**DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF NET METER IN THE HV SIDE AND 5 KWP GRID INTERACTIVE SPV BASED SOLAR POWER PLANT FOR BANK'S MAIN OFFICE BUILDING.**

**Part -I**

Name of Tenderer: \_\_\_\_\_

Address: \_\_\_\_\_

Date of Pre Bid Meeting : March 20, 2020 at 11: 00 AM

Due date and time for Submission of e-Tender : March 30, 2020 up to 2:00 PM

Date of opening of Part- I of e-Tender : March 30, 2020 at 3:00 PM

Venue : Estate Department, Bhubaneswar

Estate Department  
2<sup>nd</sup> floor, Reserve Bank of India, Pt. J. L. Nehru Marg, Bhubaneswar - 751001, Odisha,  
India

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RESERVE BANK OF INDIA  
ESTATE DEPARTMENT  
**BHUBANESWAR**

E-Tender Notice

Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive Solar Power System for Bank's Main Office Building.

1. e-Tenders in two parts are invited for “Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar. The work is estimated to cost **Rs. 10 lakhs** and is to be completed within 30 days from the tenth day of issue of work order.
2. All pre-Qualification documents **shall be uploaded in the site. Those who do not upload the Pre-qualification documents would not be considered for this tender process. Further, the contractor should submit the original of the documents to the Bank when demanded to qualify for further tendering process.**
3. The Earnest Money Deposit (EMD) in the form of DD/Irrevocable Bank Guarantee/proof may be paid by NEFT / shall be submitted in sealed cover addressed by name of **Shri M.K. Mall, Regional Director, Reserve Bank of India, Bhubaneswar - 751001** so as to reach up to **2:00 PM on March 30, 2020** superscripted as “EMD for DSITC of net meter and 5 KWp roof top grid interactive solar power plant.
4. Tenders may be downloaded from [www.mstcecommerce.com/eprochome/rbi](http://www.mstcecommerce.com/eprochome/rbi) or from [www.rbi.org.in](http://www.rbi.org.in) tenders section from 10 AM of February 28, 2020. **The firms which do not comply with the following pre-qualification criteria and do not submit EMD will not be considered for opening of their tender Part-II.**
  - i. The intending tenderer must have minimum 5 years of experience in carrying out grid interactive solar power system installation works for office buildings/commercial premises. The **similar work\*** should have been completed on or before **January 31, 2020**.
  - ii. The intending tenderer must and have executed successfully **similar works\***, during last five years ending on **January 31, 2020** as under:
    - (a) Three works each costing not less than the amount equal to 40% of the estimated cost

OR

(b) Two works each costing not less than the amount equal to 50% of the estimated cost

OR

(c) One work costing not less than the amount equal to 80% of the estimated cost.

- iii. Minimum yearly turnover of **100% of the estimated cost** during last 3 financial years supported by audited financial statements.
- iv. Should have service setup at Bhubaneswar or in nearby cities (Kolkata / Hyderabad).

**\*Similar Works** means - works of Design, Supply, Installation, Testing and Commissioning of **grid interactive** SPV based Solar Power System.

5. The contractors shall upload the following information/documents on MSTC site to satisfy the Bank about their eligibility

(a)	Composition of the firm	Full particulars (whether contractor is an individual, or a partnership firm, or a company etc.,) of the composition of the firm of contractors in details should be submitted along with name(s) and address (es), of the partner's copy of the Articles of Association/ Power of Attorney / other relevant document.
(b)	Work experience & Completion of similar works of specified value during the specified period	Copies of the <b>detailed work orders</b> for the qualifying works <b>(4(i) and 4(ii) above)</b> indicating date of award, value of awarded work, time given for completing the work, etc. and the corresponding <b>completion certificates</b> indicating actual date of completion and actual value of executed similar works should be enclosed in proof of the work experience. The details along with documentary evidence of previous experience, if any, of carrying out works for the Reserve Bank of India at any Centre, should also be given.
(c)	Turnover	<b>Audited financial statements</b> for last three financial years i.e. 2016-17, 2017-18 and 2018-19 along with a <b>certificate of Chartered Accountant</b> indicating the turnover for these financial years.
(d)	Credit worthiness of the contractor and their turnover during the specified period	Copies of the Income Tax Clearance Certificates / Income Tax Assessment Orders along with the latest final accounts of the business of the contractor duly certified by a Chartered Accountant should be enclosed in proof of their creditworthiness and turnover for last three years.

(e)	Name(s) and address(es) of the Bankers and their present contact executives	Written Information about the names and addresses of their bankers along with full details, like names, postal addresses, e-mail IDs, telephone (landline and mobile) nos., fax nos., etc. of the contact executives (i.e. the persons who can be contacted at the office of their bankers by the Bank, in case it is so needed) should be furnished.
(f)	Details of bank accounts	Full particulars of their bank accounts, like account no. type, when opened etc., should be given.
(g)	Name(s) and address(es) of the Clients and their present contact executives	Written information about the names and addresses of their clients along with full details, like names, postal addresses, e-mail IDs, telephone (landline and mobile) nos., fax nos. etc., of the contact executives (i.e. the persons who can be contacted at the office of their clients by the Bank in case it is so needed) should be furnished.
(h)	Details of completed works	The client-wise names of work(s), year(s) of execution of work (s), awarded and actual cost (s) of executed work (s), completion time stipulated in the contract (s) and actual time taken to complete the work (s), Name(s) and full contact-details of the officers/authorities/departments under whom the work(s) was/were executed should be furnished.
(i)	Details of Service setup	Address and contact details of the service set up at the place of proposed work or nearby metro for rendering after sales service.

6. In the event of intending Tenderer's failure to satisfy the Bank; the Bank reserves the right to participate in tendering process.

7. A pre-bid meeting (off-line mode) of the intending tenderers will be held **on March 20, 2020 at 11.00 AM** at Estate Department, Main Office Building, Reserve Bank of India, Bhubaneswar. The duly filled in tender documents shall be uploaded on MSTC site till **2:00 PM on March 30, 2020**

8. (a) EMD of Rs 20,000 /- (Rupees Twenty Thousand only) in the form of Demand Draft favouring Reserve Bank of India payable at Bhubaneswar / NEFT as per details in Annexure-L or an irrevocable Bank Guarantee issued by a scheduled Bank in the Bank's standard proforma which is available in the tender form ([Annexure-J](#))

(b) Tenderers shall submit all the information and the documents as mentioned in Para 5 above.

After examination, if any of the tenderer is not found to possess the required eligibility, their tenders will not be accepted by the Bank for further processing.



9. Part I of the tenders will be opened on-line at **3:00 PM on March 30, 2020** in the presence of the authorized representative of the tenderers who choose to be present. Part-II (Price bid) shall be opened of the eligible tenderer on a subsequent date which will be intimated to the tenderers in advance.
10. The applicants/tenderers have to submit/upload -
  - a. Client's certificate (minimum 02) as per format at [Annex- G](#) from their clients for whom they have carried out "eligible works" in terms of the eligibility (Pre-qualification) criteria explained in this notice.
  - b. Banker's certificate as per format at [annex -H](#) from their banker/bankers.

The client's certificate shall be accepted only when the same is signed by an official of the rank of Executive engineer/Superintendent Engineer or equivalent in respect of a Government/Semi Government organization or a PSU and only when they are supported by adequate proof of payment received by the contractor for the work done by him. The client's certificate issued by the private organizations shall also accompany Tax Deducted at Source (TDS) certificates. Applications/tenders uploaded without the above certificates may be rejected. The Bank shall have the right to independently verify these certificates.

The Bank shall evaluate the said reports before opening of price bid of the tenders. If any tenderer is not found to possess the required eligibility for participating in the tendering process at any point of time and/or his performance reports received from his clients and/or his bankers are found unsatisfactory, the Bank reserves the right to reject his offer even after opening of Part-I of the tender. The Bank is not bound to assign any reason for doing so.

11. The Bank is not bound to accept the lowest tender and reserves the right to accept either in full or in part any tender. The Bank also reserves the right to reject all the tenders without assigning any reason there for.

Bhubaneswar  
Date: February 28, 2020

MK Mall  
Regional Director

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**RESERVE BANK OF INDIA  
Estate Department  
Bhubaneswar**

**Section I  
Form of Tender**

Place \_\_\_\_\_

Date \_\_\_\_\_

To,

The Regional Director  
Reserve Bank of India  
Estate Department,  
Bhubaneswar

Dear Sir/Madam,

We have carefully examined the specifications, designs and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the installation site of the works specified in the said memorandum and having acquired the requisite information relating thereto as affecting the e-Tender. We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the attached Schedule of Quantities and in accordance in all respects with specifications, designs and instructions in writing referred to in articles of agreement, general instructions to the Tenderers and special conditions, conditions hereinbefore referred to, specifications, data sheet and schedule of quantities and with such materials as are provided for, by and in all other respects, in accordance with such conditions so far as they may be applicable.

**MEMORANDUM**

(a)	Description of works	Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive Solar Power System for Bank's Main Office Building, Bhubaneswar.
(b)	Estimated cost	<b>Rs. 10 lakhs only.</b>

(c)	Mode of payment	As per clause 3.13 General Instructions to Contractors and Special Conditions.
(d)	Earnest Money	<b>Rs. 20,000/-</b> by each bidder with Part I
(e)	Time allowed for completion of work from tenth day after the date of letter advising acceptance of e-Tender.	30 days

2. We also agree that our e-Tender will remain **valid for acceptance by the Bank for 90 days from the date of opening of Part I of the e-Tender** and this period of validity can be extended for such period as may be mutually agreed between the Bank and us in writing. We also agree to keep the Bank Guarantee towards earnest money valid during the entire period of validity of e-Tender, as per enclosed proforma ([Annexure J](#)).
3. Should this e-Tender be accepted, I/we hereby agree to abide by and fulfil all the Terms and Conditions of the e-Tender and in default thereof, to forfeit and pay to you or your successors, or assignees or nominees such sums of money as are stipulated in the conditions contained in the e-Tender together with the written acceptance of the Contract.
4. I/We understand that you reserve the right to accept or reject any or all the e-Tender either in full or in part without assigning any reason therefor. We have deposited a sum of **Rs. 20,000/-** as earnest money in the form of NEFT/Demand draft/banker's cheque/bank guarantee (strike out whichever is not applicable) issued by a scheduled public sector bank with the Reserve Bank of India, which amount is not to bear any interest. Should we fail to execute the Contract when called upon to do so, we do hereby agree that this sum shall be forfeited by us to the Reserve Bank of India.
5. The Tender is to be submitted in two parts addressed to the Regional Director, Reserve Bank of India, Bhubaneswar. Part I contains all commercial terms and conditions and technical particulars and Part II contains only the price bid in the Bank's proforma.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

For and on behalf of M/s \_\_\_\_\_

\_\_\_\_\_  
(Signature with seal)

Name \_\_\_\_\_

Designation \_\_\_\_\_

Place \_\_\_\_\_

Date \_\_\_\_\_

(Certified true copy of the Power of Attorney of the above signatory should be enclosed).

Witnesses

(1) Signature with \_\_\_\_\_  
name, address and date \_\_\_\_\_  
\_\_\_\_\_

(2) Signature with \_\_\_\_\_  
name, address and date \_\_\_\_\_  
\_\_\_\_\_



RESERVE BANK OF INDIA  
Estate Department  
Bhubaneswar

**Section II**  
**Articles of Agreement**

ARTICLES OF AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ between the Reserve Bank of India, Bhubaneswar having its Central Office at Mumbai (hereinafter called "the Bank") of the one part and \_\_\_\_\_ (hereinafter called "the Contractor") on the other part.

WHEREAS the Bank is desirous of **Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and grid 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building, Bhubaneswar** and has caused drawings and specifications describing the work to be done. AND WHEREAS the said Drawings from Numbers \_\_\_\_\_ to \_\_\_\_\_, the specifications, and the schedule of quantities have been signed by or on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute the work as per the terms and conditions set forth herein and to the terms and conditions set forth in the special terms and conditions and in the schedule of quantities and conditions of Contract as modified and finally accepted by both the parties ( all of which are collectively hereinafter referred to as "the said Conditions") the works shown upon the said drawings and/or described in the said Specifications and included in the Schedule of quantities at the respective rates therein set forth, amounting to the sum as therein arrived at or such other sum as shall become payable there under (**hereinafter referred to as, the said Contract Amount**).

**NOW IT IS HEREBY AGREED AS FOLLOWS -**

In consideration of the said Contract amount to be paid at the times and in the manner set forth in the said terms and conditions, the Contractor shall, execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of quantities.

2.1 The Bank shall pay the Contractor the said Contract amount or such other sum as shall become payable at the times and in the manner specified in the said terms and conditions.

2.2 Contractor shall object for reasons considered to be sufficient by the Bank PROVIDED ALWAYS that no person or perhaps persons subsequently appointed to be architect under this Contract shall be entitled to disregard or overrule any

previous decisions or approval or direction given or expressed in writing by the architect for the time being.

2.3 The said terms and Conditions and Appendix thereto shall be read and construed as forming part of this agreement and the parties hereto shall respectively abide by, submit themselves to the said conditions and perform the agreements on their part respectively in the said conditions contained.

2.4 The drawings, agreement and documents mentioned herein shall form the basis of this Contract.

2.5 This Contract is deemed to be Item rate Contract for all items of work as described in detail in the bill of quantities and specifications in part I and Part II of the e-Tender documents.

2.6 The Contractor shall afford every reasonable facility for carrying out of all works relating to civil works, electrical installations, fittings and other ancillary works in the manner laid down in the said conditions, and shall make good any damages done to walls, floors, etc. after the completion of such works.

2.7 The Bank reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out at any time during the currency of Contract, without prejudice to this Contract.

2.7.1 Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work from the day of issue of works order/letter of acceptance as provided for in the said terms and conditions and to complete the entire work **within 30 days from issue of work order** subject nevertheless to the provisions for the extension of time.

2.7.2 All payments by the Bank under this Contract will be made only at Reserve Bank of India, Bhubaneswar.

2.7.3 All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in **Bhubaneswar** and only courts in **Bhubaneswar** shall have jurisdiction to determine the same.

**2.7.4 NON-DISCLOSURE CLAUSE**

The contractor shall not disclose directly or indirectly any information, materials and of the Bank's infrastructure/ system/equipment's etc. which may come to the profession or knowledge of the contractor during the course of discharging its contractual obligations in connection with the agreement, to any third party and shall at all times hold the same in strictest confidence. The contractor shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or to comply with applicable laws. The contractor shall not publish, permit to be published, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous written consent of the Bank. The contractor shall indemnify the Bank for any loss suffered by the Bank as a result of disclosure of any confidential information. Failure to observe the above shall be treated as breach of contract on the part of the

contractor and the Bank shall be entitled to claim damages and pursue legal remedies.

The contractor's obligations with respect to non-disclosure and confidentiality will survive the expiry or termination of this agreement for whatever reason.

**2.7.5 Sexual Harassment**

(a) The Contractor / Agency shall be solely responsible for full compliance with the provisions of "the Sexual Harassment of women at work place (Prevention, Prohibition and Redressal) Act, 2013" in case of any complaint of sexual harassment against its employee within the premises of the Bank, the complaint will be filed before the Internal Complaints Committee constituted by the Contractor / Agency and the Contractor/Agency shall ensure appropriate action under the said Act in respect to the complaint.

(b) Any complaint of sexual harassment from any aggrieved employee of the Contractor against any employee of the Bank shall be taken cognizance of by the Regional Complaints Committee constituted by the Bank.

(c) The contractor shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employees of the contractor, for instance any monetary relief to Bank's employee, if sexual violence by the employee of the contractor is proved.

(d) The contractor shall be responsible for educating its employees about prevention of sexual harassment at work place and related issues.

(e) The contractor shall provide a complete and updated list of its employees who are deployed within the Bank's premises.

2.7.6 The contractor shall take all appropriate actions with respect to its employees to ensure that the obligations of non-disclosure of confidential information under this agreement are fully satisfied.

2.7.7 That the several parts of this Contract have been read by the Contractor and fully understood by the Contractor.

If the Contractor is a partnership or an individual	IN WITNESS WHEREOF the Bank and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first herein above written.
If the Contractor is a company	IN WITNESS WHEREOF the Bank has set its hands to these presents through its duly authorized official and the Contractor has caused its common seal to be affixed hereunto and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.



SIGNED AND DELIVERED by Reserve Bank of India, \_\_\_\_\_

\_\_\_\_\_

(Name and Designation)

In the presence of -

Witnesses –

1. \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

If the party is a  
partnership firm  
or individual

SIGNED AND DELIVERED BY \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

In the presence of -

Witness -

1. \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

THE COMMON SEAL OF \_\_\_\_\_

\_\_\_\_\_

was hereunto affixed pursuant to the resolutions passed by its Board of Directors at the meeting held on

\_\_\_\_\_

\_\_\_\_\_

In the presence of -

Witness –

1. \_\_\_\_\_
2. \_\_\_\_\_

If the Contractor signs under common seal, the signature clause should tally with the sealing clause in the articles of association.

Directors who have signed these presents in token thereof in the presence of -

1. \_\_\_\_\_
2. \_\_\_\_\_

If the Contract is signed by the hand of power of attorney, whether a company or an individual.

SIGNED AND DELIVERED BY -  
the Contractor by the hand of  
Shri \_\_\_\_\_

\_\_\_\_\_ and duly constituted attorney.



**RESERVE BANK OF INDIA**  
**Estate Department**  
**Bhubaneswar**  
**SECTION – III**

Important instructions for E-procurement

Bidders are requested to read the terms & conditions of this tender before submitting their online tender.

Process of E-tender:

- 1 A) Registration: The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Technical Bid as well as Commercial Bid will be done over the internet. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

**SPECIAL NOTE: THE TECHNICAL BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT [www.mstcecommerce.com/eprochome/rbi](http://www.mstcecommerce.com/eprochome/rbi)**

1).Vendors are required to register themselves online with [www.mstcecommerce.com](http://www.mstcecommerce.com)→ e-Procurement →PSU/Govt depts→ Select RBI Logo->Register as Vendor -- Filling up details and creating own user id and password→ Submit.

2). Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact RBI/MSTC, (before the scheduled time of the e- tender).

**Contact person (RBI):**

Amol Wadhonkar (Asst.Manager): 9594238938 ([arwadhonkar@rbi.org.in](mailto:arwadhonkar@rbi.org.in))

S.P Sahu(Manager-Tech-Electrical):9654946313 ([spsahu@rbi.org.in](mailto:spsahu@rbi.org.in))

**Contact person (MSTC Ltd):**

1. Mr. TDMV Satya Sai – [tsatyasai@mstcindia.co.in](mailto:tsatyasai@mstcindia.co.in) Mobile- 9441487624

2. Mr R Mahesh - [rmahesh@mstcindia.co.in](mailto:rmahesh@mstcindia.co.in) Mobile-8801281004, 0674-2571699

Google hangout ID- (for text chat)- [mstceproc@gmail.com](mailto:mstceproc@gmail.com)

B) System Requirement:

- i) Windows 7 or above Operating System
- ii) IE-7 and above Internet browser.
- iii) Signing type digital signature

- iv) Latest updated JRE 8 (x86 Offline) software to be downloaded and installed in the system.

To disable “Protected Mode” for DSC to appear in The signer box following settings may be applied.

Tools => Internet Options => Security => Disable protected Mode If enabled- i.e, Remove the tick from the tick box mentioning “Enable Protected Mode”.

Other Settings:

Tools => Internet Options => General => Click On Settings under “browsing history/ Delete Browsing History” => Temporary Internet Files => Activate “Every time I Visit the Webpage”.

To enable ALL active X controls and disable ‘use pop up blocker’ under Tools→Internet Options→ custom level (Please run IE settings from the page [www.mstcecommerce.com](http://www.mstcecommerce.com) once)

- 2 The Techno-commercial Bid and the Price Bid shall have to be submitted online at [www.mstcecommerce.com/eprochome/rbi](http://www.mstcecommerce.com/eprochome/rbi) .Tenders will be opened electronically on specified date and time as given in the Tender.

- 3 All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.

Special Note towards Transaction fee:

- 4 The vendors shall pay the transaction fee using “Transaction Fee Payment” Link under “My Menu” in the vendor login. The vendors have to select the particular tender from the event dropdown box. The vendor shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. On selecting Online Payment, the vendor shall have the provision of making payment using its Credit/ Debit Card/ Net Banking. Once the payment gets credited to MSTC’s designated bank account, the transaction fee shall be auto authorized and the vendor shall be receiving a system generated mail.

Transaction fee is non-refundable.

A vendor will not have the access to online e-tender without making the payment towards transaction fee.

NOTE

Bidders are advised to remit the transaction fee well in advance before the closing time of the event so as to give themselves sufficient time to submit the bid.

- 5 Information about tenders /corrigendum uploaded shall be sent by email only during the process till finalization of tender. Hence the vendors are required to ensure that their corporate email I.D. provided is valid and updated at the time of registration of vendor with MSTC. Vendors are also requested to ensure validity of their DSC (Digital Signature Certificate).

- 6 E-tender cannot be accessed after the due date and time mentioned in NIT.

- 7 Bidding in e-tender:

- a) Vendor(s) need to submit necessary EMD and Transaction fees (If ANY) to be eligible to bid online in the e-tender. Transaction fees is non-refundable. No interest will be paid on EMD.
- b) The process involves Electronic Bidding for submission of Technical and Commercial Bid.
- c) The vendor(s) who have submitted transaction fee can only submit their Technical Bid and Commercial Bid through internet in MSTC website

[www.mstcecommerce.com](http://www.mstcecommerce.com) → e-procurement →PSU/Govt depts→ Login under RBI→My menu→ Auction Floor Manager→ live event →Selection of the live event

- d) The vendor should allow running JAVA application. This exercise has to be done immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that click on the Technical bid. If this application is not run then the vendor will not be able to save/submit his Technical bid.
  - e) After filling the Technical Bid, vendor should click 'save' for recording their Technical bid. Once the same is done, the Commercial Bid link becomes active and the same has to be filled up and then vendor should click on "save" to record their Commercial bid. Then once both the Technical bid & Commercial bid has been saved, the vendor can click on the "Final submission" button to register their bid
  - f) Vendors are instructed to use *Attach Doc button* to upload documents. Multiple documents can be uploaded.
  - g) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid.
  - h) During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else.
  - i) The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
  - j) All electronic bids submitted during the e-tender process shall be legally binding on the vendor. Any bid will be considered as the valid bid offered by that vendor and acceptance of the same by the Buyer will form a binding contract between Buyer and the Vendor for execution of supply.
  - k) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.
  - l) RBI reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
  - m) No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any vendor confirms his acceptance of terms & conditions for the tender.
- 8 Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
- 9 No deviation to the technical and commercial terms & conditions are allowed.
- 10 RBI Bhubaneswar has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
- 11 Vendors are requested to read the vendor guide and see the video in the page [www.mstcecommerce.com/eprochome](http://www.mstcecommerce.com/eprochome) to familiarize them with the system before bidding.



**RESERVE BANK OF INDIA**  
**Estate Department**  
**Bhubaneswar**  
**Section IV**

**General Instructions to Tenderers and Special terms and Conditions**

**3.1 Commercial conditions:**

3.1.1 E-Tenders are invited for Design, Supply, Installation, Testing and commissioning of net meter in the HV side and 5 KWp grid interactive Solar Power System for Bank's Main Office Building at an estimated cost of **Rs. 10 lakhs** from eligible firms.

**3.1.2. Eligibility Criteria:**

Online tenders will be allowed to view /download to all firms from 10 AM of February 28, 2020. **The firms which do not comply with the following pre-qualification criteria and do not submit EMD will not be considered for opening of their tender Part-II.**

- The intending tenderer must have 5 years of experience in carrying out grid interactive solar power system installation works for office buildings/commercial premises. The work should have been completed on or before **January 31, 2020**
- The intending tenderer must and have executed successfully **similar works\***, during last five years ending on **January 31, 2020** as under:

(a) Three works each costing not less than the amount equal to 40% of the estimated cost

OR

(b) Two works each costing not less than the amount equal to 50% of the estimated cost

OR

(c) One work costing not less than the amount equal to 80% of the estimated cost.

- Minimum yearly turnover of 100% of the estimated cost during last 3 financial years supported by audited financial statements.

- Should have service setup at Bhubaneswar or in metro cities in the adjoining states.

**\*Similar Works** means - Works of Design, Supply, Installation, Testing and Commissioning of **grid interactive** SPV based Solar Power System.

Tenderers should upload the following documents in respect of their eligibility:

- Copies of detailed work order indicating scope and value of works.
- Completion certificate for the qualifying works.
- List of completed works with all the details.
- Financial statement for turnover for last 3 years

A Tender submitted by a firm who is found to be not satisfying the above criteria will be rejected

### **3.1.3 e-Tender submission:**

The e-Tender shall be prepared and submitted online in two parts, viz., Part I and Part II "Part I – Technical and Commercial" and "Part II – Prices", respectively.

**3.2 Pre-Bid Meeting:** A pre-tender briefing meeting of the intending tenderers will be held at 11:00 hours on March 20, 2020 in Estate Department, RBI, Bhubaneswar to clarify any point/doubt raised by them in respect of the tender. No separate communication will be sent for this meeting. All the intending tenderers are advised to be present and study the tender documents. They may indicate any points/conditions/specifications which need to be clarified during the meeting. These issues will be discussed and all the tenderers will be advised suitably. The tenderers are expected to get all the issues clarified during this meeting and therefore should desist from deviating from the Bank's tender conditions/specifications in their technical (Part I) and Price bids (Part II)

**3.3** The tenders shall be submitted / uploaded till 2 PM on March 30, 2020. No tender will be received/accepted after **2 PM on March 30, 2020** under any circumstances whatsoever.

**3.4 a)** Intending tenderers shall remit as Earnest Money a sum of **Rs. 20,000/- (Rupees Twenty Thousand only)** by a demand draft in favour of Bank of India, payable at

Bhubaneswar drawn on a scheduled bank or NEFT or Bank Guarantee in a form ([Annexure-J](#)) acceptable to the Bank along with Part I of the tender. The Earnest Money Deposit of the successful tenderer shall be held by the Bank as security for the execution and due fulfilment of the Contract. No interest shall be paid on the said deposit. Under no circumstances Earnest Money Deposit will be accepted in the form of fixed deposit receipts or insurance guarantee or cheque or cash. EMD will be released after virtual completion of the work.

b) On receipt of intimation from the Bank of the acceptance of his / their e-Tender, the successful Tenderer shall sign the contract and within fourteen days thereof. The successful Tenderer shall sign an agreement in accordance with the draft agreement and the Schedule of terms and Conditions but the written acceptance by the Reserve Bank of India of e-Tender will constitute a binding contract between the Reserve Bank of India and the person so Tendering whether such formal agreement is or is not subsequently executed.

c) All compensation or other sums of money payable by the contractor to the Bank under the terms of this Contract may be deducted from his earnest money and the security deposit if the amount so permits and the Contractor shall, unless such deposit as become otherwise payable, within ten days after such deduction make good in cash the amount so deducted.

### **3.5 Part I – Technical & Commercial**

3.5.1 Part I shall contain the un-priced tender consisting of complete technical specification including drawings and documents and commercial terms and conditions technical aspects of the tender such as equipment data sheets, tests and inspection, makes of materials, technical description, drawings etc.

3.5.2 Part I of the tender shall form **EMD** and the following:

- a) Power of Attorney/authorisation with the seal of the company/firm in the name of the person signing the e-Tender documents.
- b) List of deviation, if any, in commercial/technical specification.
- c) Detailed proposed **layout drawing** and full equipment details.
- d) A letter from the OEM, authorising the bidder to participate in the e-Tender along with a copy of the agreement with the OEM as regards implementation of similar projects in India and their after sales service.
- e) **Guaranteed DC power generation capacity** of the entire system in KWp.



- f) **Detailed specifications** of each of the offered items such as SPVs, Arrays, PCUs, control panels, control & monitoring systems, cables etc. matching with the specifications contained under this contract along with manufacturer's catalogue / product brochure. If there are some variations in specifications and dimensions of the equipments / products as contained under the manufacturer's catalogue / product brochures Vis-a via those given under the specifications contained under this e-Tender document, the specifications and dimensions given in this e-Tender document shall prevail.
- g) **Complete technical details** and any special features proposed for incorporation must be given for full technical evaluation. Supporting documents for the claimed facilities/ features shall also be attached while submitting the technical bid.
- h) **Product support for twenty-five (25) years shall be given.** Tenderer shall specifically indicate the product support offered against this e-Tender & submit an undertaking in this regard. ([Annex.- C](#) & [D](#))
- i) The e-Tenderer should have maintenance set-up at Bhubaneswar or in any metro city in the adjoining states. Address & telephone / fax nos. of maintenance set-up shall be indicated.
- j) Technical data sheet as given under [Annexure-A](#) shall be filled up giving full information.
- k) Other Certificates / Declarations as per Annexures enclosed to be submitted.
- l) Duly filled in and signed copies of client's reports (from two clients in the attached format, for whom similar works is executed) and Banker's certificate in separately sealed envelopes.

3.5.3 Tenderers are advised to visit the site of installation and acquaint themselves of the site conditions before Tendering.

3.5.4 The Tenderers are advised to submit the e-Tender based strictly on the General Conditions of the Contract and Technical Specifications contained in the e-Tender documents, and not to stipulate any deviations. If acceptance of the terms and conditions given in the e-Tender documents has any price implications, the same should be considered and included in the quoted price. **Any Tender containing deviation from the terms and conditions is liable for rejection.**

3.5.5 The e-Tenderers shall submit full details of the patent, trade mark, registered design, intellectual property rights, copy rights, industrial property rights held by them or used by them of any third party with regard to design or any part of the system.

3.5.6 All information, correspondence letters shall be addressed to **The Regional Director, Reserve Bank of India, Estate Department, Bhubaneswar.**

### **3.6 Part II - Price**

Part II – “Price bid”, supplied along with the e-Tender.

- (a) This part shall contain prices in Indian Rupees only with break-up of price as per format (Part II). No other enclosure is permitted in Part II. Change of terms and conditions and technical deviations, if any, found in Part II of the e-Tender will not be taken into account and will be treated as null and void.
- (b) The Tenderer must use only the forms issued by the Bank to fill in the rates. The e-Tender form must be filled in English and all entries must be made by hand and written in ink. If any of the documents is missing or unsigned, the e-Tender may be considered invalid by the Bank in its discretion.
- (c) No request for any change in rate or conditions after the opening of the part II of the e-Tender will be entertained.
- (d) The rates quoted shall be deemed to be for the finished work and shall be firm and binding without any escalation whatsoever till the system is handed over to the Bank.
- (e) For any item, if the rate and amount do not tally with respect to the quantity, then the amount arrived on the basis of quoted rates shall only be acceptable and in case of variation of rates in figures and words, the rate quoted in words will only be considered for arriving at the total amount for that item.

### **3.8 Opening of e- Tender**

Part I of the e-Tenders will be opened on **March 30, 2020 at 3:00 PM** in the presence of e-Tenderers. Price bid (Part II) of only those e-Tenderers who are found eligible after scrutiny of their Part I of the Tenders will be opened on a subsequent working day which will be intimated to all the eligible Tenderers. The Tenderers are advised to remain present during the opening of Part I and Part II of the e-Tenders.

### **3.9 Brief Scope of Work**

3.9.1 The scope of work shall include the following.

- Design and Delivery of all equipment's, materials for the captioned work to Bank's site at Bhubaneswar including insurance, packing, handling, transporting, loading / unloading etc. at site.
- Erection, Testing, Commission of Solar Power System including net-metering and handing over the system to Bank.
- Providing regular Inspection and Upkeep of system inclusive of periodic service etc.
- Approval, if any, of local statutory authorities for connection to the grid.

3.9.2 The Tenderer should indicate the complete description of the working of the system / sub systems and their power requirements with all relevant brochures/literature etc. in addition to those called for in the Technical Specifications:

3.9.3 The Tenderer shall carefully check the specifications and shall satisfy himself that the equipment offered is suitable as per the Bank's Technical Specifications.

3.9.4 Tenderer shall supply all tools, plants, scaffolding, labour and consumables etc as required for installation, testing and commissioning of the system.

### **3.10 Validity of e-Tender**

The e-Tender along with the prices shall remain valid initially for a period of 90 days from the date of opening of Part I of e-Tender, which period may be further extended by mutual agreement in writing by the Tenderer and the Tenderer shall not cancel or withdraw the e-Tender during this period.

### **3.11 Lowest e-Tender Not Necessarily to Be Accepted**

3.11.1 The Bank is not bound to accept the lowest or any e-Tender or to assign any reason for non-acceptance.

3.11.2 The Tenderers shall not be entitled to claim any costs, charges, damages and expenses of and incidental to or incurred by him through or in connection with his submission of e-Tenders, even though the Bank may elect to modify/withdraw the e-Tender.

### **3.12 Earnest Money, Security Deposit & Security during Defect liability period**

3.12.1 All Tenderers shall deposit Earnest Money of **Rs. 20,000/-** by a demand draft issued by a scheduled Public Sector Bank drawn in favour of Reserve Bank of India, payable at Bhubaneswar, from any Scheduled Bank. The Earnest Money Deposit (EMD) is also acceptable in the form of Bank Guarantee in the approved

format or through NEFT **transfer to A/C No-186004001, Reserve Bank of India, IFSC Code-RBIS0BBPA01 (fifth and tenth character is zero), Branch Name – Bhubaneswar, Branch Address –Pt. J. L. Nehru Marg, Bhubaneswar – 751001.** The EMD paid by the e-Tenderer shall be held by the Reserve Bank of India initially valid for 4 months, shall remain un-discharged for such period as may be specified for keeping the tender open. No interest shall be paid on the said deposit. Under no circumstances, Earnest Money Deposit will be accepted in the form of fixed deposit receipts or insurance guarantee or cheque or cash.

The EMD paid by the tenderer shall be held by the Reserve Bank of India as security for the execution and due fulfilment of the Contract. No interest shall be paid on the said deposit. Under no circumstances, Earnest Money Deposit will be accepted in the form of fixed deposit receipts or insurance guarantee or cheque or cash. EMD of successful bidder will be released after virtual completion of the work & submission of Bank Guarantee of 10% of the contract value as Security as mentioned in clause No. 3.12.3. The EMD of unsuccessful tenderer shall be released on acceptance of the tender.

3.12.2 All compensation or other sums of money payable by the Contractor to the Bank under the terms of this Contract may be deducted from the security deposit, if the amount so permits unless the contractor deposits such amounts in cash within ten days of issue of demand notice by the Bank.

3.12.3 The tenderer shall furnish a separate **Bank guarantee of 10% of the contract value as Security** for due fulfilment of terms and **obligation of defects liability period and Comprehensive Maintenance Contract** from the date of commissioning and handing over of the works as specified in the tender to the Bank at the time of submission of final bill. The Bank Guarantee must be valid for five years from the date of virtual completion of the project. After five years, the amount of Bank guarantee will be reduced by fifty percent (50%) of initial value and shall remain valid for next five years.

### 3.13 **Terms of Payment**

The payment for the works to be executed under this contract shall be made as follows subject statutory deductions. No variation in the mode of payment will be acceptable.

- 1) 95% of the quoted rates (for item No.1 in Price bid) after receipt of the material at site, erection, installation, commission and testing and on submission of the following documents:
  - a) Manufacturer's Inspection and Test Certificates
  - b) Contractor's Certificate that all components, parts, sub-systems, consumables etc. for successful installation, commissioning and testing of the systems including maintenance have been received at site in good condition and if any shortfall is noticed during installation, commissioning and testing they will be supplied free to the Bank.
  - c) Policies of insurance covering all the risk during transit, storage, installation, commissioning & handing over including third party liabilities as per e-Tender conditions.
- 2) Balance 5% of the quoted rates after handing over of the entire system and submission of BG as per clause 3.12.3.

### **Payment of Comprehensive Annual Maintenance**

The pro-rata payment against all-inclusive upkeep & Maintenance contract shall be made half yearly on submission of the bill towards the same after completion of satisfactory services and on confirmation of the committed production of power along with required tests/reports.

### **3.14 Taxes and Subsidy**

3.14.1 The prices quoted shall include all applicable taxes, custom duty, excise duty, local levies; works contract tax, service tax, Goods and Services Tax (GST) etc. as imposed by Central/State Government/ Local Bodies. If the Tenderer fails to include such taxes and duties in the tender, no claim thereof will be entertained by the Bank afterwards. Statutory deductions like income tax etc. as applicable shall be made at source and a certificate for the same will be issued to the contractor. Bank doesn't intend to avail any subsidy for this project. Therefore, the prices are to be quoted accordingly.

### 3.15 Insurance

The contractor shall, within 10 days from the date of issue of work order, insure the works at his cost and keep them insured until the virtual completion of reworks, against loss or damage by fire with an office in the joint names of the Bank and the contractor **(the name of the former i.e. RBI being placed first in the policy)** for the full amount of the contract. Such policy shall cover the property of the "Bank" only. The contractor shall deposit the policy and receipts for the premium with the Bank within 10 days from the commencement of the works. In default of the contractor, insuring as provided above, the Bank may so insure the works and may deduct the premium paid from any moneys due, penalty etc., or which may become due to the Contractor without prejudice to the other rights of the Bank in respect of such default. In case it becomes necessary to suspend the works, the Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office, should they elect to do so, proceed with all due diligence with the completion of the works in same manner as though the fire had not occurred and in all respects under the same conditions of Contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as deems fit.

The contractor shall take all insurances at his cost to cover all kinds of risks from the time the equipment's/materials leave the manufacturer's works till handing over the said system to the Bank, in the joint names of the Bank and the contractor and it shall cover the following risks.

- Storage, erection, testing and commissioning policy.
- Workmen compensation policy for the employees of the contractor at site.
- Third party liability policy for a total of Rs. 10 lakhs.

**Note:** These policies shall be valid till the completion of the work & in the joint name of RBI with RBI's name being the first one. If the contractor does not provide these policies, the Bank reserves the right to take the above insurance policies themselves and recover the cost thereof from the bill of the contractor or any other action.

### 3.16 **Completion Period**

3.16.1 Time allowed for carrying out the work, as mentioned in the Memorandum, shall be strictly observed by the Contractor and it shall be reckoned from the 10<sup>th</sup> day after written order to commence the work is issued.

#### 3.16.2 **Damages for non-completion**

The work shall throughout the stipulated period of the contract be preceded with all the diligence and if the contractor fails to complete the work within the specified period, he shall be liable to pay liquidated damages as defined in "Appendix herein before referred to" the contract at the rate **@ 0.25% of contract value per week** for the period during which the said works shall so remain incomplete subject to a maximum of 10% of the contract amount and the Bank may deduct such damages from any money due to the Contractor.

3.16.2 The contractor shall submit a Bar Chart for completion of the work within the contractual completion period from the tenth day of letter of intent. Such chart shall include all activities like the date of supply of material at site, item wise completion of work etc., and obtain the approval of the Bank.

3.16.3 Bank will provide storage space within the compound of the building. However, the responsibility and safety of the materials stored will be with the contractor. No accommodation will be provided for any worker by the Bank.

#### 3.17.1 **Warranty/ Defects Liability Period (DLP).**

3.17.2 (a) The entire system shall be warranted against any manufacturing/design/ installation defects etc. for a period of one year. During this period any defect observed in the system shall be rectified within 2 days of the observation without any additional cost to the Bank.

(b) Supply and replacement of all spares, consumables and parts required for smooth operation and serviceability of the system shall be the responsibility of the contractor during this period. In this respect the contractor shall maintain sufficient spares/consumables for immediate replacement of defective / damaged part during day-to-day routine maintenance / breakdown maintenance. Cost of these spares and any other spares which may be required during maintenance is deemed to be included in the rates quoted by the contractor. The periodicity of service shall be quarterly or more depending upon the weather conditions.

**(c) Penalty for delay in rectification of fault during DLP:**

There will be a penalty of Rs.200/- per day subject to maximum of 10% of the annual maintenance charges, if the defect in the system is not rectified within the period of 2 days during the DLP period. Any penalty during the DLP shall be recovered from any dues payable to the contractor or invoke from the bank guarantee.

3.17.3 PV modules used in solar power systems / systems 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 under standard test conditions.

**3.17.4 Compensation for Reduced Generation during initial 10 years:**

As mentioned under the foregoing paragraphs, the successful Tenderer is required to commit a guaranteed average annualized energy of specified KWH per year at synchronization point. Failure to do so will make the contractor liable to pay compensation at double the rate of the prevailing tariff of Electricity supply Agency for shortfall of every KWH or part thereof of the power generated.

Penalty shall be derived as per the following formula:

$$\begin{aligned} \text{Actual output for the year under reference} &= A \text{ (KWh)} \\ \text{Guaranteed output of the system as per the contract} &= B \text{ (KWh)} \\ \text{Compensation to be paid to RBI in case of reduced generation (Rs)} &= (B-A) \times (\text{Tariff} \times 2) \end{aligned}$$

**3.18. Comprehensive Annual Maintenance Service Contract (CAMSC) after DLP period**

(a) The Tenderers shall quote their charges separately for comprehensive annual maintenance service of complete system as per schedule of quantities which will be applicable after one year of defect liability period (DLP). The rates shall also include the charges for the insurance of the workmen for carrying out the above job and GST for maintenance shall be quoted in respective column in the BOQ.

(b) The system shall be inspected, upkeep/serviced/cleaned periodically. The periodicity shall be **quarterly or earlier** depending upon the weather conditions.



(c) The charges for comprehensive annual maintenance service shall include replacement of any part of the system, including all required spares, consumables etc. during service contract period. Any defects in the system/sub-assemblies, found within the AMC period, shall be rectified / replaced by the Tenderer without any additional cost to the Bank

**(d) Penalty for delay in rectification during CAMC:**

During the comprehensive annual maintenance service period (after DLP period), any fault in the system shall be rectified within 2 days of receipt of intimation of the defect in the system. The quoted rates shall, therefore, take into account all the cost, including travel cost from the nearest service station. There will be a penalty of **Rs.200/- per day subject to maximum of 10% of the annual maintenance charges**, if the defect in the system is not rectified within the period of 2 days during the AMC period as stated above. Any penalty during the DLP shall be recovered from any dues payable to the contractor or invoke from the bank guarantee.

**(e) Payment of service charges during comprehensive annual maintenance service (CAMC):**

The payment during the CAMS period shall be **made on half yearly basis** on rendering satisfactory service.

(f) The service contract shall be renewed for a further additional period of at least 8 years after the initial annual service contact period of one year after one-year warranty. While renewing the contract the new contract amount will be arrived at based on following formula:

$AC = AP [(15+60x(EPIC/EPIP) + 25x(CPIC/CPIC))] \times 100$	
AC	The contract amount for the current year.
AP	The contract amount for the previous year.
EPIC	Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the current year.
EPIP	Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the previous year.
CPIC	Consumer Price Index for Industrial Workers (All India

	Average) 6 months prior to the commencement date of contract for the current year.
CPIP	Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the previous year.

The successful Tenderer shall enter into an agreement for comprehensive annual maintenance contract of the system with the Bank.

### 3.19 **Packing and Despatch**

The equipment shall be properly and securely packed in boxes and multiple handling and transportation by sea/ air / rail / road under Indian conditions. All equipment/components shall be delivered at the Bank's office building, Bhubaneswar.

### 3.20 **Signing of Contract Agreement**

The General instructions to the Tenderers and special conditions, conditions hereinbefore referred to Conditions of Contract and Technical Specifications and drawings enclosed with the e-Tender documents, the subsequent correspondence exchanged between the Bank and the Tenderer and the work order placed shall be the basis of the final contract to be entered into with the successful Tenderer.

- 3.20.1 The Tenderer shall go through the terms and conditions given in the general conditions of contract herewith and his offer shall be strictly in line with the terms specified therein. No deviation from the terms and conditions specified shall be acceptable. Each page of the e-Tender documents should be signed for his/their having acquainted himself/themselves in the general conditions of contract, Technical specifications, etc.
- 3.20.2 The e-Tender submitted on behalf of a firm shall be signed by all the partners of the firm or a partner who has the necessary authority on behalf of the firm to enter into the proposed contract. Otherwise the e-Tender may be rejected.
- 3.20.3 On receipt of intimation from the Bank of the acceptance of his/their e-Tender, the successful Tenderer shall be bound to implement the Contract and within fourteen days thereof, the successful Tenderer shall sign an agreement in accordance with the draft agreement. Notwithstanding the signing of the agreement the written

acceptance by the Reserve Bank of India of a e-Tender in itself will constitute a binding agreement between the Reserve Bank of India and the person so e-Tendering, whether such contract is or is not subsequently executed.

3.20.4 The contractor shall not assign the contract. He shall not sublet any portion of the contract except with the written consent of the Bank. In case of breach of these conditions, the Bank may serve a notice in writing on the Contractor rescinding the contract whereupon the security deposit shall stand forfeited to the Bank, without prejudice to his other remedies against the Contractor.

### 3.21 **Sufficiency of Schedule of Quantities**

The Contractor shall be deemed to have satisfied himself before e-Tendering as to the correctness and sufficiency of his e-Tender for the works and of the prices stated in the Schedule of Quantities and/or the Schedule of Rates and Prices which rates and prices shall cover all his obligations under the Contract, and all matters and things necessary for the proper completion of the works.

3.21.1 The quantities in the schedule of quantities approximately indicate the total extent of work but may vary to any extent and even be omitted thus altering the aggregate value of the contract.

### 3.22 **Language**

The e-Tender including all labels in drawings, documents, catalogues etc. shall be in English.

### 3.23 **Right to Accept Part e-Tender**

The Bank reserves the right to accept the e-Tender either in whole or in part at the same prices quoted by the Tenderer.

### 3.24 **Evaluation of e-Tender**

e-Tenders will be evaluated on the basis of capital cost of the system and taking into account the effect of comprehensive annual maintenance service charges (CAMSC) for 09 years and one-year DLP. e-Tenders will, therefore, be evaluated

based on the total owning cost for 10 years which will be arrived at as under using the below formula:

Total owing cost = Quoted capital cost + NPV of service contract charges for 9 years = Quoted capital cost + Quoted charges for Comprehensive maintenance service contract per annum x Multiplying Factor (MF)

(MF = 7.0476)

For calculating the NPV of service contract charges, the following factors have been applied:

(a)	Increase (Escalation)	5% per annum
(b)	Discount factor	8% per annum
(c)	Period of contract	10 years from the date of handing over of the system.
(d)	Payment terms for annual maintenance contract.	Half yearly payment after satisfactory completion of service

### 3.25 Pre-dispatch Inspection

Before dispatching the equipment to site, the equipment, will be inspected at the discretion of the Bank and tested for various parameters by the Bank's Engineers at the manufacturer's works and then cleared for shipment. This will however, not in anyway absolve the contractor of his responsibility for the continued performance of the system/components after erection & commissioning at the designated site during the period of defects liability.

### 3.26 Drawings

All required drawings for equipment lay out viz: layout of PV panels, interconnection with Power conditioning units etc., should be prepared by the Tenderer and submitted to the Bank's engineer for approval before commencement of work.

### 3.27 Other Issues

The Contractor shall carry out all the work strictly in accordance with the approved drawing, detailed specifications and instructions of the Bank's engineer. If in the opinion of the Bank's engineer/consultant, nominal changes have to be made to suit the site

condition and with the prior approval in writing of the Bank, the Contractor shall carry out the same without any extra charge.

3.28 The Tenderer are requested to examine the drawings, inspect the site of the work, and acquaint himself with all local conditions, means of access to the work, nature of the work etc. before submission of e-Tender.

3.29 A Schedule of Probable Quantities in respect of each work and Specifications accompany these Special Conditions. The Schedule of Probable Quantities is liable to alteration by omissions, deductions or additions at the discretion of the Bank. Each e-Tender should contain not only the rates but also the value of each item of work entered in a separate column and all the items should be totalled in order to show the aggregate value of the entire e-Tender.

3.30 The rates quoted in the e-Tender shall include all charges for scaffoldings, watching and lighting by night as well as day including Sundays and holidays, protection of all other erections, matters or things and the Contractor shall take down and remove any or all such centring, scaffolding etc. as occasion shall require or when ordered so as to do, and fully reinstate and make good all matters and things disturbed during the execution of work and to the satisfaction of the Bank.

3.31 The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works. The Bank does not accept liability for any sum besides the e-Tender amount, subject to such variations as are provided for herein.

3.32 The successful Tenderer is bound to carry out all items of work necessary for completion of the job even though such items are not included in the quantities and rates. Schedule of instruction in respect of such additional items and their quantities will be issued in writing by the Bank.

3.33 **Minimum wages/ Gratuity act / contract labour Act to the workmen:** The contractor shall ensure that minimum wages/ gratuity as per statutory requirement are paid to all the workmen.

3.34 **Labour License:** The contractor shall adhere to various provisions of the Contract Labour (Regulation & Abolition) Act 1970, if applicable under the said contract, and fulfil all the statutory requirements.

3.35 The successful Tenderer must co-operate with the other contractors appointed by the Bank so that the work shall proceed smoothly with the least possible delay.

Date:

Signature of the firm

Place:

(By a person holding the Authority/Power of attorney)

**Section (V)**  
**Safety Code**

1. First-aid appliances, including adequate supply of sterilized dressings and cotton wool, shall be maintained in a readily accessible place.
2. The injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalisation.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length, the width between the side rails not less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of the trench, whichever is more. All trenches and excavations shall be provided with necessary minimum height shall be one metre.
6. Every opening in the floor of a building or a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one metre.
7. No floor, roof or other part of the structure shall be so over-loaded with debris or materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
10. No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
11. Suitable face masks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
12. Hoisting machines and tackles used in the work, including their attachments, anchorage and supports shall be in perfect condition.
13. The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.

## FIRE SAFETY

- i. Cutting / drilling machine and other electrically operated equipments used at site shall be plugged into correctly rated electrical outlets.
- ii. Only ISI marked 3 pin plug and other appliances and equipments shall be used.
- iii. Electrical power cables/wires used shall not have any joints and shall be properly rated.
- iv. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and securely earthed to prevent leakage current while in operation.
- v. Before commencing the welding work for the first time on any day, fire section shall be informed and only after the site inspection by the Fire officers/Personnel, work shall be started.
- vi. Two buckets of water and sand shall be kept in an easily accessible area on the site.
- vii. Fire extinguishers recommended and issued by fire officers shall be kept on the site.
- viii. Used paint drums shall be stored in specified store only after closing them properly.
- ix. Personal protective equipments such as safety shoes, hand gloves, welder's mask, ear plug etc. depending upon the requirement of the work shall be provided by the contractor to the workmen to prevent occupational health hazards.
- x. The safety belt shall be provided by the contractor and used by the workmen while working from height for more than 10' from Ground level.
- xi. None of the passages near lift lobby and staircases shall be used for stacking / dumping any kind of materials/waste.
- xii. Both the staircase doors shall be normally kept closed.
- xiii. None of the fire extinguishers shall be removed/shifted from its designated location.
- xiv. Power supply shall be switched off from the mains when equipment is not in use.
- xv. Wood-shavings and saw-dust generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
- xvi. Any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
- xvii. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

Place:

Date:

Seal & Signature of the Tenderer.





**RESERVE BANK OF INDIA**  
**Estate Department**  
**Bhubaneswar**

**Section-VI**

**The Conditions Hereinbefore Referred To**

1. In constructing these conditions, the specification, schedule of quantities and Contract Agreement, the following words shall have the meaning herein assigned to them except where subject or context otherwise requires.

- a) "Bank" Shall mean the Reserve Bank of India and shall include its assignees and successors.
- b) In the case of company "Contractor shall mean \_\_\_\_\_ a company incorporated under \_\_\_\_\_ and having its registered office at \_\_\_\_\_ and shall include its successors and assigns.
- c) "Site" Shall mean the site of the contract works including any building and erection thereon and any other land (inclusively) as aforesaid allotted by the Bank for the Contractor's use.
- d) "This Contract" Shall mean the Article of Agreement, the special conditions, the conditions, the Appendix, the schedule of quantities and specifications attached hereto and duly signed.
- e) "Notice in writing" Shall mean a notice in written, typed or printed or written notice" characters sent (unless delivered personally otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.
- f) "Act of Insolvency" Shall mean any Act of insolvency as defined by the Presidency Town Insolvency Act, or the provincial insolvency Act or any Act amending such original Act.
- g) "Net Prices" If in arriving at the contract amount the Contractor

shall have added to or deducted from the total of items in the e-Tender any sum, either as a percentage or otherwise, then net price of any item in their e-Tender shall be the sum arrived at by adding to or deducting from the actual figures appearing in the e-Tender as the price of that the item a similar percentage or proportionate sum provided always that in determining the percentage or proportion of the sum so added or deducted by the Contractor the total amount of the any Prime Cost items and provisional sums of money shall be deducted from the total amount of the e-Tender. The expression "net rates" or "net prices" when used with reference to the contract or account shall be held to mean rates or prices so arrived at.

h) "The works" Shall mean e-Tender for design, supply, installation, testing and commissioning of net meter on HV side and 5 KWp grid interactive solar plant at Main office building.

2. **Scope of Contract**: The contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of the Bank's Engineer. The Bank's Engineer may in his absolute discretion and from time to time issue further drawings and/or written instructions, details, direction and explanations which are hereafter collectively referred to as "Bank's Engineer's instruction in regard to":

- a) The variations or modifications of the design, quality or works or the addition or omission or substitutions of any work.
- b) Any discrepancy in the Drawing or between the Schedule of Quantities and/or Drawing and/or specifications.
- c) The removal from the site of any materials brought thereon by the contractor and the substitution of any other material therefor.
- d) The removal and/or re-execution of any works executed by the contractor.
- e) The dismissal from the works of any persons employed thereupon.
- f) The opening up for inspections of any work covered up.
- g) The amending and making good of any defects under clause 20 hereof.

The contractor shall forthwith comply with and duly execute any work comprised in such Bank's Engineer's instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the works by the Bank's Engineer shall, if involving a variation, be confirmed in writing by

the Contractor within seven days, such shall be deemed to be Bank's instructions within the scope of the Contract.

The contractor shall submit a statement of variations giving quantity and rates duly supported by analysis of rates, vouchers etc. The rates on scrutiny and final acceptance by the Bank shall form a supplementary e-Tender. The Bank shall not be liable for payment of such variations until these statements are sanctioned by him.

3. The Contract shall be executed in triplicate and the Bank's Engineer, the Bank and the Contractor shall be entitled to one executed copy each for his use. The contractor shall prepare the line diagram, system configuration drawing and Lay out plan of the site for carrying out the work. Before the issue of the final certificate to the Contractor he shall submit to the Bank's Engineer all Drawings and Specifications.
4. The Contractor shall provide at his cost everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Schedule of Quantities and specifications taken together, whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of quantities and Specifications, he shall immediately and in writing refer the same to the Bank's Engineer, who shall decide which is to be followed.
5. **Authorities, notices and patents:** The Contractor shall conform to the provisions of any Act of the Legislature relating to the works, and to the regulations and bye-laws of any authority, and of any water, electricity supply and other companies and/or authorities with whose system the structure is proposed to be connected, and shall, before making any variations from the Drawings or Specifications that may be necessitated by so conforming, give to the architect written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case the Contractor shall not within ten days receive such instructions he shall proceed with the work conforming to the provisions, regulations, or bye-laws in question, and any variation so necessitated shall be dealt with under clause 17 hereof.

The contractor shall bring to the attention of the Bank all notices required by the said Acts, regulations or bye-laws to be given to any authority and pay to such authority or to any public office all fees that may be properly chargeable-in respect of the works and lodge the receipts with the Bank.

The Contractor shall indemnify the Bank against all claims in respect of patent rights, and shall defend all actions arising from such claims and shall himself pay all royalties, license fees, damages cost and charges of all and every sort that may be legally incurred in respect thereof.

6. **Setting out of work**: The contractor shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions levels, dimensions and alignment of all parts thereof. If at any time any error in this respect shall appear during the progress of the works or within a period of one year from the completion of the works, the Contractor shall, if so required, at his own expense rectify such error to the satisfaction of the Bank's Engineer.
7. **Materials and Workmanship to conform to description**: All materials and workmanship shall so far as procurable be of the respective kinds described in the Schedule of Quantities and/or specifications and in accordance with the contract and the Contractor shall furnish to the Bank with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials.
8. **Contractor's superintendence and representative on the works**: The Contractor shall give all necessary personal superintendence during the execution of the works and so long thereafter as the Bank may consider necessary until the expiration of the "Defects Liability Period" stated in the Appendix hereto. The contractor shall, also during the whole time the works are in progress employ a competent representative who shall be constantly in attendance at the works while the men are to work. Any directions, explanations, instructions or notice given by the Bank's Engineer to such representative shall be held to be given to the Contractor.
9. **Dismissal of workmen**: The Contractor shall on the request of the Bank's Engineer immediately dismiss from the works any person employed thereon by him who may, in the opinion of the Bank's Engineer, be incompetent or misconduct himself and such persons shall not be again employed on the works without the permission of the Bank's Engineer.
10. **Access to works**: The Bank, shall at all reasonable times, have free access to the works and/or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall give every facility to the Bank necessary for Inspections and examination and test of the materials and workmanship. No person not authorized by the Bank except the representatives of public authorities shall be allowed on the works at any time.
11. **Bank's Engineer**: The term Bank's Engineer shall mean the person appointed and paid by the Bank to inspect the works. The Contractor shall afford the Bank's Engineer every facility and assistance for inspecting the works and materials and for checking and measuring time and materials.

The Bank's Engineer, or the Bank shall have power to give notice to the Contractor or to his representative of non-approval or any work or materials and such work shall be suspended or the use of such materials shall be discontinued. The work will from time to time be examined by the Assistant Manager (Tech.) but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at a stage of the works or after the same is completed. Subject to the limitations of this clause the Contractor shall take instructions only from the Bank's Engineer.

12. **Assignment and Subletting**: The whole of the works included in the Contract shall be executed by the Contractor and the contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part share thereof.

13. No alteration, omission or variation shall vitiate this contract but in case the Bank's Engineer thinks proper at any time during the progress of the works to make any alterations in, or addition to, or omissions from the works or any alteration in the kind of quality of the materials to be used therein and shall give notice thereof in writing under his hand to the Contractor, the Contractor shall alter, add to, or omit from, as the case may be, in accordance with such notice, but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the Contract. Stipulations, specifications or Contract Drawings without the previous consent in writing of the Bank and the value of such extras alterations, additions or omission shall, in all cases, be determined by the Bank in accordance with the provisions of Clause 17 hereof, and the same shall be added to, or deducted from the Contract Amount, as the case may be accordingly.

14. **Schedule of Quantities**: The Schedule of quantities, unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Method of Measurement.

Any error in description or in quantity or in omission of items from the schedule of quantities shall not vitiate this contract but shall be rectified and the value thereof, as ascertained under Clause 17 hereof, shall be added to, or deducted from the Contract Amount (as the case may be) provided that no rectification of errors, if any, shall be allowed in the Contractor's schedule of rates.

15. **Sufficiency of Schedule of Quantities**: The Contractor shall be deemed to have satisfied himself before e-Tendering as to the correctness and sufficiency of his e-Tender for the works and of the prices stated in the Schedule of Quantities and/or the schedule of rates and prices which rates and prices shall cover all his obligations under the contract, and all matters and things necessary for the proper completion of the works.

16. **Measurement of works:** The Bank's Engineer may, from time to time, intimate to the contractor that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified agent to assist Assistant Engineer in taking such measurements and calculations and to furnish all particulars or to give all assistance required by any of them.

Should the Contractor not attend or neglect or omit to send such agent then the measurement taken by the Bank's Engineer or a person approved by him shall be taken to be correct measurement of the works. Such measurements shall be taken in accordance with the Mode of Measurements detailed in the Specifications.

The Contractor or his Agent may at the time of measurement take such notes and measurement as he may require.

All authorized extra works, omissions and all variations made with the prior approval in writing of Bank shall be included in such measurements.

17. **Prices for extra:** The Contractor may, when authorized and shall, when directed, in writing by the Bank, add to, omit from or vary the works shown upon the drawings, or described in the specification, or included in the schedule of Quantities, but the contractor shall make no addition, omission or variation without such authorization or direction. A verbal authority or direction by the Bank's Engineer shall, if confirmed by them in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed under provisions of clause above hereof with the concurrence of the Bank herein mentioned. Any such extra in herein referred to as authorized and shall be made in accordance with the following provisions.

(a) (i) The net rates or prices in the original e-Tender shall determine the valuation of the extra work where such extra work in similar character and executed under conditions as the work priced therein.

(ii) Rates for all items, wherever possible should be derived out of the rates given in the priced Schedule of Quantities.

(b) The net prices of the original e-Tender shall determine the value of items omitted provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under sub-clause(c) hereof.

(c) Where the extra works are not of similar character and/or quoted under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omissions or additions relative the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Bank's engineer, the net rate or price contained in the priced Schedule of Quantities or e-Tender or for any item of the works involves loss or expenses beyond that reasonably contemplated by the contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Bank's Engineer shall fix such other

rate or price as in the circumstances he shall think reasonable and proper, with the prior approval in writing of the Bank.

- (d) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work prices as the net rates stated in the e-Tender or the Priced Schedule or Quantities or, if not so stated, then in accordance with the local day work rates and wages for the district provided that in either case vouchers specifying the daily time (the workmen's names) and materials employed be delivered for verification to the Bank's Engineer at or before the end of the week following that in which the work has been executed plus 15% towards establishment charges, contractor's overhead and profits.

The measurement and valuation in respect of the Contract shall be completed within the "period of final measurements" stated in the Appendix or if not stated then within six months of the completion of the Contract works as defined in Clause 21 hereof.

**18. Unfixed materials when taken into account to be the property of the Bank**

Where in any certificates (of which the Contractor has received payment) the Bank's Engineer has included the value of any unfixed materials included for and/or placed on or adjacent to the works such materials shall become the property of the Bank and they shall not be removed except for use upon the works, without the written authority of the Bank. The Contractor shall be liable for any loss of, or damage to, such materials.

19. **Removal of improper work** : The Bank shall, during the progress of the works, have power to order in writing from time to time the removal from the works within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Bank's Engineer are not in accordance with the Specifications, the substitutions of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings & specifications or instructions and the contractor shall forthwith carry out such order at his own cost. In case of default on the part of Contractor to carry out such order, the Bank shall have the power to employ any pay other persons to carry out the same; and all expenses consequent thereon, or incidental thereto, shall be borne by the Contractor, or may be deducted by the Bank from any moneys due, or that may become due, to the Contractor.

20. **Defects after virtual completion** : Any defect, shrinkage, settlement or other fault which may appear within the "Defects Liability Period" stated in the Appendix hereto, or, if none stated them within twelve months after the virtual completion of the works, arising in the opinion of the Bank from materials of workmanship not in accordance with the contract, shall upon the direction in writing of the Bank, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost and in case of default the Bank may employ and pay

other persons to amend and make good such defects, shrinkage settlements or other faults, and all damages loss and expenses consequent thereon are incidental thereto shall be made good and borne by the Bank or may be deducted by the Bank, upon the Bank's Engineer's Certificate in writing, from any money due or that may become due to the Contractor, or the Bank may in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum, to be determined by the Bank equivalent to the cost of amending such work and in the event of the amount retained under clause 32 hereof being insufficient, recover the balance from the Contractor, together with any expenses the Bank may have incurred in connection therewith. Should any defective work have been done or materials supplied by any sub-contractor employed on the works who has been nominated as provided under clause 12 and 22 hereof, the contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subject to the provision of this clause 2 hereof. The contractor shall remain liable under the provisions of this clause the signing of any certificate or the passing of any accounts by the Bank.

21. **Certificate of virtual completion and defects liability period:** The works shall not be considered as completed until the Bank's Engineer has certified in writing that they have been virtually completed. The defects liability period shall commence from the date of such certificates.

22. **Nominated Sub-Contractor:** All Specialists, Merchants, Tradesmen and others executing any work of supplying and fixing any goods for which the prime cost prices or provisional sums are included in the Schedule of Quantities and/or Specifications who may be nominated or selected by the Bank or hereby declared to be sub-contractors employed by the contractor and are herein referred to as nominated sub-contractors.

No nominated sub-contractors shall be employed on or in connection with the works against the Contractor shall make reasonable objection are (save where the Architect and the Contractor shall otherwise agree) who will not enter into contract providing.

- (a) That the nominated sub-contractor shall indemnify the contractor against the same obligation in respect of the sub-contract as the contractor is under in respect of this contract.
- (b) That the nominated sub-contractor shall indemnify the contractor against claims in respect of any negligence by the sub-contractors his servants or agents or any misuse by him or them or any scaffolding or other plant, the property of the Contractor or under any Workmen's Compensation Act in force.
- (c) Payment shall be made to the nominated sub-contractor within fourteen days of his receipt of the Bank's Certificate provided that before any Certificate is issued the Contractor shall upon request furnish to the Bank proof that all nominated sub-contractors accounts included in previous certificates have



been duly discharged; in default whereof the Bank may pay the same upon a Certificate of the Bank and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create private of contract as between Bank and Sub-Contractor.

23. **Other persons employed by Bank**: The Bank reserves the right to use premises and any portion of the site for the execution of any work not included in this Contract which it may desire to have carried out by other persons, and the Contractor shall allow all reasonable facilities for the execution of such work but shall not be required to provide any plant or material for the execution of such work except by special arrangement with the Bank. Such work shall be carried out in such manner as not to impede the progress of the works included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

24. **Insurance in respect of damage to person and property**: The Contractor shall be responsible for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of himself or of any nominated sub-contractor or any employee of either, whether such injury or damage arises from carelessness accident or any other clause whatever in any connected with the carrying out of this Contract. This clause shall be held to include inter alia, any damage to buildings, whether immediately adjacent or otherwise, and any damage to road, streets, foot-paths, bridges or ways as well as damage caused to the buildings and works forming the subject of this contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify the Bank and hold it harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of any legislature or otherwise and also in respect of any award or compensation or damages consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the Contract works complete to and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

An insurance policy covering third party liability shall be taken by the contractor to cover the loss/disablement of human life (persons not belonging to the contractor). This shall also cover the risk of damages to other's materials/equipment/properties including those, if any of the banks during construction/erection/commissioning of the said contract work at site. The value of third party liability for compensation for loss of human life or full /partial disablement shall be of required statutory value for full and partial disablement and shall nevertheless cover such compensation as may be awarded by a court of law. Cover for damage to other's equipment/property shall be as approved by the bank. The sub-contractors of the contractor shall not be holders or beneficiaries in the policy nor shall they be named in the policy. The bank shall be the principal holder of the policy along with the contractor. The bank reserves the exclusive right to assign the policy.

The Contractor shall indemnify the Bank against all claims which may be made against the Bank by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequences thereof and shall at his own expenses arrange to effect and maintain, until the virtual completion of the contract, with an approved office a policy of insurance in the joint names of the Bank and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during the currency of this contract. The Contractor shall also similarly indemnify the Bank, against all claims which may be made upon the Bank whether under the Workmen's Compensation Act or any other status in force during the currency of this contract or at common law in respect of any employee of the Contractor or any Sub-Contractor and shall at his own expenses effect and maintain, in the joint names of the Bank and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during currency of the Contract.

The Contractor shall be responsible for any liability which may be executed from the Insurance Policies above referred to and also for all other damage to any person, animal or property arising out of the incidental to the negligent or defective carrying out of this Contract transit, storage, erection, testing & commissioning policy. He shall also indemnify the Bank in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damages arising therefrom.

The Bank shall be entitled to deduct the amount of any damage, compensation, costs, charges and expense arising or accruing from or in respect of any such claims or damage from any or all sums due or to become due to the Contractor without prejudice to the Bank's other rights in respect thereof.

25. **Insurance**: The contractor shall from the date of commencement of the works, insure the works at his cost and keep them insured until the virtual completion of reworks, against loss or damage by fire with an office **in the joint names of the Bank and the contractor (the name of the former being placed first in the policy) for the full amount of the contract.** Such policy shall cover the property of the "Bank" only. **The contractor shall deposit the policy and receipts for the premium with the Bank within 10 days from the issue of work order.** In default of the contractor, insuring as provided above, the Bank may so insure the works and may deduct the premium paid from any moneys due or which may become due to the Contractor without prejudice to the other rights of the Bank in respect of such default. In case it becomes necessary to suspend the works, the Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office, should they elect to do so, proceed with all due diligence with the completion of the works in same manner as though the fire had not occurred and in all respects under the same conditions of Contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as deems fit.

26. **Date of commencement and completion**: The Contractor shall be allowed admittance to the site on "Date of Commencement" stated in the Appendix hereto, or

each later date as may be specified by the Bank and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same (except such painting or other decorative work as the bank may desire to delay) or before the "Date of Completion" stated in the Appendix subject nevertheless to provisions for extension of time hereinafter contained.

27. **Damages for non-completion**: If the Contractor fails to complete the works by the date stated in the Appendix or within any extended time under Clause 26 and 20 here the Contractor shall pay the Bank the sum named in the Appendix as " Liquidated Damages" for the period during which the said works shall so remain incomplete and the Bank may deduct such damages from any money due to the Contractor.
28. **Delay and extension of time**: If in the opinion of the Bank the works be delayed (a) by force major or (b) by reason of any exceptionally inclement weather or c) by reason of proceedings taken or threatened by or dispute with adjoining or neighbouring owners or public authorities arising otherwise than through contractor's own default or (d) by the works or delays of other contractor or Tradesmen engaged or nominated by the Bank and not referred to in the schedule of quantities and/or specifications or (e) by reasons of Bank's Engineer instruction as per clause 17 hereof (f) by reason of civil commotion, local combination of workmen or strike or lockout affecting any of the building trades or (g) in consequence of the Contractor not having received in due time necessary instructions from the Bank for which he shall have specifically applied in writing or (h) from other causes which the Bank may certify as beyond the control of contractor or (I) in the event, the value of the work exceed the value of the Priced Schedule of Quantities owing to variation, the Bank may make a fair and reasonable extension of time for completion shall as soon as may be given written notice thereof to the bank but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably has required to the satisfaction of Bank to proceed with work.
29. **Contractor's failure to comply with Banks instruction**: If the Contractor after receipt of written notice from the Bank requiring compliance within 10 days fails to comply with such further drawings and/or Bank's instructions the Bank may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Bank as a debt or may be deducted by him from any moneys due to the Contractor.
30. **Termination of Contract by the Bank**: If the Contractor being an individual or a firm commits any "act of insolvency" or shall be adjudged an insolvent or being an incorporated company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the supervisions of the court and the Official Assignee or the Liquidator in such acts of insolvency or winding up, as the case may be, shall be unable within seven days after notice to him requiring him to do so to show the reasonable satisfaction of the Bank that he is able to carry out and fulfill the Contract and to given security therefore, if so required by the Bank.

Or if the Contractor (whether an individual, first or incorporated company shall suffer execution or other process of court attaching property to be issued against the Contractor.

Or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractors.

Or shall assign to sublet this Contract without the consent in writing of the Bank first had and obtained.

Or shall charge or encumber this Contract or any payments due or which may become due to the Contractor hereunder.

- (i) Has abandoned the Contract, or
- (ii) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progresses of the works for fourteen days after receiving from the Bank notice to proceed or
- (iii) Has failed to proceed with the work with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- (iv) Has failed to remove materials from the site or to pull down and replace work for seven days receiving from the Bank written notice that the said materials or work were condemned and rejected by the Bank's Engineer under these conditions' or
- (v) Has neglected or failed persistently to observe and perform all of any of the acts, matter or things by the Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

Then and in any of the said cases the Bank may, notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract, the whole of which shall continue in force as fully as if the Contract has not been so determined, and so if the works subsequently execute had been executed by or on behalf of the Contractor. And further, the Bank by his agents or servants may enter upon and taken possession of the works and all plant, tools scaffoldings, sheds, machinery, steam and other power utensils and materials lying upon the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient the Bank shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him, the Bank may sell the same by public auction, and give credit to the

Contractor for the net amount realized. The Bank shall thereafter ascertain and certify in writing under his hand what of the said plant and materials so taken possessions or by the Bank and the expenses or loss which the Bank shall have been put to in procuring the works to be completed and the amount. If any, owing the Contractor and the amount which shall be so certified shall thereupon be paid by the Bank to the Contractor or by the Contractor to the Bank, as the case may be, and the Certificate of the Bank shall be final and conclusive between the parties.

31. **Termination of Contract by Contractor**: If any amount payable by the Bank is unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Bank then the Contractor shall be at liberty to terminate the Contract by giving notice of 30 days in writing to the Bank, and he shall be entitled to recover from the Bank, payment for all works executed and for any loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose or the Contract.

In arriving at the amount of such payment the net rates contained in the Contractor's original e-Tender shall be followed or where the same may not apply valuation shall be made in accordance with Clause 17 hereof.

32. **Certificates and Payments**: The Contractor shall be paid by the Bank from time to time by installments under interim Certificate to be issued by the Bank's Engineer on account of the works executed work to the approximate value named in the Appendix as 'Value of work for Interim Certificate' has been executed in accordance with this Contract, subject, however, to a retention of the percentage of such value named in the Appendix as "Total Retention Money" after which time the installments shall be up to the full value of the work subsequently so executed and fixed in the building. And when the works have been virtually completed, the Contractor shall be paid by the Bank in accordance with the Certificate to be issued by the Bank's Engineers the sum of money named in the Appendix as "installment after Virtual Completion" being a part of the said Total Retention Money. And the Contractor shall be entitled to the payment of the Final Balance in accordance with the final Certificate at the expiration of the period referred to as 'the Defects liability Period' in the Appendix hereto from the date of virtual completion or as soon as after expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof whichever shall last happen provided always or at or after their completion shall not relieve the Contractor from his liability under clause 21 and 36 nor relieve the Contractor of his inability in cases of fraud, dishonesty, or fraudulent concealment relating to the works or materials or to any matter dealt with in the Certificate and in case of the all defects and insufficiencies in the works or materials which a reasonable examination would not have disclosed.

The Bank shall have power to withhold any Certificate if the works or any parts thereof are not being carried out to his satisfaction.

33. **Delayed Payment:** The bank shall be liable to pay an interest @ 3% per annum for the period of the delay if it fails to make the payment to the contractor on the due date.
34. The decision, opinion, direction Certificate (except for payment) with respect to all or any of the matters under Clauses 2(a, b), 4, 5, 14, 20 (a, b, c, d and f) hereof (which matters are herein referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other decision, opinion, direction, shall be subject to the right of Arbitration and review under the Clause 35 hereof in the same way in all respects (including the provisions as to opening the reference).
35. **Settlement of disputes by Arbitration:** All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after the completion and whether before or after the determination abandonment or breach of the contract) shall be referred to and settled by the Bank who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Bank with respect to any of the excepted matters shall be final and without appeal as stated in Clause 33 hereof. But if either the Contractor be dissatisfied on any matter on which a decision is taken by the Bank as above, except any of the expected matter the Contractor may within 28 days after receiving notice of such decision give a written notice to the other party requiring that the matters in dispute be arbitrated upon. Such written notice shall specify the matters, which are in dispute or difference of which such written notice has been given. If both the parties agree, a single arbitrator would be appointed for the purpose. In case no agreement could be reached on the appointment of single arbitrator, both the parties will nominate one person each as an arbitrator on their behalf. The two arbitrators nominated by the parties shall nominate one more person to act as third arbitrator or umpire.

The arbitrator or Arbitrators, as the case may be, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to the excepted matters, referred to in the preceding clause, and to determine all matters to dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The arbitrator or Arbitrators, as the case may be, shall make his or their award within one year (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case during the arbitration proceedings the parties mutually settle or compromise their dispute or difference, on the parties filing their joint memorandum of the settlement or compromise, the Arbitrator or the Arbitrators as the case may be, shall make an award in terms of such settlement or compromise.

Upon any such reference, the decision on the cost incidental to the reference and Award respectively shall be in the discretion of the arbitrator or Arbitrators as the case may be, who may determine the amount thereof or direct the same to be

taxed as between the party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid.

This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof.

The award of the arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence and shall until the decision of the Arbitrator or Arbitrators, as the case may be, is given, abide by the decision of the Bank. No award of the Arbitrator or Arbitrators, as the case may be, shall relieve the Contractor of his obligations to adhere strictly to the Bank's instructions with regard to the actual carrying out of the works. The Bank and the Contractor hereby also agree that arbitration under this Clause shall be a condition precedent to any right of action under the Contract.

**Right of technical scrutiny of final bill**

36. The Bank shall have a right to cause a technical examination of the works and the final bill of the contractor including all supporting vouchers, abstracts, etc. to be made at the time of payment of the final bill. If as a result of this examination of otherwise any sum is found to have been overpaid or over certified it shall be lawful for the employer to recover the sum.

37. **Bank entitled to cover compensation paid to workman**

If, for any reason, the Bank is obliged, by virtue of the provisions of the Workmen's Compensation Act, 1923, or any statutory modification or re-enactment thereof to pay compensation to a workman employed by the Contractor in execution of the works, the Bank shall be entitled to recover from the Contractor the amount of compensation so paid, and without prejudice to the rights of the Bank under the said Act. The Bank shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Bank shall not be bound to contest any claim made against it under the said Act, except on the written request of the Contractor and upon his giving to the Bank full security to the satisfaction of the Bank for all costs for which the Bank might become liable in consequence of contesting such claim.

38. **Abandonment of works**

If at any time after the acceptance of the e-Tender, the Bank shall for any reasons whatsoever not requires the whole or any part of the works to be carried out, the Bank shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or other-wise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works.

39. **Return of surplus materials**

Notwithstanding anything to the contrary contained in any or all the clauses of this Contract, where any material for the execution of the Contract is procured with the assistance of the Bank by purchase made under orders or permits or licenses issued by Government, the Contractor shall hold the said materials economically and solely for the purpose of the Contract and not dispose of them without the prior written permission of the Bank and return it to the Bank, if required by the Bank, at the price to be determined by the Bank having due regard to the conditions of the materials, the price to be determined not be exceed the purchase price thereof inclusive of sales tax, octroi and other such levies paid by the Contractor in respect thereof, in the event of breach of the aforesaid condition, the Contractor shall in addition to being liable to action for contravention of the terms of licenses or permit and/or criminal breach of trust, be liable to Bank for all moneys, advantages or profits resulting or which in the usual course would have resulted to his by reason of such breach.

40. **Right of Bank to terminate contract in the event of death of Contractor or individual**

Without prejudice to any of the rights or remedies under this Contract, if the Contractor, being an individual, dies, the Bank shall have the option of terminating the contract without incurring any liability for such termination.

41. **Force Majeure:** If either party is unable to perform its obligations under this Agreement due to the occurrence of an event beyond its control (such as acts of God, war like situations, riots, labor strike, government actions, earthquakes, cyclones, typhoons, and other natural calamities, etc.), that party will not be deemed to have defaulted under this Agreement. Each party agrees to use all reasonable efforts to enable performance under this Agreement to continue. If the period of non-performance due to a force majeure event exceeds 30 days, the party whose ability to perform has not been so affected may, by giving written notice, terminate this Agreement.

Place:

Date:

Signature of the Tenderer with Seal.





RESERVE BANK OF INDIA  
Estate Department  
Bhubaneswar

**SECTION-VII**

**Check List**

**Design, Supply, Installation, Testing and Commissioning of net meter on HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building.**

**Commercial Conditions**

Sr. No.	Description	Bank's Terms and conditions	Acceptance of Bank's terms and conditions (YES/NO)
1.	Validity	90 days from opening of e-Tender part-I	
2.	EMD	<b>Rs. 20,000/- (Rupees Twenty thousand only)</b>	
3.	Terms of payment	As per applicable clause in Part I of the e-Tender	
4.	Technical specifications	As per specifications in Part I of the e-Tender	
5.	Guarantee Period	One year from date of virtual completion.	
6.	Service after sales during CAMC	Quoted rates shall include the cost of repairs/maintenance including replacement of any material / assembly / equipment / spares / labour if found necessary and quarterly visit.	
7.	Completion period	30 days from 10th day of letter of award of work.	
8.	Liquidated damages	@ 0.25% of contract value per week of delay subject to a maximum of 10% of the contract value.	

Sr. No.	Description	Bank's Terms and conditions	Acceptance of Bank's terms and conditions (YES/NO)
9.	Penalty during warranty & AMC period	Rs.200/- per day subject to maximum of 10% of the annual maintenance charges, if the defect in the system is not rectified within the period of 2 days.	
10	Penalty for reduced Power Generation during	As per applicable clause in Part I of the e-Tender	

Part II should not contain any terms and conditions but only priced for bill of quantity. Terms and conditions, if any, incorporated in Part II, will not be valid or considered.

Place

Date

Seal & Signature of Contractor

**Appendix**

**The condition Herein before Referred To**

1.	Defects Liability Period	One year from the date of Virtual Completion Certificate
2.	Period of Final Measurement	3 months
3.	Date of Commencement	10 <sup>th</sup> day from the date of letter of acceptance.
4.	Date of Completion	Date of virtual completion certificate.
5.	Rate of liquidated damages for non-completion of work.	<b>@ 0.25% of contract value</b> per week of delay subject to a maximum of 10% of the contract value.
6.	Period for honouring certificates	One month for interim bills and 3 months for final bill.
7.	Interest for delayed payment	3% per annum

Place:

Seal & signature of Contractor

Date:

### Schedule of Commercial Deviations

We confirm that all commercial terms and conditions of the Bank except for deviations listed below are acceptable to us.

<b>Sr. No.</b>	<b>Section No.</b>	<b>Clause No.</b>	<b>Deviation proposed</b>
1	2	3	4

Seal & Signature of Tenderer  
Name:  
Designation :  
Date :

**Schedule of Technical Deviations**

We confirm that all technical terms and conditions and specifications of the Bank except for deviations listed below are acceptable to us.

<b>Sr. No.</b>	<b>Section No.</b>	<b>Clause No.</b>	<b>Deviation proposed</b>
1	2	3	4

Seal & Signature of Tenderer.  
Name  
Designation  
Date



**RESERVE BANK OF INDIA**  
**Estate Department**  
**Bhubaneswar**

**Section - VIII**  
**Technical Specifications**

**7.0 Scope of Work**

The extent of the work shown and specified hereunder is defined to include all labour, materials, equipment, and supervision required for the design, fabrication, supply, installation, testing and commissioning of the complete solar power generation system, and subsequent upkeep and maintenance as defined.

**A.** Generation of 5 KWp of Solar Energy based, conversion of the same to AC power with a **guaranteed annual generation of 5,000 KWH** per year during the first five years of operation at Bank's power grid synchronization point including:

- a) Design, Manufacturing, Factory Acceptance Test (FAT), supply, installation, testing and commissioning of Solar PV Modules (inclusive of Electrical, Electronic and Mechanical features), Power Conditioning Units (PCUs), as required and specified in MNRE standard and Generation monitoring units to be installed at proper location for monitoring.
- b) Design, Supply and installation of Module mounting structure / super structure on identified locations. The successful Tenderer shall design their 5 KWp SPV Panel structure with Hot dipped galvanised steel and cement concrete (CC) foundation suitable for site condition. Design of SPV structure shall be certified /vetted by a recognized Govt. Engineering College viz. IIT / NIT etc. or by a reputed structural consultant and submitted for approval before taking up the structure and foundation works.
- c) Supply, installation, testing and commissioning of three phase Power Conditioning Units (PCU),(inverter plus local grid synchronizing system), distribution panels, electrical switchgears, inverters, metering and connecting the system to the switch

gear(MCB/Distribution Board) provided by the Bank for load and connecting up the system to the electrical grid, surge protection units etc. as required.

- d) Supply and laying of all power and control cables, as per site requirement, on prefabricated GI cable trays including supply of cable trays, their installation, hangers, supports, cable terminations and all fixing accessories.
- e) **Earthing:** Supply and installation of GI Pipe Earthing systems with an earth electrode minimum 2.5 m long and 50 mm dia as per IS 3043. 25x3 mm GI earth strip shall be provided from earthing station to the entire system. Earthing stations shall be provided with testing point for every pits as per relevant IS, including required earthing chamber with brick plaster and CI/MS cover, cutting of roads / paved areas & making good the damages as in original shape.
- f) Testing and commissioning of the entire system including synchronizing with power grid and operation as required. The installation shall include the electrical switchgears, cabling, terminations, cable trays, inverters, metering and connecting the system to the electrical grid.
- g) The PV modules shall be installed with the necessary tilt with the most effective orientation.
- h) All related & required civil works will be the responsibility of successful Tenderer.
- i) Solar System capacity shall be demonstrated to the Bank's Engineer.
- j) Onsite training to RBI Engineers and Workmen for proper operation, maintenance and trouble shooting.
- k) Provision for periodic cleaning of the solar panels considering the ambient conditions of the site. Water connection at the same floor at one point shall be provided by Bank.
- l) **Net Metering:** Replacement of existing conventional energy meter provided by CESU with bidirectional energy meter for Net Metering and grid connection etc. **This will also include the replacement of CT / PT, metering Box etc. as required on the HV side in the scope of the bidder. The work also includes provision of a generation meter and combining the existing 2 X 20 KWp plants with the new 5 KWp solar plant. Necessary and valid permission is to be obtained for existing 2 X 20 KW plant and proposed 5 KW plant. A combiner circuit is to be provided for the same which consists of MCCB and MCB of requisite capacity.** The scope shall also include the required liaison with CESU and electrical inspector or with any other **applicable authority** for the

same. The bidder will pay the fees / charges, if any, to the power supply authority or any other authority as applicable for providing Net Metering for this work and the **Bank will reimburse the said fees / charges only on production of original receipts of such payment.**

- m) The bidder must take approval / NOC from the concerned local supply authority (CESU) and electrical inspector and any other statutory authority as applicable for above cited grid tied solar plant towards connectivity through net metering (3-phase bidirectional energy meter), technical feasibility and synchronization of SPV plant with LT distribution network and submit the same to the Bank before commissioning of SPV plant.

**Service to be provided by the Bank:**

Unless otherwise agreed by RBI, only the following services shall be provided in connection with this work:

- a) Single point water source for cleaning of SPV panels near to the solar system. Further plumbing for distribution of water to various array locations, if required, to be provided by the contractor.
- b) Provision of necessary switchgear in the LT distribution panel for connecting the solar energy based AC power to Bank's Power grid. **However, the termination of cable to the switchgear shall be in the scope of the successful Tenderer.**

**B. All Inclusive Upkeep & Maintenance during Defect Liability and Comprehensive Annual Maintenance Contract (CAMC) period**

- a) During the Defect Liability period and CAMC period the contractor shall provide the all Inclusive Upkeep & Maintenance services of the entire system as provided, including all spares and consumables. The system shall be maintained by the contractor for a period of minimum 10 years from the date of handing over i.e. 09 years of CAMC after successful completion of one year of defect liability period of the system. The rates of the same are to be quoted separately as per Schedule of Quantities.
- b) In addition to the routine / periodic cleaning of the Panels, qualifies engineer of the contractor shall pay visit to the site at least **once a quarter** to check the system thorough and conduct preventive maintenance.

**7.1 MINIMAL TECHNICAL REQUIREMENTS / STANDARDS FOR SPV ITEMS / SYSTEMS (All materials & installation as per MNRE standard)**



### 7.1.1 PV MODULES:

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

Crystalline Silicon Terrestrial PV Modules: IEC 61215 / IS14286

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

PV modules shall be suitable to be used in a highly corrosive atmosphere (coastal areas, etc.) must qualify Salt Mist Corrosion Testing as per IEC 61701 / IS 61701.

### 7.2 RELEVANT STANDARD OF SYSTEM / COMPONENTS / ITEMS

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

<b>System / components / items</b>	Applicable BIS /Equivalent IEC Standard or MNRE Specifications	
	Standard Description	Standard Number
Charge Controller / Maximum peak power transfer (MPPT) units	Environmental Testing	IEC60068-2 (1,2,14,30) / Equivalent BIS Std.
Power Conditioners/ Inverters including (Maximum peak power transfer) MPPT and Protections	Efficiency Measurements	IEC 61683 / IS 61683
	Environmental Testing	IEC 60068-2 (1, 2, 14, 30) / Equivalent BIS Std.
	procedure of islanding prevention measures	IEC 62116
Cables	General Test and Measuring Method PVC insulated cables for working voltage up to and including 1100 V and UV resistant for outdoor installation	IEC 60227 / IS 694 IEC 60502 / IS 1554 (Pt. I & II)
Switches/Circuit Breakers	General Requirements connectors –safety A.C. / D.C.	IEC 60947 part I,II, III / IS 60947 Part I,II,III

/ Connectors		EN 50521
Junction Boxes /Enclosures for Inverters/Charge Controllers/Luminaries	General Requirements	IP 65(for outdoor)/ IP 21(for indoor) as per IEC 529

### 7.3. AUTHORISED TESTING LABORATORIES / CENTERS

7.3.1 The PV modules must be tested and approved by one of the IEC 62093 authorized test centres. Test certificates can be issued by any of the NABL / BIS Accredited Testing / Calibration Laboratories/ International Electrical Safety Standards wherever applicable.

7.3.2 Test certificates for the system/ components/ items from any of the NABL / BIS Accredited Testing Calibration Laboratories / MNRE approved test centres to be submitted to the Bank.

### 7.4. IDENTIFICATION AND TRACEABILITY

Each PV module used in the solar power project must use a RF identification tag (RFID), which must contain the following information. The RFID can be inside or outside the module 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 of PV Module
- 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,  $I_m$ ,  $V_m$  and field factor (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.

RIFD can be inside or outside the module laminate, but must be able to withstand harsh environmental conditions.

**7.5** The contractor shall execute the whole & every part of the work in the most substantial manner and both as regard to materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also confirm the execution of work exactly, fully and faithfully to designs, drawings & instructions in writing in respect of the work assigned by the Bank's Engineer.

## **7.6. ACTIONS TO BE TAKEN BY THE SUCCESSFUL TENDERER AFTER AWARD OF WORK**

7.6.1 Considering that time is the essence of the contract, the successful tenderer shall take the following actions immediately –

- a) They shall contact the Bank's Engineer in charge of the work, immediately after award of work and submit the agreement on non-judicial stamp paper of adequate value as per the relevant stamp act and the cost of the same shall be completely borne by the tenderer.
- b) All the required submittals must be completed within 15 days from the date of issue of work order.
- c) A programme chart shall be prepared for execution of the work within specified time and submitted to the Bank. The work-schedule chart/ bar-chart shall also include the time schedule for commencement of various activities of work like inspection & delivery of materials, commencement of work, completion of work etc. required for the execution & timely completion of work.

7.6.2 All activities for execution of work shall strictly follow the programme chart so finalized unless advised otherwise by the Bank's Engineer in writing. It shall be the responsibility of the contractor to adhere to this work-schedule and complete the work in the specified time. Any deviation from this schedule, for any reason, shall be brought to the notice of the Bank's Engineer immediately to enable him to take necessary corrective action(s). Failure to submit the work schedule chart within the specified time or meeting the various committed deadlines shall be treated as delay on the part of the tenderer.

7.6.3 Drawings indicating the design of Solar Power Generation System proposed along with designs for structures / foundations for SPV array duly certified / vetted by a recognised Govt. Engg. College etc. shall be submitted to the Bank's Engineer, for approval, within seven (07) days of the receipt of work order. The drawings shall indicate

all relevant details about the component/equipment and integration circuit diagram of net meter etc. The contractor shall submit all equipment information, which should include but not limited to the following and obtain approval:

- a) General arrangement and dimensional layout
- b) Schematic Drawing showing the requirement of SPV System, Power conditioning Unit(s), Circuit breakers, Junction Boxes, AC and DC Distribution Boards, meters etc.
- c) Structural drawing along with foundation details for the structure.
- d) Itemised bill of material for complete SPV system covering all the components and associated accessories.

**7.7 Testing of equipment/system:** Type test certificates for all the tests specified for the factory built Solar PV modules and the component parts shall be submitted by the Bidder along with the bid.

**7.8.1 Factory Acceptance Test (FAT) of equipment:** Delivery of equipment is to be made to the site in accordance with the programme finalized in consultation with Bank's Engineer. The equipment shall be delivered only after pre-delivery inspection has been carried out by RBI's authorized representative. Pre-delivery inspection of equipment shall be carried at the factory premises of principals. The Bank shall be informed of such inspection at least 07 days in advance.

#### **7.8.2 AUTHORIZED TESTING LABORATORIES/ CENTERS**

PV modules must qualify (enclose test reports/ certificate from IEC/NABL accredited laboratory) as per relevant IEC standard. Additionally the performance of PV modules at STC conditions must be tested and approved by one of the IEC / NABL Accredited Testing Laboratories including Solar Energy Centre of MNRE. However, qualification Certificate from IEC/NABL accredited laboratory as per relevant standard for any of the higher wattage regular module should be accompanied with the STC report/ certificate.

#### **7.8.3 Testing at site after completion of installation:**

On completion of the installation, the Tenderer shall conduct a system acceptance test. The Tenderer shall propose a detail system acceptance test plan, which shall be jointly reviewed by RBI and the Tenderer.

a) All units shall on their completion, be subjected to a performance test followed by an acceptance inspection and tests to determine that all parts of the installation confirm to the requirement and that all equipments function as required and the work has been carried out as specified.

b) Tests and inspections shall be made by the contractor in the presence of the Bank's Engineer. Contractor shall notify the Bank's Engineer in writing before the date of testing in order to facilitate arrangements for Bank's Engineer to be present.

c) The contractor shall submit proposed testing procedure to the Bank's Engineer before the date of testing.

d) All test instruments and personnel to carry out the testing and commissioning shall be provided by the contractor. Adequate supervision of the tests shall also be maintained.

e) Corrective measures, if necessary, shall be carried out at no cost to the Bank.

f) **Performance Test at Site:** After installation of the complete system, its operating capability shall be demonstrated. The contractor shall provide personnel, tools, etc. for testing. The performance test shall be conducted in the presence of Bank's Engineer or his authorized representative for a minimum of (10) ten hours for ten working days as per the following: -

- i. Measurement of peak DC & AC power generated shall be taken every day for 10 working days at available load condition.
- ii. Auto operation of the complete system Correction of unsatisfactory operation during test period, if any deficiencies or variations in the design, fabrication or operation causing unsatisfactory performance is noticed, then same shall be corrected to provide satisfactory performance. Manufacturer/Contractor shall have appropriate service personnel at site during the test period to service or adjust the systems equipments as required.

**7.8.4 Acceptance of system:** After completion of the system performance tests a joint acceptance inspection shall be carried out by Bank's Engineer and the representative of the contractor. The purpose of this inspection shall be to determine that the system has been furnished and installed as specified. If the system is not acceptable for reasons of non-compliance to the drawings and specifications, the contractor shall make immediate corrections within the construction schedule. A final acceptance inspection shall be done to determine all corrections have been made.

#### **7.8.4.1 WARRANTY**

PV modules used in solar power plants/ systems 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.

#### **7.9 TRAINING**

The contractor shall include in his e-Tender cost of training of Bank's technical staff. Initial training of operating and maintenance personnel shall be provided at site to ensure competence in the operation and maintenance of the system provided. The training programme shall include but not limited to the following elements:

##### **A) OPERATING TRAINING**

- (i) System description including electrical, electronic and mechanical sub-system and their functions.
- ii) System operating procedures.
- iii) System operating characteristics.
- iv) System limitations.
- v) On-site system operation.

#### **7.10 DETAILED SPECIFICATIONS**

Solar PV system shall consist required number of PV modules, module mounting structures, MPPT/PCU with data logger, Junction box and distribution boards, cables and hardware, earthing, surge arrestors with independent earthing, tool kit, related civil works, and control & monitoring system etc. The specifications of these items are as under:

##### **7.10.1 Solar PV Modules:**

- a) The solar photo-voltaic module of  $\geq 300\text{Wp}$  power output under STC to be provided with high efficiency of more than 15% **multi or mono crystalline silicon** solar cells.
- b) The solar cell shall have surface anti-reflective coating to help to absorb more light in all weather conditions.
- c) It should have rugged design to withstand tough environmental conditions and high wind speeds (over 150 km/h). It shall perform satisfactorily in relative humidity up to 95% and temperature between 10 deg. C and 85 deg. C.

- d) PV modules must be designed 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.
- e) The PV module should be IEC 61215-Ed 2 & 61730-1&2 / UL certified and with MNRE (GOI)-SEC test certificate or from other accredited / approved labs. The I-V characteristics of all suitable modules as per specifications, to be used in the systems are required to be submitted at the time of supply.

#### **7.10.2 Module Mounting Structures:**

- a) The module mounting structure to be designed in such a way that it will occupy minimum space without sacrificing the output from suitable number of solar modules in series.
- b) The structure shall be designed to allow easy replacement of any module & shall be in line with the site requirements.
- c) The frames and leg assemblies of the mounting structure should be of standard M.S. sections of angle, channel, tubes and any other sections conforming to IS: 2062. These structures should be hot dip galvanized for the long life in external weather conditions.
- d) The mounting structure should be of Fixed Type, Tilt angle suitable to site, Foundation PCC, Fixing type with SS 304 fastener with clamp fitted to provide rigidity to the structure.
- e) Galvanized Steel Structural must be considered for all type structural steel proposed for the power system.
- f) The array structure shall be grounded properly using earthing kit.
- g) Design drawings with material selected shall be submitted for prior approval of Bank.

#### **7.10.3 PCU / MPPT/INVERTER:**

- a) PCU / MPPT and 3 phase with neutral inverter shall be supplied as integrated unit depending upon the size of the solar power system. It should conform to IEC61683 and must additionally conform to the relevant national/ international Electrical Safety Standards IEC60068-2. To minimize power losses the PCU should be microprocessor& micro controller based having inverter, which converts DC energy produced by the solar array to 3 phase with neutral AC energy.
- b) The PCU shall be mounted either on a suitable MS stand on the floor or on the wall with proper supports in the control room. All cable entry to and from the PCU

shall be fully sheathed to prevent access of rodents, termites or other insects into the PCU from bottom/top of the PCU.

c) PCU should be communicating on the **Modbus TCP Protocol** and should be provided with Ethernet port(s) for communication. **The Modbus register mapping details of the inverter shall be provided to the Bank along with the technical specifications of the PCU in the tender Part-I.**

d) The PCU should provide the following minimum Indications (through LEDs & LCD display)

- Inverter ON
- Grid ON
- Inverter under voltage/over voltage
- Inverter over load
- Inverter over temperature.

Protections:

- Over voltage both at input & output
- Over current both at input & output
- Over/under Grid frequency
- Over temperature
- Short circuit
- Protection against lightening
- Surge voltage induced at output due to external source.

e) The inverter shall be designed for continuous, reliable power supply as per specifications. The inverter shall have high conversion efficiency from 25 percent load to the full rated load. Output Sine wave with less than 3% THD from no load to full load at 0.8 pf lag or lead. The efficiency of the inverter shall be more than 94% at full load and more than 80% at partial load (50%-75%). The supplier shall specify the conversion efficiency in the offer.

e) The inverter should be capable of operating under ambient temperature 0- 55 deg C, Humidity 0-95% RH

f) The inverter shall have internal protection arrangement against any sustained fault in the feeder. The inverter shall have provision for input & output isolation.

g) Inverter shall be tested for islanding protection performance and should be provided. When the mains power is off, the PCU should also get automatically off so that back-feeding to the grid is not possible.



- h) The software (Plant Manager & PC for remote monitoring through LAN) and hardware **except PC**, required for interfacing the system are to be supplied.
- i) Maximum Power Point Tracker (MPPT) shall be integrated into the PCU to maximize energy drawn from the Solar PV array. The details of working mechanism of MPPT shall be furnished. Each solid-state electronic device shall have to be protected to ensure long life of the inverter as well as smooth functioning of the inverter.
- j) The dimension, weight, foundation, makes details etc. of the PCU / Inverter shall be clearly indicated in the detailed technical document. Good quality & reputed proven makes having minimum two years of trouble free successful functioning in similar solar PV system should be supplied.
- k) The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down
- l) Built-in with data logging to remotely monitor system performance through external PC shall be provided (PC shall be provided by Bank)

#### **7.10.4 Junction box and distribution boards:**

- a) The junction boxes should be dust, vermin & waterproof & made of FRP/ABS plastic for outdoor use and IP 65 rated (for outdoor) / IP 21 (for indoor) and IEC 62208, for long-term use in PV systems. In addition, the direct connection between the strings and the spring clamp connectors should ensure a durable and safe installation.
- b) The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming & outgoing cables. Suitable markings shall be provided on the bus bar for easy identification & cable ferrules shall be fitted at the cable termination points for identification.

#### **7.10.5 Cables and hardware:**

- a) Flexible cables of appropriate size and voltage rating of 660/1000V to be used in the system and shall conform to IS 694/1554 standards. The cable should have excellent resistance to heat, cold, water, oil, abrasion, UV radiation.
- b) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter, inverter / AC DB to location of propose Net Meter ( From Inverter to Net Metering points) etc. shall be so selected to keep the voltage drop (power

loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.

- c) Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.
- d) As per site requirement Cable laying through underground / across the road by providing necessary brick and sand covering is within the scope of work of the Tenderer.
- e) The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.

#### **7.10.6 Instrumentation, measurement and monitoring :-**

The scope of work shall include for supply and installation of pyrometer, temperature probes for recording the solar panel temperature, anemometer for measuring the wind speed. All these instruments shall be integrated and the data should be logged for viewing on the PC screen. Necessary software also shall be provided for the same.

Data Logging Provision for system monitoring, time and date stamped system data logs for analysis shall be made.

Metering and Instrumentation for display of systems parameters and status indication to be provided.

**PV array energy production:** Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated (each day / cumulatively) by the PV system shall be provided.

**Solar Irradiance:** An integrating Pyrometer (Class II or better) shall be provided, with the sensor mounted in the plane of the array. Readout integrated with data logging system.

**Temperature:** Temperature probes for recording the Solar panel temperature and ambient temperature to be provided complete with readouts integrated with the data logging system

**Wind Speed:** An integrated wind speed measurement unit to be provided.

All major parameters available on the digital bus and logging facility for energy auditing shall be available on the PC display.

**The following parameters should be accessible via the operating interface display.**

- a. AC Voltage.
- b. AC Output current.
- c. Output Power (daily)
- d. DC Input Voltage.
- e. DC Input Current.
- f. Time Active
- g. Time disabled.
- h. Time Idle
- i. Temperatures (°C).
- j. Inverter Status.

**7.11.1 System protections requirements:** Protective function limits (Viz.-AC Over voltage, AC Under voltage, over frequency, under frequency, ground fault, PV starting voltage, PV stopping voltage, over voltage delay, under voltage delay, Ground fault delay, PV starting delay, and PV stopping delay).

**7.11.2 In addition to above, the system shall be provided with the following:**

- a) **Earthing:** The structure of the PV arrays will be grounded properly using adequate number of earthing. All metal casing / shielding of the system shall be thoroughly grounded to ensure safety of the solar systems.
- b) **Lightning and O/V protection with independent earthing:** The SPV systems shall be provided with lightning & over voltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub- system components. The source of over voltage can be lightning, atmosphere disturbances etc.
- c) All wiring/cables should be in proper conduit or suitable casing and wires should not be hanging loose.
- d) All connections are to be made through suitable cable/lug/terminals; crimped properly & with use of Cable Glands.
- e) Switches / Circuit Breakers / Connectors-safety IS/ IEC 60947 part I, II & III, EN 50521
- f) Fuses to be provided to protect against short circuit conditions.
- g) Details of solar power system design and layout for all systems shall be submitted along with Technical bid (Part-I)
- h) All the components of the systems viz. PV modules, Electronics, etc. should have type approval / test certificates **as per MNRE guide lines**

- i) All components and materials used in the system should be of good quality & conform to the BIS / IEC standards / specifications, wherever available / applicable.
- j) Each system should have number plate with name & logo of the manufacturer and the month / year of installation.
- k) Operation and Maintenance / Instruction Manual (with Do's and Don'ts) to be provided with each system.
- l) Danger boards should be provided as and where necessary as per IE Act / IE rules as amended up to date.

### **7.11.3 ENVIRONMENT/MAINTENANCE/ SAFETY DESIGN PARAMETERS**

#### **i) Environment**

All components and materials are to be designed and selected for long service life under local environment conditions.

#### **ii) Maintenance consideration**

- a) Particular attention shall be given to keep components simple, rugged and easily accessible for routine maintenance and components replacement.
- b) Major assemblies and components such as, electrical components/controls shall be interchangeable and easily removable / replaceable without extensive dismantling of other assemblies of components.
- c) **All wiring shall be of a uniform colour coding and marking system throughout indicating wiring terminations** to permit rapid effective tracing and trouble shooting. Maintenance manual shall reflect said colour coding/markings.
- d) To facilitate identification, each item of equipment shall have a name plate of corrosion resistant metal attached in a conspicuous location.

#### **iii) Safety considerations**

All components shall be designed to have fail proof performance. In the event of an equipment failure or external influence such as improper operation, power failure or other adverse conditions affecting the proper function of the system or equipment, the said system or equipment **shall revert to a safe state**.

Place:

Date:

seal & signature of the Tenderer

**ANNEXURE-“A”**

**A. Bank’s approved makes**

<b>S. No.</b>	<b>Description of item</b>	<b>Bank’s approved makes</b>
1.	Net meter and generation meter	Secure / any other make approved by CESU
2.	CT /PT / Relay	Kappa
3.	GI Pipe	Tata, Jindal, Bansal
4.	Cable	Polycab, Finolex, R R Kabel
5.	MCCB	Siemens, Legrand, L&T

N.B – All the materials must be approved by Bank’s Engineer prior to installation.

**B. SCHEDULE OF TECHNICAL INFORMATION**

i)	Enclose a write up on the system design proposed for this project specifically indicating how the power generated from the solar energy will be synchronized with the local grid.	
ii)	Enclose a <b>single line diagram (SLD)</b> / schematic layout for the proposal indicating the ratings and quantity of major components viz. SPV Modules, nos. of arrays, AC & DC distributions, PCUs etc.	
iii)	Enclose the proposed <b>layout</b> of the SPV module array showing the spacing between arrays, walk way width etc. <b>for the existing and the new system.</b>	
iv)	Confirm the minimum guaranteed annualized energy (KWH/year) that will be generated from solar energy source and available for internal use for 25 years.	Please fill up the format Enclosed under <a href="#">Annex - B.</a>
v)	<b>Confirm the area required by the bidder for installation of SPV panels along with its structure, maintenance, walk ways to provide a generating capacity of 5 KWp as required in</b>	<b>(i) For 5 KWp Length in Meter _____</b> <b>Width in Meter _____</b> <b>Total area in sqm. _____</b>

	<b>the e-Tender.</b>	
vi)	Enclose drawing showing typical arrangement for mounting of SPV modules along with dimension and nature of foundation.	(plan, elevation and section to be enclosed)
vii)	Enclose the Modbus register mapping details of the offered inverter	
viii)	Confirm the location of energy meters to be provided for continuous measurement of AC power generated.	
ix)	Please confirm the acceptance test procedures to be adopted during FAT for the SPV Modules. Also indicate the standard to be followed.	
x)	Please confirm the acceptance test procedure to be adopted on completion of the work for the major components and the complete system at site.	

### **C. SCHEDULE OF TECHNICAL DATA TO BE FUNISHED BY THE CONTRACTOR**

<b>A</b>	<b>SPV MODULE</b>	
i.	Manufacture's Name & Address	
ii.	Type of Modules with cat. Reference	
iii.	Design of module at standard test condition	
	a) Peak power watt	
	b) Peak power voltage	
	c) Peak power current	
	d) Open circuit voltage	
iv.	No. of SPV Modules proposed to achieve minimum	
v.	Short circuit current of PV module (Amp.)	
vi.	Open circuit voltage of PV Module (V)	
vii.	Max. power rating of one PV Module (KWp) (not less than 300Wp)	
viii.	Photo electrical conversion efficiency of SPV module (not less than 15%)	

ix.	Fill factor of the SPV module (> 0.70)	
x	Designated life of the SPV modules	
xi.	Overall dimensions (in mm)	
xii.	Weight	
Xiii	Frame materials	
xiv.	Reference of Standards / approval, if any	
xv.	Life of SPV Module (Years of Operation)	
<b>B</b>	<b>PV ARRAY CAPACITY</b>	
	Number of Module in series in each array	
	Peak power rating of one array	
	Number of array considered to achieve the specified output	
<b>C</b>	<b>MODULE MOUNTING STRUCTURE</b>	
i)	Type of structure and its materials used in frame and accessories	
ii)	Type of mounting structures (Fixed or any other type)	
iii)	Overall dimensions	
iv)	Type of mounting	
v)	Surface azimuth angle of PV Modules	
vi	Tilt angle (Slope) of PV module	
vii.	Confirm structure & module frame shall be designed at wind speed 150 km/hr.	
<b>D</b>	<b>POWER CONDITIONING UNITS (PCUs)</b>	
i.	Manufacturer's name & address	
ii.	Type of PCU (Centralized or string type)	
iii.	Number of units proposed for each set of solar plant.	
iv.	Rated capacity of each PCU for each set of solar plant.	
v.	Input DC Voltage range of each PCU for each set of solar plant.	
vi.	Output voltage	
vii.	Frequency	
viii.	Minimum efficiency at full load	
ix.	Location (outdoor/indoor)	
x.	Output wave shape	

xi.	Dimensions in mm	
xii.	IP protection level	
xiii.	Type of cooling required	
xiv	Type of mounting	
xv.	Suitability for specified Ambient Temp. range & Humidity at _____	
xvi.	Type of Protection provided	
xvii	Over Load Condition	Yes/No
xviii	Short Circuit Protection	Yes/No
xix	Low/High Voltage Protection	Yes/No
xx	Power Electronic Component Protection Yes/No	Yes/No
E.	<b>METERING</b>	
i.	Nos. of meters proposed to be provided for measurement of actual value of AC/ DC voltage, Current & Energy generated (each day / cumulatively) by the PV system shall be provided.	
ii.	Location of meters	
iii.	Manufacturer's name & address	
iv	Confirm compliance with laid down specification	

Place:

Date:

Seal & Signature of the Tenderer.



**FORMAT FOR UNDERTAKING FOR GUARANTEED ENERGY GENERATION**

(To be submitted by the Tenderer)

**NAME OF WORK:** Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar.

Pursuant to a contract awarded by Reserve Bank of India for the full scope of work as contained under the e-Tender document for the above mentioned work or part thereof, we ..... (*full name of the firm with address*), hereby undertake that the Annual Energy Generation from the Solar plant installed by us under this contract will not be less than **5,000 KWH** in any of the year for ten years from the date of handing over of the plant. In case of any shortfall of generation, we hereby undertake to accept compensation as per tender provisions.

Place:

Date:

Seal & Signature of the Tenderer.

**Format for undertaking for product & maintenance support**

(To be submitted by the Tenderer)

**NAME OF WORK: Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar.**

Pursuant to a contract awarded by Reserve Bank of India for the full scope of work as contained under the e-Tender document for the above mentioned work or part thereof, we ..... (*full name of the firm with address*), hereby undertake the complete responsibility for providing full product support and also maintenance support for the entire period of the designed life of the equipments so supplied and installed by us, promptly and expeditiously.

Further, in case any of the component(s), materials or parts used in the system so provided goes out of production, then we will make available the blue prints, drawings of the spare parts and specifications of materials at no cost to the RBI, as and when required in connection with the equipment to enable the RBI to procure spare parts from other sources.

Thanking You

Yours faithfully,

(Signature of the Contractor / Firm with Company's Seal)

**Undertaking**

(Undertaking by manufacturer of SPV Modules and PCUs regarding the manufacture's obligation to extend uninterrupted after sales service to RBI)

**NAME OF WORK:** Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar.

We, the manufacturer of Solar Power System Component(s) undertake to provide continued after sales service including but not restricted to the following services.

- i) To guarantee uninterrupted supply of spare parts throughout the designed life of SPV modules and PCU's. The designed life of SPV modules and PCU's shall be as indicated elsewhere in the technical bid.
- ii) To assist RBI in investigation of failure/malfunctioning of any part or system as and when called for by RBI during and after defects liability period.
- iii) We shall propose with cost estimate, any modification / up gradation of safety features, design modification / improvements to be incorporated in the SPV modules and PCU's subsequent to completion of the contract and suggest a time schedule to implement the same to enhance performance, reliability / life of SPV modules and PCU's.
- iv) We hereby undertake to provide the above services and respond to RBI's queries/requests in reasonable time notified by RBI during the design life of the SPV modules and PCU's.
- v) Any breach of above undertaking will entail RBI to take any or all actions mentioned below as deemed fit by RBI.
  - a) To place on record the performance of firm either in the RBI Web Site or other publications.

- b) Intimate the Regulatory Authorities / bodies or other Banks.
- c) Restrict the firm's participation in further Tendering in RBI.

Date: *(Name and address of the company with Company Seal)*

**Note:** This undertaking shall be furnished by the manufacturer of SPV Modules and PCUs. In case the manufacturers of these two items are different, separate undertakings must be furnished by the respective manufacturer.

**DECLARATION OF COUNTRY OF ORIGIN**

(To be furnished by the Tenderer)

**NAME OF WORK: Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar.**

This is to certify that

a) The SPV Modules & PCU's offered are new:

b) The SPV Modules will be manufactured, assembled and offered for inspection before dispatch the works/factory of \_\_\_\_\_ (*address*)

\_\_\_\_\_  
\_\_\_\_\_

Therefore, Country of Origin of SPV Modules shall be \_\_\_\_\_.

c) The Power Conditioning Units (PCUs) will be manufactured, assembled and offered for inspection before dispatch at the works / factory of (*address*)

\_\_\_\_\_  
\_\_\_\_\_.

Hence the Country of Origin of PCUs shall be \_\_\_\_\_.

Date: \_\_\_\_\_

*(Name of the Company with address and Company Seal)*

**Note:** There could be different country of origin for SPV Modules & PCUs. Specific address shall be provided for carrying out pre-delivery inspection at the works of the manufacturer.

**Factory Acceptance Test**

**Solar PV Modules:** The Solar PV modules shall be tested at the factory in the following manner:

- i) Physical Inspection:** The PV modules shall be inspected for its physical parameters such as dimensions, material and workmanship etc.
  
- ii) Performance Parameter:** The Solar PV modules shall be tested at the factory on a sun simulator at Standard Temperature Conditions (STC) for the following Parameters:
  - a) Open Circuit Voltage ( $V_{oc}$ )
  - b) Short Circuit Current ( $I_{sc}$ )
  - c) Max. Power ( $P_{max.}$ )
  - d) Voltage at Max. Power ( $V_{max.}$ )
  - e) Current at Max. Power ( $I_{max.}$ )
  - f) Fill Factor
  - g) Module efficiency

**2. Power Conditioning Unit:** The power conditioning unit shall be inspected for the display of parameters as mentioned in the e-Tender either at factory of OEM/Integrator or at site.

**ANNEXURE-“G”**

CLIENT's CERTIFICATE REG. PERFORMANCE OF CONTRACTOR

Name & address of the Client

Details of Works executed by Shri /M/s

- 1 Name of work with brief particulars
- 2 Agreement No. and date
- 3 Agreement amount
- 4 Date of commencement of work
- 5 Stipulated date of completion
- 6 Actual date of completion
- 7 Details of compensation levied for delay(indicate amount) if any
- 8 Gross amount of the work completed and paid
- 9 Name and address of the authority under whom works executed
- 10 Whether the contractor employed qualified Engineer/Overseer during execution of work?
- 11 i) Quality of work (indicate grading) Outstanding/Very Good/  
Good/Satisfactory/poor  
ii) Amt. of work paid on reduced rates, if any.
- 12 i) Did the contractor go for arbitration?  
ii) If yes, total amount of claim  
iii) Total amount awarded
- 13 Comments on the capabilities of the contractor.  
a) Technical proficiency Outstanding/Very Good/  
Good/Satisfactory/poor  
b) Financial soundness Outstanding/Very Good/  
Good/Satisfactory/poor

c) Mobilization of adequate T&P	Outstanding/Very Good/ Good/Satisfactory/poor
d) Mobilization of manpower	Outstanding/Very Good/ Good/Satisfactory/poor
e) General behaviour	Outstanding/Very Good/ Good/Satisfactory/poor

**Signature of the Reporting Officer\* with  
Office seal**

\* Regarding performance report/clients certificate, for works carried out for Government/ public sector companies, the certificate should be signed by the concerned Executive Engineer or an officer in an equivalent or higher rank. For works carried out for Private companies, Copy of TDS has to be submitted for proving the credentials/contract amount.

(i) All columns should be filled in properly

(ii) The Client Certificates should be submitted for each of the Prequalification work/s



**FORMAT OF BANKERS' CERTIFICATE**

1. Composition of the firm (whether Partnership/ Private Limited/ Proprietorship/ Public Limited.)
2. Name of the Proprietor/ Partners/ Directors of the firm.
3. Turnover of the firm for the last 3 financial years (year wise).  
2018-19  
2017-18  
2016-17
4. Credit facility/ Overdraft facility enjoyed by the firm.
5. Dealings
6. The period from which the firm has been banking with your bank.
7. Any other remarks.

You may also kindly forward your opinion whether the above firm is considered financially sound to be entrusted with the contract for works estimated to cost Rs. 10 Lakhs.

(Signature)

For the Bank

Note:

Bankers' certificates should be on letter head of the Bank, sealed in cover addressed to RBI.

In case of partnership firm, certificate should include names of all partners as recorded with the Bank

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL**

(On Non-Judicial Stamp Paper of appropriate value)

Know all men by these presents, We.....(Name of the Bidder and address of their registered office) do hereby constitute, appoint and authorize Mr. / Ms. ....  
.....(Name and residential address of Power of Attorney holder) who is presently employed with us and holding the position of .....as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar including signing and submission of all documents and providing information / responses to RBI, representing us in all matters before RBI, and generally dealing with RBI in all matters in connection with our proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Note:

Power of Attorney should be properly stamped and notarized

Power of Attorney furnished shall be irrevocable.

Signature/(s) of the Bidder

Name/(s)

Stamp/Seal of the Bidder

(NB: This guarantee will require stamp duty as applicable in the state, where it is executed and shall be signed by the official whose signature and authority shall be verified).

**Proforma for Bank Guarantee In Lieu Of Earnest Money Deposit**

(To be submitted on non-judicial stamp paper of appropriate value purchased in the name of the issuing Bank)

This deed of guarantee made this \_\_\_\_\_ day of \_\_\_\_\_ two thousand \_\_\_\_\_ between \_\_\_\_\_ (Name of Banker) having its registered office at \_\_\_\_\_ (place) and one of its local offices at \_\_\_\_\_ (hereinafter referred to as the Surety), and Reserve Bank of India, an institution constituted by the Reserve Bank of India Act, 1934, having its Central Office at Central Office Building, Shahid Bhagat Singh Road, Mumbai-400 001 INDIA (hereinafter referred to as the Bank).

WHEREAS \_\_\_\_\_ (Tenderer's name hereinafter referred to as 'Tenderer') a Company registered under \_\_\_\_\_ and having its registered office at \_\_\_\_\_ is bound to deposit with the Bank by way of earnest money INR \_\_\_\_\_ (INR \_\_\_\_\_ only) in connection with its Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main Office Building at Bhubaneswar and the specifications and terms and conditions enclosed therein.

WHEREAS the Tenderer as per clause No. \_\_\_\_\_ Section II of Instructions to e-Tenderers and special conditions has agreed to furnish a Bank Guarantee valid up to \_\_\_\_\_ instead of deposit of earnest money in cash.

NOW THIS WITNESSETH:

1. That the Surety in consideration of the above e-Tender made by the Tenderer to the Bank hereby undertakes to guarantee payment on demand without demur to the Bank the said amount of INR \_\_\_\_\_ (INR \_\_\_\_\_ only) within one week from the date of receipt of the demand from the Bank on presentation of this deed of guarantee, which the Tenderer is bound to deposit with the Bank by way of earnest money in connection with his e-Tender.
2. This guarantee shall not be affected by any infirmity or irregularity on the part of the Tenderer or by the dissolution or any change in the constitution of the Bank, Tenderer or the Surety.
3. The Bank shall be eligible to make any claim under this guarantee if the Tenderer after submitting his e-Tender, rescinds from his offer or modifies the terms and conditions thereof in a manner not acceptable to the Bank or expresses his unwillingness to accept the order after the Bank has decided to place order with the Design, Supply, Installation, Testing and Commissioning of net meter in the HV side and 5 KWp grid interactive SPV based Solar Power System for Bank's Main

Office Building at Bhubaneswar. The Banks' decision in this regard shall be final and binding.

4. The Surety shall not and cannot revoke this guarantee during its currency except with previous consent of the Bank in writing.
5. Notwithstanding anything contained in the foregoing, the Surety's liability under the guarantee is restricted to INR \_\_\_\_\_ (INR \_\_\_\_\_ only).
6. This guarantee shall remain in force and effective up to \_\_\_\_\_ and shall expire and become ineffective on intimation thereof being given to the Surety by the Bank in which event this guarantee shall stand discharged.
7. The Surety will make the payment pursuant to the demand notice issued by the Bank, notwithstanding any dispute that may exist or arise between the Tenderer and the Bank or any other person.
8. Any forbearance, act or omission on the part of the Bank in enforcing any of the conditions of the said e-Tender or showing of any indulgence by the Bank to the Tenderer shall not discharge the Surety in any way and the obligations of the Surety under this guarantee shall be discharged only on the intimation thereof being given to the Surety by the Bank.
9. Notwithstanding anything contained hereinabove, unless a demand or claim under this guarantee is made on the Surety in writing on or before \_\_\_\_\_, the Surety shall be discharged from all liabilities under guarantee thereafter.
10. The Surety has the power to issue this guarantee under its Memorandum and Articles of Association and the person who is hereby executing this deed has the necessary powers to do so under the Power of Attorney granted to him by the Surety.

For and on behalf of

(Banker's Name and Seal)

Branch Manager

(Banker's seal)

**Proforma of Bank Guarantee for Security Deposit**

(To be submitted on Non-judicial stamp paper of appropriate value purchased in the name of the issuing bank)

No. \_\_\_\_\_ Date \_\_\_\_\_

To:

The Regional director  
Reserve Bank of India  
Estate Department  
Bhubaneswar

Dear Sir

In consideration of your agreeing to accept the security deposit of INR \_\_\_\_\_ (INR \_\_\_\_\_ only) furnishable to you by M/S \_\_\_\_\_ (hereinafter referred to as “the Contractor”) in terms of their contract with you for Design, Supply, Installation, Testing and Commissioning of net meter on the HV side and 5 KWp grid interactive SPV based solar plant for Bank’s Main Office building and as per their e-Tender dated \_\_\_\_\_ and your Special Conditions of Contract and other e-Tender documents relating thereto subject to the conditions and alterations mutually agreed upon the set forth or referred to in your Contract dated \_\_\_\_\_ in the form of guarantee from us in the manner hereinafter contained, we \_\_\_\_\_ (Name of the Bank) do hereby covenant and agree with you as follows:

1. We undertake to indemnify you and keep you indemnified from time to time to the extent of INR \_\_\_\_\_ INR(\_\_\_\_\_ only) against any loss or damage caused to or suffered by or that may be caused to or suffered by you by reason of any breach or breaches on the part of the Contractor of any of the terms and conditions contained in the said Contract and in the event of the Contractor making any default or default in carrying out any of the work under the said Contract or otherwise in the observance and performance of any of the terms and conditions relating thereto in accordance with the true intent and meaning thereof, we shall forthwith on demand pay to you such sum or sums not exceeding in total the said sum of INR \_\_\_\_\_ ( INR\_\_\_\_\_ only) as may be claimed by you as your losses and/or damages, costs, charges or expenses by reason of such default on the part of the Contractor.
2. Notwithstanding anything to the contrary, your decision as to whether the Contractor has made any such default or defaults and the amount or amounts to which you are entitled by reasons thereof will be binding on us and we shall not be entitled to ask you to establish your claim or claims under this Guarantee but will pay the same forthwith on your demand without any protest or demur.

3. This guarantee shall continue and hold good until it is released by you on the application by the Contractor after expiry of the relative guarantee period of the said Contract and after the contractor had discharged all his obligations under the said Contract and produced a certificate of due completion of the work under the said contract and submitted a "No Demand Certificate", provided always that this guarantee shall in no event remain in force after the day of \_\_\_\_\_ without prejudice to your claim or claims arisen and demanded from or otherwise notified to us in writing before the expiry of six months from the said date which will be enforceable against us notwithstanding that the same is or are enforced after the said date.
4. Should it be necessary to extend this guarantee on account of any reason whatsoever, we undertake to extend the period of this Guarantee on your request till such time as may be required by you. Your decision in this respect shall be final and binding on us.
5. You will have the fullest liberty without effecting this guarantee from time to time to vary any of the terms and conditions of the said contract or extend the time of performance of the Contractor or to postpone for any time or from time to time any of your rights or powers against the Contractor and either to enforce or forbear to enforce any of the terms and conditions of the said Contract and we shall not be released from our liability under this guarantee by the exercise of your liberty with reference to matters aforesaid or by reason of any time being given to the Contractor or any other forbearance, act or omission on your part or any indulgence by you to the Contractor or by any variation or modification of the said contract or any other act, matter or things whatsoever, which under the law relating to sureties would but for the provisions hereof have the effect of so releasing us from our liability hereunder provided always that nothing herein contained will enlarge our liability hereunder beyond the limit of INR \_\_\_\_\_ (INR \_\_\_\_\_ only) as aforesaid.
6. This guarantee shall not in any way be affected by your taking or varying or giving up any securities from the Contractor or any other person, firm or company on its behalf or by the winding up, dissolution, insolvency or death as the case may be, of the Contractor.
7. In order to give full effect to the guarantee herein contained you shall be entitled to act as if we were your principal debtors in respect of all your claims against the Contractor hereby guaranteed by us as aforesaid and we hereby expressly waive all our rights of surety-ship and other rights, if any, which are in any way inconsistent with any of the provisions of this guarantee.
8. Subject to the maximum limit of our liability as aforesaid, this guarantee will cover all your claim or claims against the contractor from time to time arising out of or in relation to the said contract and in respect of which your claim in writing is lodged on us before expiry of six months from the date of expiry of this guarantee.

9. Any notice by way of demand or otherwise hereunder may be sent by special courier, telex, fax or registered post to our local address as aforesaid and if sent by post, it shall be deemed to have been given when the same has been posted.
10. This guarantee and the powers and provisions herein contained are in addition to and not by way of limitation of or substitution for any other guarantee or guarantees heretofore given to you by us (whether jointly with others or alone) and now existing uncanceled and that this guarantee is not intended to and shall not revoke or limit such guarantee or guarantees.
11. This guarantee shall not be affected by any change in the constitution of the contractor or us nor shall it be affected by any change in your constitution or by any amalgamation or absorption thereof or therewith but will ensure to the benefit of and be available to and enforceable by the absorbing or amalgamated company or concern.
12. Any forbearance, act or omission on the part of the Bank in enforcing any of the conditions of the said e-Tender or showing of any indulgence by the Bank to the e-Tenderer shall not discharge the Surety in any way and the obligations of the Surety under this guarantee shall be discharged only on the intimation thereof being given to the Surety by the Bank.
13. This guarantee is irrevocable during the period of its currency and shall not be revoked without your previous consent in writing.
14. We further agree and undertake to pay you without demur the amount demanded by you in writing notwithstanding any difference or dispute or controversy that may exist or arise between you and contractor or any other person.
15. Notwithstanding anything contained herein above our liability under this guarantee is restricted to INR \_\_\_\_\_ (INR \_\_\_\_\_ only). Unless a written claim is lodged on us for payment under this guarantee within six months from the date of expiry, including extensions if any, of this guarantee all your rights under the guarantee shall be forfeited and we shall be deemed to have been released and discharged from all liabilities there under, irrespective of whether or not the original guarantee is returned to us.
16. We have power to issue this guarantee in your favour under the Memorandum and Articles of Association of our Bank and the undersigned has full power to execute this Guarantee under the Power of Attorney granted to him by the Bank.

For & on behalf of  
(Bankers Name & Seal)

BRANCH MANAGER  
(Bankers Seal)

Address -----

### Unpriced BOQ (Schedule of quantities)

**Design, Supply, Installation, Testing & Commissioning of Net meter on HV side and 5 KWp grid Interactive SPV based Solar Power Plant for Bank's Main Office Building at Bhubaneswar.**

Sl.No.	Description of Item (s)	Qty.	Unit	Rate in Rs.	Amount in Rs.
	<b>Capital Cost of the system</b>				
A.	<b>5 KWp SPV based solar plant</b>				
1	Design, supply, installation, testing and commissioning of solar photovoltaic (SPV) based grid interactive Solar power plant of minimum <b>5 KWp</b> with a guaranteed annualized AC energy output of <b>5000 Kilo watt hour (KWH) per year</b> during the first ten years of operation as per the technical specifications, the scope of work and terms and conditions mentioned in part I of the tender (Except pipe earthing and GI strip for earthing).	1	PER JOB		
2	Providing G.I. pipe earthing station using minimum 2.5 mtr. Long, 50 mm. dia. G.I. pipe complete as per IS:3043	2	Nos.		
3	Supply and fixing 25x3 GI Sq.mm. earth strip on wall / ceiling / existing trenches with necessary spacers and saddles at 300mm. intervals.	150	Mtrs.		
B.	<b>Installation of net meter in the HV side</b>				
4.	Supply and installation of net meter with meter box on the HV side with requisite CT / PT arrangement and control circuit as required.  The work also includes installation of a generation meter (CT /PT based) duly certified by MRT division of CESU at the ground level.				



	It also includes the combiner circuit with MCCB of requisite capacity for including the existing 2 units of 20 KWp each with the new 5 KWp plant installed. The combiner box must be mounted on stand or wall and requisite SPD must be provided (As per norms of CESU and electrical inspector).				
5.	Supply and laying of 4 core 50 sq. mm Copper armoured cable along the wall or in trenches of not more than 0.5 meter supported by sand and brick filling as per IS standard.	250	RM		
C.	<b>Liasioning with CESU</b>				
6.	Liasioning with M/s CESU / Electrical Inspector or any other statutory authority as applicable for obtaining necessary and valid permission for  (i) the existing 2 X 20 KW plant and proposed 5 KW plant  (ii) for complete installation, testing and commissioning of net metering (3- phase bi-directional energy meter).  The firm has to submit the requisite permission from CESU & electrical inspector obtained in the name of the Bank.	1	Per Job		
	*Total Capital Cost i.e. A +B+C (1+2+3+4+5+6)				
D	Rate for comprehensive Annual Maintenance contract as per the scope of work and terms and conditioned mentioned in the Part I of the tender. The rate shall include for all the taxes and duties as applicable.			Per Annum	
	Total Owning Cost Rupees [ *Total capital cost + ( D X 7.0476) ]				

Date

Place

Seal and Signature of the Tenderer



**संपदा विभाग**  
Estate Department  
भारतीय रिजर्व बैंक भुवनेश्वर  
Reserve Bank of India, Bhubaneswar

**E-Tender – RBI/Bhubaneswar/Estate/19-20/ET/392**

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**DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF NET METER IN THE HV SIDE AND 5 KWP GRID INTERACTIVE SPV BASED SOLAR POWER PLANT FOR BANK'S MAIN OFFICE BUILDING.**

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**Part -II**

Name of Tenderer: \_\_\_\_\_

Address: \_\_\_\_\_

Estate Department  
2<sup>nd</sup> floor, Reserve Bank of India, Pt. J. L. Nehru Marg, Bhubaneswar - 751001, Odisha,  
India

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## Part – II (Price bid)

**Design, Supply, Installation, Testing & Commissioning of Net meter on HV side and 5 KWp grid Interactive SPV based Solar Power Plant for Bank's Main Office Building at Bhubaneswar.**

Sl.No.	Description of Item (s)	Qty.	Unit	Rate in Rs.	Amount in Rs.
	<b>Capital Cost of the system</b>				
A.	<b>5 KWp SPV based solar plant</b>				
1	Design, supply, installation, testing and commissioning of solar photovoltaic (SPV) based grid interactive Solar power plant of minimum <b>5 KWp</b> with a guaranteed annualized AC energy output of <b>5000 Kilo watt hour (KWH) per year</b> during the first ten years of operation as per the technical specifications, the scope of work and terms and conditions mentioned in part I of the tender (Except pipe earthing and GI strip for earthing)	1	PER JOB		
2	Providing GI pipe earthing station using minimum 2 and half mtr Long, 50 mm diameter GI pipe complete as per IS 3043	2	Nos.		
3	Supply and fixing 25x3 GI Sqmm earth strip on wall or ceiling or existing trenches with necessary spacers and saddles at 300mm intervals	150	Mtrs.		
B.	<b>Installation of net meter in the HV side</b>				
4.	Supply and installation of net meter with meter box on the HV side with requisite CT or PT arrangement and control circuit as required The work also includes installation of a generation meter (CT or PT based) duly certified by MRT division of CESU at the ground level It also includes the combiner circuit with MCCB of requisite capacity for including the existing 2 units of 20 KWp each with the new 5 KWp plant installed The combiner box must be mounted on stand or wall and requisite SPD must be provided (As per norms of CESU and electrical inspector)				

5.	Supply and laying of 4 core 50 sq mm Copper armoured cable along the wall or in trenches of not more than half meter supported by sand and brick filling as per IS standard	250	RM		
C.	<b>Liasioning with CESU</b>				
6.	Liasioning with Ms CESU or Electrical Inspector or any other statutory authority as applicable for obtaining necessary and valid permission for (i) the existing 2 X 20 KW plant and proposed 5 KW plant (ii) for complete installation, testing and commissioning of net metering (3 phase bi directional energy meter) The firm has to submit the requisite permission from CESU electrical inspector obtained in the name of the Bank	1	Per Job		
*Total Capital Cost i.e. A +B+C (1+2+3+4+5+6)					
D	Rate for comprehensive Annual Maintenance contract as per the scope of work and terms and conditioned mentioned in the Part I of the tender The rate shall include for all the taxes and duties as applicable			Per Annum	
Total Owning Cost Rupees [ *Total capital cost + ( D X 7.0476) ]					

Date

Place

Seal and Signature of the Tenderer