



**RESERVE BANK OF INDIA  
ESTATE DEPARTMENT  
BHOPAL**

**NOTICE INVITING E- TENDER**

This is an open tender enquiry. However, only those bidders/vendors who are qualified for the work as per qualification criteria stipulated in the tender are eligible to participate in this tender. Bidders are advised to upload the documents in support of their eligibility for the tender during the submission.

<b>a. e-Tender Name</b>	Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based rooftop Solar Power System for 50 KWp at RBI Staff Quarters (Avantika), Char Imli, Bhopal
<b>b. e-Tender no</b>	<b>RBI/Bhopal/Estate/145/20-21/ET/207</b>
<b>c. Mode Of Tender</b>	<b>e-Procurement System</b> (Online Part I - Techno-Commercial Bid and Part II - Price Bid through <a href="http://www.mstcecommerce.com/eprochome/rbi">www.mstcecommerce.com/eprochome/rbi</a> )
<b>d. Date of NIT available to parties to download</b>	<b>11 AM on October 19, 2020 to 5 PM on November 8, 2020</b>
<b>e. Pre-Bid meeting (Online)</b>	<b>November 16, 2020 at 11:00 AM, Estate Department, RBI ,Bhopal</b>
<b>f. Earnest Money Deposit</b>	<b>₹ 56,000.00 (₹ Fifty Six Thousand Only) in the form of NEFT/BG (as per Annexure J) / NEFT in favour of Reserve Bank of India, Bhopal to be delivered in physical form at Estate Dept. on or before 02:00 PM of November 26, 2020</b> Reserve Bank of India, Hoshangabad road, Bhopal - 462011 <b>Details for NEFT</b> Beneficiary Name: ESTATE <space> <b>Your Firm's Name</b> Beneficiary Ac No: <b>186003001</b> IFSC: <b>RBIS0BLPA01</b>
<b>g. Last date of submission of EMD</b>	<b>November 26, 2020 by 2:00 PM</b>

h. Date of Starting of e-Tender for submission of on line Techno-Commercial Bid and price Bid at <a href="http://www.mstcecommerce.com/eprchome/rbi">www.mstcecommerce.com/eprchome/rbi</a>	<b>November 17, 2020 from 02:00 PM to November 26, 2020 up to 2:00 PM</b>
i. Date of closing of online e-tender for submission of Techno-Commercial Bid & Price Bid	<b>November 26, 2020 by 2:00 PM</b>
j. Date & time of opening of Part-I (i.e. Techno-Commercial Bid)  Date & Time of opening of Part- II ( Price Bid)	<b>November 26, 2020 by 3:00 PM</b>  opening of price bid shall be informed separately
k. Transaction Fee	Rs.1400/- (exclusive of GST @18%) To be paid through MSTC Payment Gateway/NEFT/RTGS in favour of MSTC Limited or as advised by M/s MSTC Ltd. <b>Please do not transfer the transaction fee to Reserve Bank of India, Bhopal</b>

#### I. Pre-Qualification criteria:

Online tenders will be allowed to view /download to all firms from 11:00 AM of October 19, 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**

1. The intending tenderers must have minimum 5 years of experience in carrying out grid interactive solar power system installation works for office building/commercial premises.
2. The intending tenderers must have executed successfully similar works as mentioned in para (1) above, during last five years ending September 2020, should be either of the following:
  - (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.
3. Minimum yearly turnover of 100% of the estimated cost during last 3 financial years supported by audited financial statements.
4. Should furnish solvency certificate issued by the Applicant's banker specifically for the purpose of the work, for an amount of **Rs.28.00 lakh.(Annexure 'H')**
5. Tenderers should submit copies of the detailed work order indicating scope and value of works and completion certificate for the qualifying works.
6. Tenderers should also provide a list of completed works with all the details as per the proforma at **Annexure 'N'**.
7. Should have service setup at the place of proposed work or nearby metro city for rendering after sales service.

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

8. The contractor should invariably furnish the below mentioned information in writing and upload copies of the relevant documents along with the Part I of the tender. Further, the contractor should submit the original of the documents to the Bank when demanded to qualify for further tendering process.

(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 the name(s) of the partners, copy of the Articles of association/power of Attorney/any other relevant document.
(b)	Work experience and completion of similar works of specified value during the specified period	Copies of the <b>detailed work orders</b> for the qualifying works (as mentioned in para 1 and 2 above) 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 similar 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. 2017-18, 2018-19 and 2019-20 along with a <b>certificate of Chartered Accountant</b> indicating the turnover for these financial years.
(c)	Creditworthiness of the contractor and their turn over during the specified period	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.
(d)	Name(s) and Address (es) of the Bankers and their present contract executives.	Written information about the names and address of their bankers along with full details like names, postal addresses, e-mail IDs, telephone (land and mobile) nos. fax nos. etc. of the contract 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.
(e)	Details of bank accounts	Full particulars of their bank accounts like account no., type, when opened, etc., should be given.
(f)	Name(s) and address (es) of the Clients and their present contract executives.	Written information about a few of their clients along with full details, like names, postal address, e-mail IDs, telephone (landline and mobile) nos. etc. of the contract 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.

(g)	Details of completed works	The client-wise names of work(s), year(s) of execution of work(s), awarded and actual costs (s) of executed work(s), completion time stipulated in the contracts(s) and actual time taken to complete the work(s), names and full contact-details of the officers/ authorities/ departments under whom the work(s) was/were executed should be furnished.
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9. In the event of intending tenderer's failure to satisfy the Bank, the Bank reserves the right to refuse issuance of tender forms/documents to them.

10. A pre-bid meeting (online mode) of the intending tenderers will be held on November 16, 2020 at 11.00 AM at Estate Department, Main Office Building, Reserve Bank of India, Bhopal. The duly filled in tender documents shall be uploaded on MSTC site till 2:00 PM on November 26, 2020.

11. Tender forms can be downloaded for viewing from the website [www.mstcecommerce.com](http://www.mstcecommerce.com) w.e.f. October 19, 2020 to November 08, 2020 from 11:00 AM.

12. The certificates/documents should be addressed to Regional Director, Reserve Bank of India, Estate Department, Bhopal and shall be uploaded along with the tender.

13. Part I of the tenders will be opened on-line at 3:00 PM on November 26, 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.

14. The client's certificate for qualifying work as mentioned under sl. no. (I) shall be accepted only when the same is signed by an official of the rank of Executive 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 received without the above certificates may be rejected. The Bank shall have the right to independently verify these certificates. Format for clients' report is stipulated **as Annexure 'G'** in Part I of the tender.

15. The Bank will evaluate the said reports before evaluation 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.

16. 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.

Sd/-  
Regional Director  
Bhopal



**Reserve Bank of India  
Estate Department  
Bhopal**

**e-Tender for  
Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV  
Based Roof top Solar Power System of 50 KWp at Reserve Bank's Staff Quarters  
(Avantika), Char Imli, Bhopal**

**Part I**

Name of the tenderer \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Contact \_\_\_\_\_

Email ID \_\_\_\_\_

**Date of Pre-bid meeting (Online) : At 11:00 AM on November 16, 2020**

**Due date for Submission of Tender : By 02:00 PM on November 26, 2020**

**Date of opening of Tender : At 03:00 PM on November 26, 2020**

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6.	Section-V Check list.
7.	Section-VI Technical specifications
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12.	Annexure 'E'- Declaration of Country of Origin
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21.	Annexure 'N' – List of completed works
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(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 the name(s) of the partners, copy of the Articles of association/power of Attorney/any other relevant document.
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(c)	Turnover	<b>Audited financial statements</b> for last three financial years i.e. 2017-18, 2018-19 and 2019-20 along with a <b>certificate of Chartered Accountant</b> indicating the turnover for these financial years.
(c)	Creditworthiness of the contractor and their turn over during the specified period	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.
(d)	Name(s) and Address (es) of the Bankers and their present contract executives.	Written information about the names and address of their bankers along with full details like names, postal addresses, e-mail IDs, telephone (land and mobile) nos. fax nos. etc. of the contract 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.
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		taken to complete the work(s), names and full contact-details of the officers/ authorities/ departments under whom the work(s) was/were executed should be furnished.
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Sd/-  
Regional Director  
Bhopal

## Important instructions for E-procurement

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

1	<p><b><u>Process of e-Tender :</u></b></p> <p><b>A) Registration:</b> The process involves vendor's registration with MSTC E-procurement portal which is <b><u>free of cost</u></b>. 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).</p> <p><b>SPECIAL NOTE:</b> THE TECHNICAL BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT <a href="http://www.mstcecommerce.com/eprchome/rbi">www.mstcecommerce.com/eprchome/rbi</a></p> <p>1).Vendors are required to register themselves online with <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>→ e-Procurement → PSU/Govt depts → Select RBI Logo → Register as Vendor → Filling up details and creating own user id and password → Submit.</p> <p>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).</p> <p><b>Contact person (RBI, Bhopal):</b></p> <p>1. V.Vishwa Murthy,(AM-Elect) – <a href="mailto:vvishwamurthy@rbi.org.in">vvishwamurthy@rbi.org.in</a> – 9008307567, 07552760910</p> <p>2. Satyam Nayak, J.E – <a href="mailto:satyamnayak@rbi.org.in">satyamnayak@rbi.org.in</a> – 9300350324, 07552519592</p> <p>3. R.K.Khandelwal, J.E – <a href="mailto:rkkhandelwal@rbi.org.in">rkkhandelwal@rbi.org.in</a> – 7354759937, 07552519592</p> <p><b>Contact person (MSTC Ltd):</b></p> <p>1. Mr. Shishupal Yadav Assistant Manager – Email ID: <a href="mailto:syadav@mstcindia.co.in">syadav@mstcindia.co.in</a>, <a href="mailto:mstcbhopal@mstcindia.co.in">mstcbhopal@mstcindia.co.in</a> – Mobile: 8826562675, First Floor, Tilhan Sangh Bhawan,1 Arera Hills, MPOILFED Building, Bhopal-462004</p> <p>2. Mr.Mayank Kumar, Assistant Manager – Email ID: <a href="mailto:mkumar@mstcindia.co.in">mkumar@mstcindia.co.in</a>, Mobile: 8269000225, First Floor, Tilhan Sangh Bhawan,1 Arera Hills, MPOILFED Building, Bhopal-462004</p> <p>3. Mr.Ganesh Yadav, BM, Email ID: <a href="mailto:ganeshyadav@mstcindia.co.in">ganeshyadav@mstcindia.co.in</a>, Mobile: 9869043055, First Floor, Tilhan Sangh Bhawan,1 Arera Hills, MPOILFED Building, Bhopal-462004</p> <p>Google hangout ID- (for text chat)- <a href="mailto:mstceproc@gmail.com">mstceproc@gmail.com</a></p>
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	<p><b>B) System Requirement:</b></p> <p>i) Windows 7 or above Operating System ii) IE-7 and above Internet browser.</p> <p>iii) Signing type digital signature iv) Latest updated JRE 8 (x86 Offline) software to be downloaded and installed in the system.</p> <p>To disable “Protected Mode” for DSC to appear in The signer box following settings may be applied.</p> <ul style="list-style-type: none"> <li>➤ Tools =&gt; Internet Options =&gt;Security =&gt; Disable protected Mode, if enabled- i.e, Remove the tick from the tick box mentioning “Enable Protected Mode”. Other Settings:</li> <li>➤ Tools =&gt; Internet Options =&gt; General =&gt; Click on Settings under “Browsing history/Delete Browsing History” =&gt; Temporary Internet Files =&gt; Activate “Every time I Visit the Webpage”.</li> <li>➤ 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 <a href="https://www.mstcecommerce.com">https://www.mstcecommerce.com</a> once)</li> </ul>
2	<p>The Techno-commercial Bid and the Price Bid shall have to be submitted online at <a href="https://www.mstcecommerce.com/eprochome/rbi">https://www.mstcecommerce.com/eprochome/rbi</a>.Tenders will be opened electronically on specified date and time as given in the Tender.</p>
3	<p>All entries in the tender should be entered in online Technical &amp; Commercial Formats without any ambiguity.</p>
4	<p><b>Special Note towards Transaction fee:</b></p> <p>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.</p> <p>Transaction fee is non-refundable. A vendor will not have the access to online e-tender without making the payment towards transaction fee. <b>NOTE:</b> 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.</p>
5	<p>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).</p>
6	<p><u>E-tender cannot be accessed after the due date and time mentioned in NIT.</u></p>
7	<p>a) The process involves Electronic Bidding for submission of Technical and Commercial Bid.</p> <p>b) The vendor(s) who have submitted transaction fee can only submit their Technical Bid and Commercial Bid through internet in website: <a href="https://www.mstcecommerce.com">https://www.mstcecommerce.com</a> → e-procurement →PSU/Govt depts→ Login under RBI → My menu→ Auction Floor Manager→ live event →Selection of the live Event.</p> <p>c) The vendor should allow running JAVA application. This exercise has to be done</p>

	<p>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.</p> <p>d) 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 filled up and then vendor should click on "save" to record their Commercial bid. Then once both the Technical bid &amp; Commercial bid has been saved, the vendor can click on the "Final submission" button to register their bid.</p> <p>e) Vendors are instructed to use <i>Attach Doc button</i> to upload documents. Multiple documents can be uploaded.</p> <p>f) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid.</p> <p>g) During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else.</p> <p>h) The e-tender floor shall remain open from the pre-announced date &amp; time and for as much duration as mentioned above.</p> <p>i) 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.</p> <p>j) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> <p>k) Buyer 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.</p> <p>l) 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 &amp; conditions for the tender.</p>
	Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
	<b><u>No deviation to the technical and commercial terms &amp; conditions are allowed.</u></b>
	The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
	Vendors are requested to read the vendor guide and see the video in the page_ <a href="https://www.mstcecommerce.com/eprochome/rbj">https://www.mstcecommerce.com/eprochome/rbj</a> to familiarize them with the system before bidding.

**Important Note**

In the price bid due to number of words limitation of 1000 characters, complete description could not be accommodated and description given thereof is brief. Before quoting rates, all the contractors must read the complete details of each items given in the un-priced bill of quantities (BOQ) given in Part-I of the tender. For execution and rate purpose, the details given in Unpriced Bill of Quantities in Part-I of the tender will be implemented.

**Section I**  
**Form of Tender**

Place \_\_\_\_\_

Date \_\_\_\_\_

To  
Regional Director  
Reserve Bank of India  
Estate Department  
Bhopal-462011

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 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 Grid Interactive SPV Based Roof top Solar Power System of 50 KWp at RBI Staff quarters (Avantika), Char Imli, Bhopal
(b)	Estimated cost	Rs. 28.00 Lakhs
(c)	Mode of payment	As per clause 2.12 of General Instructions to Contractors and Special Conditions.
(d)	Earnest Money	Rs.56,000/-
(e)	Time allowed for completion of Work	Three months from tenth day of the date of award of work.

2. We also agree that our tender will remain **valid for acceptance by the Bank for 90 days from the date of opening of Part I of the 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 tender, as per enclosed proforma ([Annexure – J](#))
3. Should this Tender be accepted, I/we hereby agree to abide by and fulfil all the Terms and Conditions of the 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 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 tender either in full or in part without assigning any reason therefor. We have deposited a sum of Rs.56,000/- as earnest money 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 submitted in two parts in separate sealed envelopes. 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 \_\_\_\_\_  
\_\_\_\_\_

## Section II

### General Instructions to Tenderers and Special conditions

#### 2.1 Commercial conditions:

2.1.1 E-tenders are invited for **Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based Roof top Solar Power System for 50 KWp at RBI Staff Quarters (Avantika), Char Imli, Bhopal** for an estimated cost of Rs.28.00 lakh from eligible firms.

#### 2.1.2 Eligibility Criteria:

Online tenders will be allowed to view /download to all the firms from 11:00 AM of October 19, 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 tenderers must have 5 years of experience in successfully carrying out grid interactive solar power system installation works for large office buildings/commercial premises. The work should have been completed on or before September 2020.
- Minimum yearly turnover of 100% of the estimated cost during last 3 financial years supported by audited financial statements.
- Completed works of Design, Supply, Installation, Testing and Commissioning of grid interactive SPV based Solar Power System 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.

Above works should be done during the last 5 years ending September 2020.

- Should have service setup at the place of proposed work or nearby metro for rendering after sales services.

Tenderers should submit 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.
- Audited Financial statement of turnover for last 3 years.

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



### 2.1.3 Tender submission:

The tender shall be uploaded/submitted in two parts, viz, "Part I – Technical and Commercial" and "Part II – Price bid", respectively **“Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based Roof top Solar Power System for 50 KWp at RBI Staff quarters (Avantika), Char Imli, Bhopal and** addressed to Regional Director, Reserve Bank of India, Bhopal. Telegraphic, Fax and E-mail tenders will not be accepted. The full name, postal address, e-mail address and telefax / telephone number of the tenderer shall be written on the bottom left corner of the sealed envelope. Insertions, post scripts, additions and alterations shall not be valid unless confirmed by the tenderers signature. All copies of the tenders should be complete in all respects with all attachments/enclosures/ annexures.

2.2 Tenderers are advised to use only the forms (tender books) issued by the Bank / forms. In case the tenders are submitted from downloaded tender forms from the MSTC website, if any change/modification thereto is found subsequently, such tenders are liable for disqualification. However, if they desire to submit additional information, they may do so on their own letter head/paper. Each page of the forms shall be signed and returned.

2.3 Tenders application for **“Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based Roof top Solar Power System of 50 KWp at RBI Staff quarters (Avantika), Char Imli, Bhopal”** as the case may be and addressed by name to **Regional Director, Estate Department, Reserve Bank of India, Bhopal should uploaded not later than 14:00 hours on November 26, 2020.** No tender will be accepted after 14:00 hours on **November 26, 2020** under any circumstances whatsoever.

2.4 a) Intending tenderers shall pay as Earnest Money a sum of Rs. 56,000/- (Rupees Fifty Six thousand Only) by a NEFT or Bank Guarantee in a form ([Annexure-J](#)) acceptable to the Bank in favour of Reserve Bank of India, drawn on a scheduled bank before uploading/submission of the tender. The Earnest Money Deposit of the successful 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 will be released after virtual completion of the work.

b) On receipt of intimation from the Bank of the acceptance of his / their 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 and the Schedule of Conditions but the written acceptance by the Reserve Bank of India of a 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.

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

2.5.1 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 in envelop superscribing Part I.

2.5.2 Part I of the tender as submitted **along with EMD** shall contain the following:

- a) Power of Attorney / authorization with the seal of the company/firm in the name of the person signing the tender documents.
- b) List of deviation, if any, in technical specification.
- c) Detailed proposed layout drawing and full equipment details.
- d) A letter from the OEM, authorising the bidder to participate in the 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-vis those given under the specifications contained under this tender document, the specifications and dimensions given in this 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 tender & submit an undertaking in this regard. ([Annexure - B&C](#))
- i) The tenderer should have maintenance set-up at Bhopal, 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.

**2.5.3 The Tenderers are advised to visit the site of installation and acquaint themselves of the site conditions before quoting the rates.**

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

2.5.5 The 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.

2.5.6 All information, correspondence letters shall be addressed to Regional Director, Estate Department, Reserve Bank of India, Bhopal.

## 2.6 Price bid

The "Price bid", to be filled online through MSTC website

- (a) This part shall contain prices in Indian Rupees only with break-up of price as per format (Part II) detailed on MSTC site. No other enclosure is permitted in Part II. Change of terms and conditions and technical deviations, if any, found in Part II of the 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 tender form must be filled in English, if any of the documents is missing or unsigned, the tender may be considered invalid by the Bank in its discretion.
- (c) All erasures and alterations made while filling the tender must be attested by initials of the tenderer. Overwriting of figures is not permitted. Failure to comply with either of these conditions will render the tender void at the Bank's option.
- (d) No request for any change in rate or conditions after the opening of the part II of the tender will be entertained.
- (e) 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.
- (f) 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.

## 2.7 Opening of Tender

Part I of the tenders will be opened on **November 26, 2020** at 15:00 Hrs. in the presence of tenderers. Price bid (Part II) of only those 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 tenders.

## **2.8 Brief Scope of Work**

2.8.1 The scope of work shall include the following.

Design and Delivery of all equipment materials for the captioned work to Bank's site at RBI, Bhopal including insurance, packing, handling, transporting, loading/unloading etc. at site.

2.8.1.1 Erection, Testing, Commissioning of Roof top Solar Power System and handing over the system to Bank.

2.8.1.2 Providing regular Inspection and Upkeep of system inclusive of periodic service etc.

2.8.1.3 Approval, if any, of local statutory authorities for connection to the grid

2.8.2 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:

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

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

## **2.9 Validity of Tender**

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

## **2.10 Lowest Tender Not Necessarily To Be Accepted**

2.10.1 The Bank is not bound to accept the lowest or any tender or to assign any reason for non-acceptance.

2.10.2 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 tenders, even though the Bank may elect to modify/withdraw the tender.

## 2.11 Earnest Money, Security Deposit & Security during Defect liability period

2.11.1 All tenderers shall deposit Earnest Money of Rs.56,000/- by NEFT in favour of Reserve Bank of India, Bhopal, from any Scheduled Bank. The Earnest Money Deposit (EMD) is also acceptable in the form of Bank Guarantee in the approved format ([Annexure 'J'](#)). 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 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. 2.11.3.

2.11.2 All compensation or other sums of money payable by the Contractor to the Employer 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.

2.11.3 The tenderer shall furnish a **Bank guarantee of 10% of the contract value** as security for due fulfilment of terms and obligation of defects liability period and Performance Bank Guarantee from the date of commissioning and handing over of the works as specified in the tender to the Bank. The amount of Bank Guarantee should be valid for ten year.

## 2.12 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) 60% of the quoted rates after receipt of the material at site 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 risks during transit, storage, installation, commissioning, testing and handing over including third party liabilities and fire as mentioned in tender document Part I.

- 2) Balance 40 % of the quoted rates against erection, testing and **commissioning and handing over of the entire system and on submission of BG as per clause 2.11.3 and submission of final approval cum sanction letter from CEIG, M.P and MPMKVCL (formerly MPEB).**

### **2.13 Taxes**

The prices quoted shall be deemed to have included all taxes, custom duty, excise duty, local levies, works contract tax, GST 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. As per Indian laws, income tax will be deducted at source and a certificate for the same will be issued to the contractor. No additional amount will be paid by the bank except the tender amount.

### **2.14 Insurance**

The contractor shall, within 14 days 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 employer 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 "Employer" only. The contractor shall deposit the policy and receipts for the premium with the employer within twenty one days from the commencement of the works. In default of the contractor, insuring as provided above, the employer 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 Employer 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 (Contractors All Risk Policy equal to contract value )
- Workmen compensation policy for the employees of the contractor at site.
- Third party liability policy for a total of Rs.28.00 lakh and with a limit of Rs.5 lakh per accident.
- Fire and due to bad weather policy.

**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.

## **2.15 Completion Period**

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.

## **2.16 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" of the contract at the rate **0.25% of the estimated cost 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 Employer may deduct such damages from any money due to the Contractor.

2.16.1 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.

2.16.2 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.

## **2.17. Warranty/ Defects Liability Period.**

2.17.1 (a) The entire system shall be warranted against any manufacturing/design/ installation defects etc., for a minimum 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 fortnightly or more depending upon the weather conditions.



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

There will be a **penalty of 500/- per day subject to maximum of 50% 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.

2.17.2 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.

2.17.3 Apart from this it shall include cleaning of the panels, on fortnightly basis from the date of hand over of the plant.

**2.17.4 Penalty for Reduced Generation during initial 5 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:

Actual output for the year under reference = A (KWh)

Guaranteed output of the system as per the contract = B (KWh)

Compensation to be paid to RBI in case of reduced generation (Rs)  
= (B-A) X (Tariff X 2)

(For first five years 100% output, next five years 90% output)

**2.18. Comprehensive Annual Maintenance Contract (CAMC) 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.

(b) The system shall be inspected, upkeep/serviced/cleaned periodically. The periodicity shall be fortnightly or more 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 spare 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 CAMS:**

During the comprehensive annual maintenance service period (after DLP period), any fault in the system shall be rectified within two 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.500/- per day subject to maximum of 50% of the annual maintenance charges**, if the defect in the system is not rectified within the period of two 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 (CAMS):**

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 contract period of one year after one year warranty. While renewing the contract the new contract amount will be arrived at based on following formula:

$AC = AP [(15+50x(EPIC/EPIP)+25x(CPIC/CPIP))] x (1/100)$	
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 on or before completion of the main work. 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. In this respect the contractor shall maintain at site 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 rate shall include fortnightly

cleaning of the panels on a regular basis.

## **2.19 Packing and Dispatch**

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 Reserve Bank Staff Quarters (Avantika), Char Imli, Bhopal.

## **2.20 Signing of Contract Agreement**

- 2.20.1 The General instructions to the tenderers and special conditions, conditions hereinbefore referred to Conditions of Contract and Technical Specifications and drawings enclosed with the 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.
- 2.20.2 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 tender documents should be signed for his/their having acquainted himself/themselves in the general conditions of contract, Technical specifications, etc.
- 2.20.3 The 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 tender may be rejected.
- 2.20.4 On receipt of intimation from the Bank of the acceptance of his/their 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 tender in itself will constitute a binding agreement between the Reserve Bank of India and the person so tendering, whether such contract is or is not subsequently executed.
- 2.20.5 The contractor shall not assign the contract. He shall not sublet any portion of the contract except with the written consent of the Employer. In case of breach of these conditions, the Employer may serve a notice in writing on the Contractor rescinding the contract whereupon the security deposit shall stand forfeited to the Employer, without prejudice to his other remedies against the Contractor.

## **2.21 Sufficiency of Schedule of Quantities**

- 2.21.1 The Contractor shall be deemed to have satisfied himself before tendering as to the

correctness and sufficiency of his 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.

2.21.2 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. However, during actual execution of work if the quantities of any of the items of work exceeds by more than 25% of the tender quantities, the quantities of such items executed, by the authority of the Architects of the project and with the concurrence of the employer, in excess of 25% of the tender quantity shall be considered as an extra item of work for which the contractors shall submit fresh rates supported by rate analysis worked on the actual cost basis plus 15% towards establishment charges, contractor's overhead and profit. The rate for all such items of work, being current ones, will not be eligible for price adjustment due to increase or decrease in prices of materials and labour rates as per escalation formula, if any, given in the tender. If any of the items of work is omitted from the accepted tender at the sole discretion of the employer, the contractor shall not be entitled to any claim on this account.

## 2.22 Language

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

## 2.23 Right to Accept Part Tender

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

## 2.24 Evaluation of Tender

Tenders will be evaluated on the basis of capital cost of the system and taking into account the effect of annual maintenance charges (AMC) for 9 years. Tenders will, therefore, be evaluated based on the total owning cost (TCO) for 10years which will be arrived at as under:

$$\begin{aligned} \text{TCO} &= \text{Quoted capital cost} + \text{NPV of service contract charges for 9 years.} \\ &= \text{Quoted capital cost} + [\text{AMC} \times \text{Multiplying Factor (MF)}] \quad (\mathbf{MF = 7.0476}) \end{aligned}$$

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
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**2.25 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 any way 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.

**2.26 Drawings**

All required drawings for equipment lay out viz., layout of PV panels and 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.

**2.27 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 Employer, the Contractor shall carry out the same without any extra charge.

**2.28** 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 tender and for entering into a contract and must 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 and all matters appertaining thereto. The Employer's decision in such cases shall be final and shall not be open to arbitration.

**2.29** 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 Employer. Each 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 totaled in order to show the aggregate value of the entire tender.

**2.30** The rates quoted in the 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 centering, 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.

**2.31** 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 Employer does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.

**2.32** 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.

**2.33 Minimum wages to the workmen:** The contractor shall ensure that minimum wages as per statutory requirement are paid to all the workmen.

**2.34 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.

**2.35** 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.

**2.36 Pre Bid Meeting:** An online pre-tender briefing meeting of the intending tenderers will be held at 11:00 hours on **November 16, 2020** either through MSTC/WebEx (will be intimated in due course) 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)

Date:

Place:

Seal and Signature of the tenderer

### **Section (III)**

#### **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 hospitalization.
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:**

**SIGNATURE AND SEAL OF THE CONTRACTOR**



## Section IV

### The Conditions Hereinafter Referred To

#### Interpretation Clause

1. In construing these Conditions, the Specifications, Schedule of Quantities and Contract Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise required.

a) "Employer"	Shall mean the Reserve Bank of India and shall include its assigns and successors.
b) "Contractor" (in the case of partnership)  (in the case of individual)  (in the case of Company)	"Contractor" shall mean _____ and _____ trading in the name and style of _____ and having a place of business at _____ and shall include the partners for the time being of the said firm and the legal representatives of a deceased partner.  "Contractor" shall mean Shri _____ trading in the name and style of _____ and shall include his heirs, successors and legal representatives.  "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 Buildings and erections thereon and any other land (inclusively) as aforesaid allotted by the Employer for the Contractor's use.
d) "This Contract"	Shall mean the Article of Agreement, the Special Conditions, the Conditions, the Appendix, the Schedule of Quantitates and Specifications etc., attached hereto and duly signed.
e) "Notice in writing"	Or written notice 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 Towns Insolvency Act, or the Provincial Insolvency Act or any Act amending such original.
g) "Net Prices"	If in arriving at the contract amount the Contractor shall have added to or deducted from the total of the items in the Tender any sum, either as a percentage or otherwise, then net price of any item in their tender

	shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender as the price of that item a similar percentage or proportionate provided always that in determining the percentage or proportion of the sum so added or deducted by the Contractor the total amount of any Prime cost items and provisional sums of money shall be deducted from the total amount of the 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 “Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based Roof top Solar Power System for 50 KWp at RBI Staff Quarters, Char Imli, Bhopal”.

Word importing persons include firms and corporations. Word importing the singular only also include the plural and vice-versa where the context requires.

## 2. Scope of Contract

The work includes the “**Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid Interactive SPV based Roof top Solar Power system for RBI Staff Quarters, Char Imli at Bhopal**”, as specified. 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 Employer. The Employer may in his absolute discretion and from time to time issue further drawings and/or written instructions, details, directions and explanations, which are hereafter collectively referred to as “Employer’s Instructions” in regard to :

- (a) The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
- (b) Any discrepancy in the Drawings or between the Schedule of Quantities and/or Drawings 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 inspection of any work covered up.
- (g) The amending and making good of any defects under Clause 28 & 29 hereof.

The Contractor shall forthwith comply with and duly execute any work comprised in such Employer’s instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representatives upon the works by the Employer shall, if involving a variation, be confirmed in writing by the Contractor within seven days, and if not dissented from in writing within a further seven days by the Employer, such shall be deemed to be Employer’s instructions within the scope of the Contract.

For the purpose of entering day to day instructions by the employer, the contractor shall maintain at his own cost, a "Site instruction Book" in triplicate in which the instructions shall be entered by the employer. Instructions to the contractor shall be issued through Bank's engineer/ engineer-in-charge.

3. Scope of contract includes, but is not limited to, the following:

- a) The coordination, scheduling and management of work of component suppliers and subcontractors.
- b) Provide materials as specified in the technical specifications.
- c) Assembly, Installation and Commissioning of all items as specified and handing over the completed solar plant to the Employer.

#### 4. **Contractor's Duties**

Contractor's duties include the following:

- a) Provide and pay for labour, materials and equipment, tools, construction equipment and machinery and other facilities and services necessary for the proper execution and completion of the specified works.
- b) Secure and pay for required permits, statutory workman's compensation insurance, fees and licenses necessary for proper execution and completion of required work.
- c) Give required notices.
- d) Promptly submit written notice to the Employer of observed variance of this Specification from legal requirements.
- e) Enforce strict discipline and good order among employees. Do not employ persons unskilled in assigned task.

#### 5. **Variations to be approved by Employer**

The Contractor shall submit a statement of variations giving a quantity and rates duly supported by analysis of rates, vouchers etc. The rates on scrutiny and final acceptance by the Employer shall form a supplementary tender. The Employer shall not be liable for payment of such variations until these statements are sanctioned by it.

#### 6. **Drawings, Schedule Of Quantities & Agreement**

The Contract shall be executed in duplicate and the Contractor shall be entitled to one executed copy for his use. Before the issue of the final certificate to the Contractor, he shall forthwith return to the Employer all Drawings and Specifications.

#### 7. **Work sequence**

The successful Contractor shall include all costs in the tender to complete the works in the time schedule as given by him in the work schedule table. By submitting a tender, the Contractor agrees that they have reviewed the project specifications and drawings, toured the jobsite, and will complete all work in accordance with the overall time period as per the approved schedule. The scheduled time period starts from the 10<sup>th</sup> day after a notice to proceed or contract is received from the Employer. The Contractor shall provide a detailed construction schedule, in accordance with the time frame approved as per the work task schedule, prior to award of the project.

## 8. **Contractor's use of Estate**

The site of the work is an occupied building. Contractor's use of Estate shall be subject to following:-

- a) Confine operations at the site to areas permitted by law, ordinances, permits, Specification, and Employer's specific instructions.
- b) Do not unreasonably encumber the site with materials or equipment. Staging area shall be located as directed by the Employer.
- c) Assume full responsibility for protection and safekeeping of tools and products stored on or off Estate.
- d) Move stored products which interfere with operations of building or the operations of other trades.
- e) Obtain and pay for use of additional storage or work areas needed for operations.

## 9. **Contractor to provide everything necessary at his cost**

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 same to the Employer who shall decide which is to be followed. The Contractor shall provide all works under this specification in full accordance with Health and Safety Regulations.

## 10. **No disruption to normal office functions**

This project is to be executed in an occupied office building. It is essential that the Contractor gives special attention and priority to all matters concerning safety, protection from dust and loose materials, reduction of noise levels, protection from water and air infiltration into building, and maintenance of neat and orderly conditions in and around work areas inside and outside of building. Packaging, scrap materials and demolition debris shall be promptly removed from the building and site on a daily basis.

11. If the contract includes works, which will be disruptive during normal business operations, or would be dangerous to building occupants, said works shall be performed during hours as the Employer dictates. Examples of such work include, without limitation, saw cutting of concrete, jack hammering, welding, metal cutting, pouring concrete, erecting steel or hoisting equipment over occupied portions of the building ETC. The Contractor shall perform such works during Employer dictated hours and shall include all costs in its tender.
12. The Contractor shall keep noise levels below 75 dB during normal building hours. When it is necessary to produce noise above this level, the Contractor shall advise the Employer of such needs and times will be scheduled as directed. The Contractor shall anticipate any excessive noise generating procedures and include an allowance for it in the tender.

13. **Protection of Work and Property**

The Contractor shall install a suitable protective covering on all finished floors in areas where the works are being performed. No material handling equipment shall be permitted on or over finished floors unless said floors have been protected in a manner approved by the Employer. Any damage to building finishes caused by the Contractor shall be refinished at no additional cost to the Employer. The Contractor shall take photographs of any adjacent finishes that may be damaged during the works for a photographic record. The Contractor shall take due care for protection of the work and Employer's property.

14. **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 electric supply and other companies and/or authorities with whose systems, the installation 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 Employer, 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 receive such instructions **within ten days**, 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 No. 22 & 26 thereof.

The Contractor shall bring to the attention of the Employer, 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 Employer.

The Contractor shall indemnify the Employer against all claims in respect of rights, and shall defend all actions arising from 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.

15. **Setting out of work**

The Contractor shall set out the works and shall be reasonable 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 within a period of five 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 Employer.

16. **Materials and workmanship to conform to the descriptions**

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 Employer's instructions, and the Contractor shall upon the request of the Employer furnish him 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 which the Employer may require.

17. **Contractor's superintendence and representative on the works**

The Contractor shall give all necessary personal superintendence during the execution of the works, and as long thereafter as the Employer 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 at work. Any directions, explanations, instructions or notices given by the Employer to such representative shall be held to be given to the Contractor.

**18. Dismissal of Workmen**

The Contractor shall on the request of the Employer, immediately dismiss from the works, any person employed thereon by him who may, in the opinion of the Employer, be incompetent or misconduct himself and such persons shall not be again employed on the works, without the permission of the Employer.

**19. Access to Works**

The Employer and their respective representatives shall at all reasonable times have free access to the works and/or 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 Employer and their representatives necessary for inspection and examination and test of the materials and workmanship. No person not authorised by the Employer except the representatives of public authorities shall be allowed on the works at any time.

**20. Assistant Manager (Tech)/Manager (Tech)**

The term "Assistant Manager (Tech)/Manager (Tech)" shall mean the person appointed and paid by the Employer to inspect the works, the Contractor shall afford the Assistant Manager (Tech) / Manager (Tech), every facility and assistance for inspecting the works and materials and for checking and measuring time and materials. The Assistant Manager (Tech)/Manager (Tech) shall have power to set out works or to revoke, alter, enlarge or relax any requirements of the Contract or to sanction any work, additions, alterations, deviations or omissions or any extra work whatever, except in so far as such authority may be specially conferred by a written order with the prior concurrence in writing of the Employer.

The Assistant Manager (Tech)/Manager (Tech) or any representative of the Employer shall have power to give notice to the Contractor or to his representative of non-approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued by the Assistant Manager(Tech)/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 any stage of the works or after the same is completed.

**21. Assignments and Sub-letting**

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 under-let the Contract or any part share thereof or any interest therein without the prior written consent of the Employer, and no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during their progress.

**22. Alterations, additions, Omissions etc.**

No alteration, omission or variation shall vitiate this Contract but in case the Employer thinks proper at any time during the progress of the works to make any alterations in or additions to or omissions from the works or any alteration in the kind or 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, Stipulation, Specifications or Contract Drawings without the previous consent in writing of the Employer and the value of such extras, alterations, additions or omissions shall in all cases be determined with the prior approval in writing of the Employer in accordance with the provisions of Clause 26 hereof, and the same shall be added to or deducted from the Contract Amount, as the case may be, accordingly.

23. **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 26 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.

24. **Sufficiency of Schedule of Quantities**

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his 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.

25. **Measurement of Works**

The Assistant Manager (Tech)/Manager (Tech) may from time to time intimate to the Contractor and the Employer that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified Agent to assist the Assistant Manager (Tech)/Manager (Tech) 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 Assistant Manager(Tech)/Manager (Tech) shall be taken to be correct measurements of the works. Such measurements shall be taken in accordance with the Mode of Measurement detailed in the Specifications.

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

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

26. **Prices for extra etc. ascertainment of**

The Contractor may, when authorized by Employer, 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 Employer shall, if confirmed by him in writing within seven days, be deemed to have been given in writing

No claim for any extra shall be allowed unless it shall have been executed under provisions of Clause 14, 22 & 23 hereof with the concurrence of the Employer as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

- (a) (i) The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar 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 tender shall determine the value of the 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 executed 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 omission or additions relative to the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Employer the net rate or price contained in the Priced Schedule of Quantities or tender or for any item of the works involves loss or expense beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Employer shall fix such other rate or price as in the circumstances he shall think reasonable and proper.
- (d) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work prices at the net rates in accordance with the local day work rates and wages for the district, provided that in either case vouchers specifying the daily time and materials employed, be delivered for verification to the Employer 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 measurement" stated in the Appendix, or if not stated, then defined in Clause 30 hereof.

**27. Unfixed materials when taken into account to be the property of the Employer**

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

**28. Removal of improper work**



The Employer 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 Employer are not in accordance with the Specifications or the instructions of the Employer, the substitution of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the Drawings and Specifications or instruction, and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order, the Employer shall have the power to employ and pay the 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 Employer from any moneys due, or that may become due, to the Contractor.

**29. Defects after virtual completion**

Any defect, shrinkage, settlement or other faults which may appear within the “Defects Liability Period” stated in the Appendix hereto, if none stated, then within 10 years after the virtual completion of the works, arising in the opinion of the Employer from materials or workmanship not in accordance with the contract, shall upon the directions in writing of the Employer, 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 Employer may employ and pay other persons to amend and make good such defects, other faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Employer or may be deducted by the Employer from any moneys due or that may become due to the Contractor, or the Employer 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 Employer equivalent to the cost of amending such work and in the event of the amount retained as Security Deposit being insufficient, recover the balance from the Contractor, together with any expenses the Employer may have incurred in connection therewith. Should any defective work have been done or material supplied by any Sub-Contractor employed on the works who has been nominated or approved by the Employer as provided in various clauses 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 provisions of this Clause and Clause 2 hereof. The Contractor shall remain liable under the provision of this Clause, notwithstanding the signing of any certificate or the passing of any accounts, by the Employer.

**30. Certificate of virtual completion and Defects Liability Period**

The works shall not be considered as completed until the Employer has certified in writing that they have been virtually completed. The Defects Liability Period shall commence from the date of such Certificate.

**31. Nominated Sub-Contractor**

All Specialists, Merchants, Tradesman and others executing any work of supplying and fixing any goods, for which prime cost prices or provisional sums are included in the Schedule of Quantities and/or Specifications, who may be nominated or selected by the Employer are 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

whom the Contractor shall make reasonable objection or (save where the Employer and Contractor shall otherwise agree) who will not enter into Contract providing.

- (a) That the nominated Sub-Contractors shall indemnify the Contractor against the obligation in respect of the Sub-Contractor 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-Contractor, his servants or agents or any misuse by him or them of 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 provided that all nominated Sub-Contractor's accounts included in previous Certificates have been duly discharged, in default whereof, the Employer may pay the same and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create privity of contract as between Employer and Sub-Contractor.

### 32. Other persons employed by Employer

The Employer reserves the right to use the Estate and any portions 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 materials for the execution of such work. 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.

### 33. 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 or either, whether such injury or damage arises from carelessness, accident or any other cause whatever, in any way connected with the carrying out of this Contract. This liability under this clause shall be held to include inter alia, any damage to buildings, whether immediately adjacent or otherwise, and any damage to roads, streets, footpaths, bridges or ways as well as all damage caused to the buildings and other structures and works forming the subject matter of this Contract. The contractor shall also be responsible for any damage caused to the buildings and other structures and works forming the subject matter of this Contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify and keep indemnified the Employer and hold him harmless in respect of all and any loss and expenses arising from any such injury or damage to persons or property as aforesaid and also against any claim made in respect of injury or damage, whether under any Statute or otherwise and also in respect of any award of compensation or damages consequent upon such claim. **The contractor shall, at his own expense, effect and maintain till issue of the completion certificate under this contract, with an insurance company approved by the Employer, an All Risks Policy for insurance for an amount equal to the amount of the contract including earthquake risk in the joint names of the Employer and the contractor ( the name of the former being placed first in the policy) against all risks as per the standard all risk policy for contractors and deposit such policy or policies with the employer before commencing the works.** The Contractor shall reinstate all damage of every sort mentioned in this Clause, so as to do delivery of the whole of the Contract works complete and perfect in every respect and so as to make good

or otherwise satisfy all claims for damage to the property of third parties. The Contractor shall also indemnify and keep indemnified the Employer against all claims which may be made against the Employer by any person/ member of the public or other **third party** in respect of anything which may arise in respect of the works or in consequence thereof and **shall at his own expense arrange to effect and maintain, until the completion of the Contract, with an Insurance company approved by the employer a policy of Insurance in the joint names of the Employer and the Contractor( the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Employer before commencement of the work.** The minimum limit of coverage under the policy shall be as defined elsewhere under General instructions to the tenderer. The Contractor shall also similarly indemnify the Employer against all claims which may be made upon the Employer whether under the **Workmen Compensation Act** or any other statute 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, until the completion of the Contract, with an Insurance company approved by the employer a policy of Insurance in the joint names of the Employer and the Contractor( the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Employer from time to time during the currency of the Contract.** In default of the contractor ensuring as provided above, the employer may so ensure and may deduct the premiums paid from any money due or which may become due to the contractor.

The Contractor shall be responsible for any liability which may be excluded from the Insurance Policies above referred to and also for all other damages to any person, animal or property arising out of and incidental to the negligent or defective carrying out of this Contract, whatever may be the reasons due to which the damage shall have been caused. He shall also indemnify and keep indemnified the Employer in respect of all and any costs, charges or expenses arising out of any claim or proceedings relating to the works and also in respect of any award of compensation or damages, arising therefrom. Without prejudice to the other rights of the employer against contractor in respect of such default, the Employer shall be entitled to deduct from any sums payable to the Contractor the amount of any damage, compensation, costs, charges and other expenses paid by the employer and which are payable by the contractor under this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to a policy taken under this clause proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the money received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payments in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

The contractor, in case of re-building or reinstatement after damage shall be entitled to such extension of time for completion as the Employer may deem fit, but shall, however, not be entitled to reimbursement by the employer of any shortfall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein.

34. Without prejudice to his liability under this clause, the contractor shall also cause all nominated sub-contractors to effect, for their respective portions of works similar policies of insurance in accordance with the provisions of this clause and shall produce or cause to produce to the employer such policies. The contractor shall not permit a nominated sub-contractor to commence work at site unless said insurance policies are submitted. In the event of failure, of the sub-contractor to take out such policy or policies of insurance before commencing the works at site, the contractor shall be responsible for any claim or damage attributable to the said sub-contractor.

**35. Date of Commencement and Completion**

The Contractor shall be allowed admittance to the site on the "Date of Commencement" stated in the Appendix hereto or such later date as may be specified by the Employer 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 Employer may desire to delay) on or before the "Date of Completion" stated in the Appendix subject nevertheless to the provisions for extension of time hereinafter contained.

**36. Damages for Non-completion**

If the Contractor fails to complete the works within the period stated in the Appendix Here in before referred to or within any extended time under Clause 37 hereof and the Employer certifies in writing that in his opinion the same ought reasonably to have been completed, the Contractor shall pay the Employer the sum named in the Appendix as "Liquidated Damages" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any moneys due to the Contractor. The contractor hereby specifically agrees and authorizes the Employer to deduct such liquidated damages, if any, from any installment of payment becoming due and payable to the contractor in terms of this contract or from the retention money."

**37. Delay and Extension of Time**

If in the opinion of the Employer, the works be delayed (a) by force majeure or (b) by reason of any exceptionally inclement weather or (c) by reason of proceedings taken or threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise than through the Contractor's own default or (d) by the works or delays of other Contractors or Tradesmen engaged or nominated by the Employer and not referred to in the Schedule of Quantities, and/or Specification or (e) by reason of Employer's instructions as per Clause 2 hereof or (f) by reason of civil commotion, legal combination of workmen or strike or lock-out affecting any of the building trades or (g) in consequence of the Contractor not having received in due time, necessary instructions from the Employer for which he shall have specifically applied in writing or (h) from other causes which the Employer may certify as beyond the control of Contractor or (i) in the event the value of the work exceeds the value of the Priced Schedule of Quantities owing to variation, the Employer may make a fair and reasonable extension of time for completion of the Contract works. In case of such strike or lock-out the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the Employer to proceed with work.

If the contractor needs an extension of time for completion of the work or if the completion of work gets delayed for any reason beyond the due date of completion stipulated in the contract, the contractor shall apply to the employer for extension of time in writing at least 7 days before the expiry of the scheduled time and while applying for extension of time, contractor shall furnish the reasons in detail and his justification along with documentary evidence (copy of relevant pages of hindrance register), if any, for delays. Only that period of extension of time as granted by the employer (on receipt of the application from the contractor or even in absence of any such application certification as to the reasonableness of the grounds for delay) will qualify for exemption of imposition of liquidated damages. For the balance period in excess of original stipulated period and an authorised extension of time granted by the employer, the provision of liquidated damages as stated under clause 36 will become applicable.

Further, the contract shall remain in force even for the period beyond the due date of completion irrespective of whether the contractor has applied or not, for the grant of extension of time for completion unless the employer decides to terminate the contract. The delay for completion of work for any reason will not entail any right to the contractor to claim any revision of rates or any extra compensation for any reason.

38. **Failure by Contractor to comply with Employer's instructions**

If the Contractor after receipt of written notice from the Employer requiring compliance within ten days fails to comply with such further drawings and the Employer 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 Employer as a debt or may be deducted by him from any moneys due to the Contractor.

39. **Termination of Contract by the Employer**

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 supervision 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 Employer that he is able to carry out and fulfil the Contract and to give security therefor, if so required by the Employer.

Or if the Contractor (whether an individual, firm 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 Contractor,

Or shall assign or sublet this Contract without the consent in writing of the Employer first had and obtained,

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

Or if the Employer determine that the Contractor

- (i) has abandoned the Contract, or
- (ii) has failed to commence the works, or has without any lawful excuse under those Conditions suspended the progress of the works for 14 days after receiving from the Employer notice to proceed, or
- (iii) has failed to proceed with the works 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 after receiving written notice that the said materials or work were condemned and rejected by the Employer under these Conditions or

- (v) has neglected or failed persistently to observe and perform all or any of the acts, matters 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 Employer may notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract and liabilities of the Contractor, the whole of which shall continue in force fully as if the Contract had not been so determined, and as if the works subsequently executed had been executed by or on behalf of the Contractor and further, the Employer by his agents or servants may enter upon and take possession of the works and all plant, tools, scaffoldings, machinery and materials lying upon the Estate 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 works 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 Employer 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 Employer may sell the same by public auction, and give credit to the Contractor for the net amount realised. The Employer shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to, or by the Employer, for the value of the said plant and materials so taken possession of by the Employer and the expense or loss which the Employer shall have been put to in procuring the works to be completed, and the amount, if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be, and the decision of the Employer shall be final and conclusive between the parties.

#### 40. **Termination of Contract by Contractor**

If payment of the amount payable by the Employer under certificate of the Bank's engineer shall be in arrears and unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Employer or if the Employer shall repudiate the Contract, or if the works be stopped for three months under the order of the Employer or by any injunction or other order of any Court of Law, then and in any of the said cases, the Contractor shall be at liberty to determine the Contract by notice in writing to the Employer and he shall be entitled to recover from the Employer, 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 of the Contract.

In arriving at the amount of such payment, the net rates contained in the Contractor's original Tender shall be followed, or where the same may not apply, valuation shall be made in accordance with Clause 26 hereof.

#### **41. Certificates and Payments**

The Contractor shall be paid by the Employer from time to time by instalments 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 Certificates" (or less at the reasonable discretion of the Employer) has been executed in accordance with this Contract. The Employer may, at his discretion, include in the Interim Certificate such amount as he may consider proper on account of materials delivered upon the site by the Contractor for use in the works. And when the works have been virtually completed and the Employer shall have certified in writing that they have been completed, the contractor shall be paid the balance amount by the employer in accordance with the certificate to be issued by the Bank's engineer. The Contractor shall be entitled to the release of the Bank guarantee towards Security Deposit in accordance with the Final certificate to be issued in writing by the Employer 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 after the expiration of such period as the works shall have been finally completed and defects made good according to the true intent and meaning hereof, whichever shall last happen, provided always that the issue by the Employer of any certificate during the progress of the works at or after their completion shall not relieve the Contractor from his liability under Clause 2 and 29 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 within the Certificate, and in case of all defects and insufficiencies in the works or materials, which a reasonable examination would not have disclosed. No Certificate shall of itself be conclusive evidence that any works or materials, to which it relates, are in accordance with the Contract neither will the Contractor have a claim for any amounts which the Employer might have certified in any interim bill and paid by the Employer and which might subsequently be discovered as not payable and in this respect the Employer's decision shall be final and binding.

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

The Employer may by any Certificate make any correction in any previous certificate which shall have been issued by him.

Payments shall be made within the period named in the Appendix as "Period for honoring Certificates" after such Certificates have been delivered to the Employer.

#### **42. Delayed Payment**

Any amounts payable by the Employer to the Contractor if not paid within the "Period for honouring Certificates" named in the Appendix, carry interest at the rate named in the Appendix as the "Rate of interest for delayed payment" from the date upon which such sum ought to have been paid by the Employer until the payment.

#### **43. Matters to be finally determined by Employer**

The decision, opinion, direction, Certificate (except for payment), with respect to all or any of the matter under Clauses 2, 9,15,16,21,25,26,27,28,29,37(a,b,c,d,f), 38, 39, 41 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, Certificate or valuation of the Employer or any refusal of the Employer to give any of the same shall be subject to the right of arbitration and review under Clause 44 hereof in the same way in all respects (including the provision as to opening the reference) as if it were a decision of the Employer.

#### **44. Settlement of dispute 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 Employer who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Employer with respect to any of the excepted matters shall be final and without appeal as stated in Clause 43 hereof. But if either party be dissatisfied on any matter, except the excepted matter as above, the party 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.

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 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 Employer and the Contractor hereby also agree that arbitration under this clause shall be a condition precedent to any right of action under the contract.

The venue of arbitration shall be **BHOPAL, INDIA.**

**45. Right of technical scrutiny of final bill**

The Employer 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 or otherwise, any sum is found to have been overpaid or over-certified, it shall be lawful for the Employer to recover the sum.

**46. Employer entitled to recover compensation paid to workmen**

If, for any reason, the Employer is obliged, by virtue of the provision of the Workmen's Compensation Act, 1923, or any statutory modifications or re-enactment thereof to pay compensation to a workman employed by the Contractor in execution of the works, the Employer shall be entitled to recover from the Contractor the amount of compensation so paid, and without prejudice to rights of the Employer under the said Act. The Employer 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 Employer to the Contractor under this Contract or otherwise. The Employer 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 Employer full security to the satisfaction of the Employer for all costs for which the Employer might become liable in consequence of contesting such claim.

**47. Abandonment of Works**

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

**48. Return of surplus materials**

Notwithstanding anything contained to the contrary 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 Employer by purchases 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 Employer and return it to the Employer, if required by the Employer, at the price to be determined by the Employer having due

regard to the condition of the materials, the price to be determined not to 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 permits and/or criminal breach of trust, be liable to the Employer for all moneys, advantages or profits resulting, or which in the usual courses would have resulted to him, by reason of such breach.

**49. Right of Employer to terminate Contract in the event of death of Contractor, if individual**

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

**50. Accident Reports**

In the event of accidents of any kind, the Contractor shall furnish the Client with copies of all accident reports. The reports shall be sent without delay and at the same time that they are forwarded to any other parties.

**51. Marginal Notes**

The notes in the box and in the catch lines hereto and in the annexures hereto are meant only for convenience of reference and shall not in any way be taken into account in the interpretation of these presents and the annexures hereto.

**SPECIAL CONDITIONS**

**52. Progress of Work**

Upon award, the Contractor shall reconfirm, in writing, the starting and completion schedule including equipment delivery dates based upon the information submitted in his tender form along with project schedule (including details of all the important activities involved). The contractor shall also inform the Bank in writing the details of the project team who will be responsible for planning/ execution of the work.

53. The Contractor shall submit, in writing, monthly reports showing current equipment delivery dates and anticipated completion dates for individual activity along with reasons, if any for deviations from the approved/ accepted schedule.

**54. 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 Employer. The contractor shall indemnify the Employer for any loss suffered by the Employer 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 Employer shall be entitled to claim damages and pursue legal remedies.

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.

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

**55. Minimum wages to the workmen:**

The contractor shall ensure that minimum wages as per statutory requirement are paid to all the workmen.

**56. 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.

**57. Sexual Harassment of Women:**

a) The contractor 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 or Local Complaints committee as the case may be and the contractor/ agency shall ensure appropriate action under the said Act in respect of the Complaint.

b) Any complaint of sexual harassment from any aggrieved employee of the service provider against any employee of the Bank or any employee of any other firm working in 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 or other firm'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 employees who are deployed within the Bank's premises.

## Section (V)

### Appendix Hereinbefore 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.	Liquidated damages at the rate of, for non-completion of work	As per clause 2.16 mentioned in the tender
6.	Value of works for interim certificates	Rs.10 lakh
7.	Period for honoring certificates	One month for interim bills and 3 months for final bill.
8.	Interest for delayed payment	3% per annum

Seal & signature of Contractor with date

## SECTION VI

### Check List

**Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid Interactive SPV Based Roof top Solar Power System for Bank's Staff Quarters (Avantika), Char Imli, Bhopal.**

Sr. No.	Description	Bank's Terms and conditions	Acceptance of Bank's terms and conditions (YES/NO)
1	Validity	90 days from opening of tender part-I	
2	EMD	<b>Rs. 56,000/- (Rupees Fifty Six Thousand only)</b>	
3	Terms of payment	As per applicable clause in Part I of the Tender	
4	Technical specifications	As per specifications in Part I of the Tender.	
5	Guarantee Period	One year from date of virtual completion.	
6	Service after sales during AMC	Quoted rates shall include the cost of Repairs/maintenance including replacement of any material / assembly / equipment / spares / sim recharge/license renewal/ labour etc., if found necessary and fortnightly visit.	
7	Completion period	3 months from 10th day of letter of award of work.	
8	Liquidated damages	As per clause 2.16 mentioned in the tender	
9	Penalty for reduced Power Generation during Defect Liability Period	As per applicable clause in Part I of the Tender	
10	Penalty during warranty & AMC period	Rs.500/- per day subject to maximum of 50% of the annual maintenance charges, if the defect in the system is not rectified within the period of 2 days	

Part II should not contain any terms and conditions but only priced bill of quantity.

Terms and conditions, if any, incorporated in Part II, will not be valid or considered.

Place:

Date :

Seal & Signature of Contractor



## SECTION VII

### Technical Specification

#### 6.1 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, its distribution and subsequent upkeep and maintenance as defined under succeeding paragraphs and subsequent upkeep and maintenance as defined. The Tenderers are advised to visit the site of installation and acquaint themselves of the site conditions before quoting the rate in tender Part II.

**Note:** Please note that Reserve Bank Staff Quarters (Avantika), Char Imli, Bhopal is a residential premises of LT consumer having 11KV/440V supply from MPMKVCL (formerly MPEB) where new solar system installation is required to be installed with net metering facility by the bidder.

- A.** Generation for 50 KWp (with required sets of PCUs/inverters to match with total capacity of 50 KWp) of Solar Energy based, conversion of the same to AC power with a guaranteed annual generation of **64,000 KWh per year** during the first five years of operation at Colony's power grid synchronization point and including:
- a) Design, Manufacturing, engineering, Factory Acceptance Test (FAT), supply, installation, testing and commissioning of Solar PV Modules (inclusive of Electrical, Electronic and Mechanical features) along with Power Conditioning Units (PCUs), consisting of Maximum Power Point Tracker unit (MPPT), inverter, controls & protection, interconnecting cables and switches as required and specified as per MNRE standard.
  - b) Supply and installation of Module mounting structure / super structure on identified locations. The successful tenderer shall design their SPV Panel structure with Hot dipped galvanized 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 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 three number of plate earthing stations (as decided by the Bank) consisting of copper plate (600X600X3.15mm) placed at least 3mtr deep inside earth using 100mm dia. pipe with funnel for 50 KWp system. Earthing systems interconnected with Solid copper strip (25mmX5mm) from earthing station to the entire system including interconnection of solar panels. Sufficient solid stratum should be removed and replaced with fine soil/black cotton soil, salt and charcoal to ensure as low

a resistance as possible. Earthing stations shall be provided with testing point for every pits as per relevant /latest IS: 3043-1987 IE rules, including required inspection chamber (100mmX500mmX600mm) with brick plaster and CI/GI cover, cutting of roads / paved areas & making good the damages as in original shape. Earth resistance shall be tested in presence of the Bank's Engineers as and when required by calibrated earth tester. Earth resistance shall not be more than 2 Ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential. If the desired earth resistance is not obtained, additional earth stations to be done to bring the desired resistance, at no extra cost.

- 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 to ensure maximum generation from the plant at all season.
- 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) Supply of the recommended spare parts along with the main equipment's to avoid downtime during Guaranty/Warranty and defect liability period. (Also refer Para-B below)
- m) Inspection of the complete installation at least once every year during guarantee period by the respective equipment manufacturer's specialist Engineer(s).

#### **B. All Inclusive Upkeep & Maintenance during warranty period**

All Inclusive Upkeep & Maintenance Contract of the entire system as provided, including all spares and consumables for a period of 10 years after successful completion of work. The rates of the same are to be quoted separately as per Schedule of Quantities (Head-II).

#### **C. 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.
- c) Enclosed indoor space for locating PC, control monitoring, data loggers etc., and PCU/solar inverter (if required).

### **6.2 Minimal Technical Requirements / Standards for SPV Items/ systems**

#### **6.2.1 PV MODULES:**

The PV modules used should be **made in India (indigenous)**. 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.

### 6.2.2 RELEVANT STANDARD/BALANCE OF SYSTEM (BOS) / COMPONENTS/ ITEMS

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:

System/ components/ items	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications	
	Standard Description	Standard Number
Charge Controller / Maximum peak power transfer (MPPT) units	Environmental Testing	IEC 60068-2 (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 /Connectors	General Requirements connectors – safety A.C. /D.C.	IEC 60947 part I,II, III / IS 60947 Part I,II,III EN 50521
Junction Boxes /Enclosures for Inverters/Charge Controllers/Luminaries	General Requirements, shall be dust proof	IP 65(for outdoor)/ IP 21(for indoor) as per IEC 529

### 6.3. AUTHORISED TESTING LABORATORIES / CENTERS

6.3.1 The PV modules must be tested and approved by one of the IEC authorized test centres. Test certificates can be issued by any of the NABL / BIS Accredited Testing / Calibration Laboratories.

6.3.2 Test certificates for the system/ components/ items from any of the NABL / BIS

Accredited Testing Calibration Laboratories / MNRE approved test centers to be submitted to the Bank.

#### **6.4. 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.

**6.5** 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.

#### **6.6 Actions to be taken by the successful tenderer after award of work**

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

a) He shall contact the Bank's Engineer-In-Charge of the work immediately after award of work

and submit an agreement on a non-judicial stamp paper of adequate value as per the relevant

Stamp Act and sign the same in front of the witnesses.

b) All the required submittals must be completed within 14 days from the date of issue of detailed work order.

c) A programme PERT chart shall be prepared for execution of the work & the same shall be finalized in consultation with the Bank's Engineer. The work-schedule chart/ bar-chart indicating 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 shall be submitted by the tenderer to the Bank's Engineer for approval within 7 (Seven) days of the date of award of work.

6.6.2 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.

6.6.3 Drawings indicating the design of Solar Power Generation System and distribution proposed along with designs for structures / foundations for SPV array (duly certified / vetted by a recognised Govt. Engg. College/ reputed structural engineering firm etc. for suitability of the structure to withstand high wind velocity upto 150 Km/h) shall be submitted to the Bank's Engineer, for approval, within fifteen (15) days of the issue of the detailed order. The drawings shall indicate all relevant details about the component/equipment etc. A three dimensional pictorial view of the same shall also be depicted in the drawings. 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 Plant, 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) Itemized bill of material for complete SPV plant covering all the components and associated accessories.

6.6.4 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 an inspection at least 07 days in advance.

6.6.5 The Contractor shall at all times, during the period of execution of works keep in mind the specified completion time and other terms & conditions of contract as specified in the tender document which is, and shall remain the essence of the contract. On completion of the installation, the tenderer shall conduct a system acceptance test. The tenderer shall propose a detailed system acceptance test plan, which shall be jointly reviewed by RBI and the tenderer.

## 6.7. TESTING OF EQUIPMENTS

6.7.1 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.

6.7.2 **Factory Acceptance Test (FAT)** of equipments: 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 authorised representative. Pre-delivery inspection of equipments *shall* be carried at the factory premises of principals. The bank shall be informed of such inspection at least 7 days in advance. Both the vendor and OEM must be present at the time of inspection.

## 6.7.3 TESTING OF INSTALLATION AFTER COMPLETION

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

b) The contractor shall submit proposed testing procedure to the Bank's Engineer not later than (one) 15 days before the date of testing.

c) 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 at least 07 days before the date of testing in order to facilitate arrangements for Bank's Engineer to be present.

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 additional cost to the Bank.

f) Performance Test

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: -

**Performance test parameter**

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 and Correction of unsatisfactory operation during test period. If any deficiency or variation in the design, fabrication or operation causing unsatisfactory performance is noticed, the 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.

g) Acceptance: 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 supplied and installed as specified. If the system is not acceptable for reasons of noncompliance 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. Even though the equipment shall be inspected and accepted, the acceptance date shall not occur before all contractual obligations are completed including delivery of all "as built" drawings, maintenance, and operation & spare parts manuals etc.

**Date of virtual completion**

After successful performance test, the system shall be put into operation. However, the date on which the system is finally accepted as per terms of the contract will be considered as the date of virtual completion of the work, from which the defect liability period shall be commenced.

**6.8 TRAINING**

The contractor shall include in his tender, cost of training of operators and maintenance 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.

## **B) MAINTENANCE TRAINING**

- i) System description including electrical, electronic and mechanical sub-systems and their functions.
- ii) System and component trouble-shooting
- iii) On-site inspection and operation and maintenance
- iv) Schedule of maintenance, safety checks and procedures.

## **6.9 DESIGN PARAMETERS / REQUIREMENTS AND EQUIPMENT SPECIFICATIONS**

### **SPECIFIC TECHNICAL REQUIREMENTS**

#### **Solar PV system shall consist of following equipments:**

- i) Solar PV modules consisting of required number of PV modules.
- ii) Power Conditioning Units with data logger
- iii) Mounting structures
- iv) Cables and hardware
- v) Junction box and distribution boards
- vi) Earthing kit complete in all respect
- vii) Surge arrestors
- viii) Related Civil Works
- ix) Control & monitoring system etc.

#### **A. Broad Technical Specifications:**

##### **1. Solar PV Modules**

- a) The solar photo-voltaic module of  $\geq 350$  Wp power output under STC shall be provided with high efficiency (of more than 15%) multi or mono crystalline silicon solar cells.
- b) SPV module shall be **Mono crystalline SPV modules based on Mono PERC** high power silicon solar cells. The solar cell shall have surface anti-reflective coating to enable it 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 upto 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. For modules to be used in a highly corrosive environment throughout their lifetime they must qualify for IEC 61701.

##### **2. Module Mounting Structures**

- a) The module mounting structure shall 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 (80 micron thick coating) for the long life in external weather conditions.
- d) The mounting structure should be of Fixed Type, Tilt angle suitable to site, on PCC Foundation, with SS 304 fastener and clamp fitted to provide rigidity to the structure.
- e) Galvanized Steel Structural members must be considered for all type of structural
  - i) Steel proposed for the power plant.
  - ii) The array structure shall be grounded properly using earthing kit.
  - iii) Design drawings with material selected shall be submitted for prior approval of Bank.
    - a. The suitable number of PV panel structures shall be provided. Structures shall be non-penetrated with roof.
    - b. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Galvanizing should meet ASTM A-123 hot dipped galvanizing or equivalent which provides at least spraying thickness of 70 microns on steel as per IS 5905, if steel frame is used. Aluminium frame structures with adequate strength and in accordance with relevant BIS/international standards can also be used.
    - c. Structures shall be supplied complete with all members to be compatible for allowing easy installation at the rooftop site.
- f) The structure should be capable of withstanding a wind load of 150 km/hr after installation.
- g) The structures shall be designed for simple mechanical and electrical installation. There shall be no requirement of welding or complex machinery at the installation site.
- h) The supplier/developer shall specify installation details of the PV modules and the support structures with appropriate diagrams and drawings. Such details shall include, but not limited to, the following:
  - i) Determination of true south at the site;
  - ii) Array tilt angle to the horizontal;
  - iii) Details with drawings for fixing the modules;
  - iv) Structure installation details and drawings;
  - v) Electrical grounding (earthing);
  - vi) Inter-panel/Inter-row distances with allowed tolerances;
  - vii) Safety precautions to be taken.

### **3. PCU / MPPT Inverter**

- a) PCU / MPPT and 3 phase 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 based having inverter, which converts DC energy produced by the solar array to 3 phase 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 or other insects into the PCU from bottom/top of the PCU.
- c) PCU shall be communicable on LAN protocol and should be provided with the following minimum Indications (through LEDs & LCD display)

- i. Inverter ON
- ii. Grid ON
- iii. Inverter under voltage/over voltage
- iv. Inverter over load
- v. Inverter over temperature.

**Protections:**

- i. Over voltage both at input & output
  - ii. Over current both at input & output
  - iii. Over/under grid frequency
  - iv. Over temperature
  - v. Short circuit
  - vi. Protection against lightening
  - vii. Surge voltage induced at output due to external source.
- d) 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 shall be true 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.
  - h) The software (Plant Manager & PC for remote monitoring either through LAN/Sim based Modem/IoT or Cloud based as acceptable to the Bank) and hardware except PC, required for interfacing the plant are to be supplied. The inverter shall be provided with RS 232/485 port. Complete purchase, installation and renewal charges for the entire period as stipulated in the tender for Sim, Modem, software license etc., as required to be borne by the bidder.
  - i) The dimension, weight, foundation, makes details etc. of the PCU / Inverter shall be clearly indicated in the detailed technical document. Good quality & reputed / standard makes shall be supplied, having experience of trouble free successful functioning for minimum two years in similar solar PV system.
  - j) The PCU/solar inverter shall be capable of complete automatic operation, including wake-up, synchronization & shut down.
  - k) Built-in data logging facility to remotely monitor plant performance through external PC shall be provided (PC shall be provided by Bank).

**4. Junction Boxes 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.
- c) Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / surge arrestors, suitable Reverse Blocking Diodes. The Junction Boxes shall have

suitable arrangement monitoring and disconnection for each of the groups. Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

## 5. Cables:-

Cables of appropriate size to be matched/ used in the system shall have the following characteristics:

- i) Will meet IS 694/1554/IEC 60189 standards
  - ii) Voltage rating 660/1100V
  - iii) Excellent resistance to heat, cold, water, oil, abrasion, UV radiation and FRLS.
  - iv) Flexible
- a) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter 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/XLPE compound formulated for outdoor use.
  - b) 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 cables are easily identified.
  - c) The Cable should be so selected that it should be compatible with the life of the solar PV panels i.e. 25 years.
  - d) The size of each type of cable selected shall be based on minimum voltage drop, however, the maximum drop shall be limited to 2%
  - e) Selected cable should carry a current density of minimum 1.2Amp/Sq.mm
  - f) All electrical cables / wires inside the building to be fixed in Rigid Steel Conduit for wiring inside the building. Cable laying through underground / across the road should be by providing necessary GI pipe and is within the scope of work of the tenderer.
  - g) Proper laying of cables have to be ensured in appropriate cable trays, pipes / trenches as per site requirement.
  - h) For laying / termination of cables, latest BIS / IEC codes / standards be followed.

## B. General Technical Specifications:-

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.

1. Data Logging Provision for plant control and monitoring shall provide time and date stamped system data logs for analysis purposes.
2. Metering and Instrumentation for display of system parameters and status indication shall be provided.

**PV array energy production:** Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system shall be provided. Energy meter along with CT/PT should be of 0.2 accuracy class shall be provided.

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

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

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

All major parameters shall be available on the digital bus and logging facility for energy



auditing through the internal microprocessor and can be read on the digital front panel at any time the current values, previous values for up to a month and the average values.

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

- (a) AC Voltage & AC Output current.
  - (b) Output Power (daily)
  - (c) Running hours & total power generation in KWH
  - (d) DC Input Voltage.
  - (e) DC Input Current.
  - (f) Time Active
  - (g) Time disabled.
  - (h) Time Idle
  - (i) Temperatures (°C).
  - (j) Inverter Status
  - (k) Power produced in KWh (Daily/Monthly/Yearly)
2. **System Protection 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).
  3. **Earthing:** The structure of all the PV arrays will be grounded properly using adequate number of earthing kits/Copper Earthing/Solid copper strip of suitable size to be matched with system. All metal casing / shielding of the plant shall be thoroughly grounded to ensure safety of the solar systems. All the three phase equipment's to be provided with double copper earthing system as per latest Electrical safety instructions/standards.
  4. **Lightning and O/V protection:** 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.
  5. All wiring / cables should be in proper conduit or suitable casing and wires should not be hanging loose.
  6. All connections are to be made through suitable cable/lug/terminals; crimped properly & with use of Cable Glands.
  7. Switches / Circuit Breakers / Connectors-safety IS/ IEC 60947 part I, II & III, EN 50521
  8. Fuses to be provided to protect against short circuit conditions.
  9. Details of solar power system design and layout for all systems shall be submitted along with Technical bid (Part-I)
  10. All the components of the systems viz., PV modules, Electronics, etc., should have type approval / test certificates from / internationally accredited labs. / as per MNRE guide lines
  11. All components and materials used in the system should be of good quality & conform to the BIS / IEC standards / specifications, wherever available / applicable.
  12. Each system should have number plate with name & logo of the manufacturer and the month / year of installation.
  13. Operation and Maintenance / Instruction Manual (with Do's and Don'ts) to be provided with each system.
  14. Danger boards should be provided as and where necessary as per IE Act./IE rules as amended up to date.

**C. 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**

i) Particular attention shall be given to keep components simple, rugged and easily accessible for routine maintenance and components replacement.

ii) Major assemblies and components such as, electrical components/controls shall be interchangeable and easily removable/replaceable without extensive dismantling of other assemblies of components.

iii) **All wiring shall be of a uniform color coding and marking system throughout indicating wiring terminations** to permit rapid effective tracing and trouble shooting. Maintenance manual shall reflect said colour coding/markings.

iv) 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.**

## **D. METERING**

1. The bidirectional electronic energy meter/net metering (0.5 S Class) shall be installed for the measurement of import/export of energy. This shall also include provision of CTs & PTs, enclosures etc., as per the requirement.

2. The bidder must take approval/NOC/sanctioning from the concerned DISCOM and CEIG for the connectivity, technical feasibility and synchronization of SPV plant with distribution network and submit the same to the Bank before commissioning of the solar power plant. All the charges/fees for the above work are to be borne by the bidder. No additional charges will be paid by the Bank.

3. Reverse power relay shall be provided by the bidder (if necessary) as per the DISCOM requirement.

4. The Bidder should liaison with DISCOM for net metering facility to the plant at Bank's staff quarters. The entire charges for net metering facility for staff quarters liaison, and approvals with statutory bodies (CEIG/MPEB) should be included in the system cost as mentioned while quoting in tender part-II.

## **E. SAFETY MEASURES**

The bidder shall take the entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow the safety rules & regulations applicable as per Electricity Act 2003 and CEA guidelines etc.

### **Note:**

1. The grid connectivity shall be in accordance with MPERC net metering regulations 2015 and any amendments thereof from time to time.

2. In case of any changes required in the existing system, due to this proposed installation these shall be performed by the Contractor at his own cost.

Place:

Date:

Seal and signature of the Contractor



**NAME OF WORK: "Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid interactive SPV based Roof top solar power system for RBI Staff quarters (Avantika), Char Imli at Bhopal"**

**A) SCHEDULE OF TECHNICAL INFORMATION (To be filled by the bidder)**

i)	Enclose a <b>write up on the system design</b> 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 Bill of Quantities of major equipments	Please fill up the details as per the format enclosed.
iv)	Enclose the proposed layout of the SPV module array showing the spacing between arrays, walk way width etc.,	
v)	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.C</a>
vi)	Confirm the area required by the bidder for installation of SPV panels along with its structure, maintenance, and walk ways to provide a generating capacity of 50 KWp as required in the tender.	Length in _____m Width in _____m Area in _____ Sqm.
vii)	Installation of SPV panels along with its structure, maintenance, walk ways to provide a generating capacity of 50 KWp as required in the tender.	Length in _____m Width in _____m Area in _____ Sqm.
viii)	Confirm the total quantum of AC power to be available from the installed SPV Modules	_____ KVA for 50 KWp
ix)	Confirm the location of meters to be provided for continuous measurement of AC power generated.	
x)	Please confirm the acceptance test procedures to be adopted during Factory Acceptance Test (FAT) for the SPV Modules as per the enclosed format at <a href="#">Annex H</a> . Also indicate the standard to be followed.	
xi)	Please confirm the acceptance test procedure to be adopted on completion of the work for the major components and the complete system at site.	

**B) SCHEDULE OF TECHNICAL DATA (To be filled by the bidder)**

<b>I.</b>	<b>SPV MODULE</b>	<b>For 50 KWp</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	
	Open circuit voltage	
iv.	No. of PV Modules proposed to achieve minimum DC power	
v.	Short circuit current of PV module (Amp.)	
vi.	Open circuit voltage of PV module (V)	
vii.	Max. power rating of one PV Module (Wp) (not less than 350 Wp)	
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>II.</b>	<b>PV ARRAY CAPACITY</b>	
i.	Number of Module in series in each array	
ii.	Peak power rating of one array	
iii.	Number of array considered to achieve the specified output	
<b>III.</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 of 150 Km/hr.	
<b>IV.</b>	<b>POWER CONDITIONING UNITS (PCUs) /Solar Inverter</b>	
i.	Manufacturer's name & address	
ii.	Type of PCU (Centralized or string type)	
iii.	Number of units proposed	
iv.	Rated capacity of each PCU	
v.	Input DC Voltage range	
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	
	a) Over load condition	Yes/No
	b) Short circuit protection	Yes/No
	c) Low/High voltage protection	Yes/No
	d) Power Electronic component protection	Yes/No
	e) Anti-Islanding protection	Yes/No
xvii.	Life of PCU	
<b>V</b>	<b>METERING</b>	
i.	Nos. of meters proposed to be provided	
ii.	Location of meters	
iii.	Manufacturer's Name & address	
iv.	Confirm compliance with laid down specification	

Date

Signature of the contractor with company seal

**ANNEXURE- 'B'**

**NAME OF WORK:** "Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid interactive SPV based Roof top solar power system for RBI Staff quarters (Avantika), Char Imli, Bhopal"

**List of Major equipment's to be provided for 50 KWp Solar Power Plant**  
**(To be filled by the bidder)**

<b>S. No</b>	<b>Item</b>	<b>Quantities</b>
1.	SPV Modules	Total Quantities (nos)
		No. of Arrays
		Nos. of SPV modules in each array
2.	Power Conditioning Units (PCUs) (Centralized / string type)	Type
		Quantity
3.	DC Junction Boxes	
4.	AC Junction Boxes	
5	Other related items viz. control & power cables, cable trays, surge diverters, earthing etc. for the complete work as required & specified	Lot

Date

Signature of the contractor with company seal

**ANNEXURE- 'C'**

**NAME OF WORK:** “Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid interactive SPV based Roof top solar power system for RBI Staff quarters (Avantika), Char Imli, Bhopal”

**GUARANTEED ENERGY GENERATION FOR 25 YEARS FOR INTERNAL USE  
(To be filled by the bidder)**

Note: Efficiency of solar PV System shall be guaranteed to minimum 90% at the end of 10 years and 80% at the end of 25 years.

<b>Year</b>	<b>Total (KWh) of guaranteed generation</b>
	<b>50KWp Solar plant</b>
<b>Year 1</b>	
<b>Year 2</b>	
<b>Year 3</b>	
<b>Year 4</b>	
<b>Year 5</b>	
<b>Year 6</b>	
<b>Year 7</b>	
<b>Year 8</b>	
<b>Year 9</b>	
<b>Year 10</b>	
<b>Year 11</b>	
<b>Year 12</b>	
<b>Year 13</b>	
<b>Year 14</b>	
<b>Year 15</b>	
<b>Year 16</b>	
<b>Year 17</b>	
<b>Year 18</b>	
<b>Year 19</b>	
<b>Year 20</b>	
<b>Year 21</b>	
<b>Year 22</b>	
<b>Year 23</b>	
<b>Year 24</b>	
<b>Year 25</b>	

Date

Signature of the contractor with company seal



**Format for undertaking product & maintenance support**

(To be submitted by the tenderer)

**Name of work: Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid interactive SPV based Roof top solar power system for RBI Staff quarters (Avantika), Char Imli, Bhopal.**

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

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

Thanking you

Yours faithfully

(Signature of the contractor 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 50 KWp Grid interactive SPV based Roof top solar power system for Reserve Bank's Staff quarters (Avantika), Char Imli, Bhopal.

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 50 KWp Grid Interactive SPV Based Solar Power System for Reserve Bank's Staff quarters (Avantika), Char Imli, Bhopal.**

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 in India)

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

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 India)

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

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 manufacture.

**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 tender either at factory of OEM/Integrator or at site.

**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 behavior Outstanding/Very Good/  
Good/Satisfactory/Poor

Note:(i) All columns should be filled in properly countersigned.

(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).  
2019-2020, 2018-2019, 2017-2018
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 28.00Lakhs.

(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 authorise 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 50 KWp Grid Interactive SPV Based Solar Power System for Reserve Bank Staff Quarters (Avantika), Char Imli, Bhopal 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 \_\_\_\_\_ 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, a Corporation 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 Tenders for for **Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid Interactive SPV Based Roof top Solar Power System for Reserve Bank's Staff quarters (Avantika), Char Imli at Bhopal** and the specifications and terms and conditions enclosed therein.

WHEREAS the tenderer as per clause No. \_\_\_\_\_ Section II of Instructions to 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 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 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 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 Tenderer for the work of **Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid Interactive SPV Based Rooftop Solar Power System for Reserve Bank's Staff quarters (Avantika), Char Imli at Bhopal**. 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 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.

SIGNED AND DELIVERED

(For & on behalf of the above named Bank)

For & on behalf of

(Banker's Name & Seal)

BRANCH MANAGER

(Banker's Seal)

Address \_\_\_\_\_

**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. \_\_\_\_\_

To  
Regional Director  
Reserve Bank of India  
Estate Department,  
Bhopal-462011

Dear Sir

In consideration of your agreeing to accept the security deposit of INR\_\_\_\_\_(INR\_\_\_\_\_only) furnish able to you by Messer's\_\_\_\_\_(hereinafter referred to as "the Contractor") in terms of their contract with you for **Design, Supply, Installation, Testing and Commissioning of 50 KWp Grid Interactive SPV Based Roof top Solar Power System for Reserve Bank's Staff quarters (Avantika), Char Imli, Bhopal.** as per their Tender dated\_\_\_\_\_and your Special Conditions of Contract and other 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 here in after 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 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.
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.

SIGNED AND DELIVERED  
(For & on behalf of the above named Bank)

For & on behalf of (Banker's Name & Seal)

BRANCH MANAGER  
(Banker's Seal)

Address:

**ANNEXURE – ‘L’**

**LIST OF SPARE PARTS TO BE SUPPLIED ALONG WITH THE MAIN EQUIPMENTS  
(To be filled by the bidder)**

*Use separate sheets*

<b>S. No.</b>	<b>Description of Item</b>	<b>Part No</b>	<b>Quantity</b>
<b>A</b>	<b>SPV Spare Parts</b>		
1			
2			
3			
4			
<b>B</b>	<b>PCU / Solar Inverter Spare Parts</b>		
1			
2			
3			
4			

Date :

Sign and seal of the contractor firm

### Articles of Agreement

ARTICLES OF AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ between the Reserve Bank of India, Estate Department, Bhopal having its Central Office at Mumbai (hereinafter called "the Employer") of the one part and \_\_\_\_\_ (Hereinafter called "the Contractor") of the another part.

WHEREAS the Employer is desirous of **Design, Supply, Installation, Testing and Commissioning of Grid Interactive SPV Based Roof top Solar Power System of 50 KWp at Reserve Bank's Staff quarters, Char Imli, Bhopal** (hereinafter called "the said work") and has caused drawings, specifications and schedule of quantities 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 upon the subject work to the conditions set forth herein and to the conditions set forth in the special 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 conditions, the Contractor shall, upon and subject to the said conditions, execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of quantities.

1. The Employer 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 conditions.

2. The term "Architect" in the said conditions shall mean CGM, Premises Department, Central Office, Reserve Bank of India, Bhopal and on his ceasing to be the architect for the purpose of this Contract for whatever reason, such other person or persons as shall be nominated for that purposes by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer 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.

3. The said conditions and Appendix thereto and any correspondence exchanged between the Employer and the contractor in connection with the said work till the date of letter of acceptance of their tender 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.

4. The said 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.

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

6. This Contract is neither a fixed lump sum contract nor a piece work but is a contract to carry out the work in respect of provision of Roof top solar system, to be paid for at the rates/amount contained in the Schedule of Rates and Probable Quantities or as provided in the Said Conditions.

7. 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.

8. The Employer 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.

9. Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work from the tenth day of issue of works order/letter of acceptance as provided for in the said Conditions and to complete the entire work within **Three Months** subject nevertheless to the provisions for the extension of time, failing which the employer shall be entitled to recover liquidated damages as per the said conditions.

10. All payments by the Employer under this Contract will be made only at Reserve Bank of India, Bhopal.

11. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Bhopal and only Courts in Bhopal shall have jurisdiction to determine the same.

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

13. **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 Employer. The contractor shall indemnify the Employer for any loss suffered by the Employer 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 Employer shall be entitled to claim damages and pursue legal remedies. 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. The contractor's obligations with respect to non-disclosure and confidentiality will survive the expiry or termination of this agreement for whatever reason.

14. **Sexual harassment Clause:** 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

15. **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.

If the Contractor is a partnership or an individual	IN WITNESS WHEREOF the Employer 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 Employer 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 / has caused these presents and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.



SIGNED AND DELIVERED by the

Reserve Bank of India by the hand of

Shri \_\_\_\_\_

(Name and designation)

in the presence of

(1) \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Witnesses)

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

(1) \_\_\_\_\_

(2) \_\_\_\_\_

Directors, who have signed these presents in

Token thereof in the presence of

(1) \_\_\_\_\_

(2) \_\_\_\_\_

SIGNED AND DELIVERED BY the Contractor by

the hand of Shri \_\_\_\_\_

and duly constituted attorney.

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

If the Contractor is signing by the hand of power of attorney, whether a Company or an individual.

**Note:** Bank reserves the right to modify the contents of the Articles of the Agreement before the agreement is entered with the contractor

**Details of similar qualifying works executed during the last 5 years**

Sr. No.	Name and address of the firm	No. of units supplied	Value of the work	Whether works completed in time or not (give date of start & and date of completion)	Completion period as per work order	Fax /phone number & contact person of the firm

(Attach sheet if required)

Signature and Seal of the tenderer

**NEFT Details for effecting e-payments**

Name of the Institution: Reserve Bank of India, Bhopal

Address (in full): Reserve Bank of India, Bhopal

1	Name of the Account Holder (as appearing in the Bank Account)	Reserve Bank of India, Bhopal
2	<b>Account Number</b>	<b>186003001</b>
3	Type of Account (Savings, Current etc.)	Current
4	<b>PAN Number</b>	<b>AAIFR 5286M</b>
5	Name of the Bank	RBI, Bhopal
6	Name of the Branch	RBI, Bhopal
7	Address of the Bank	RBI, Bhopal
8	<b>NEFT/IFS Code</b>	<b>RBIS0BLPA01 (0 in the code represents ZERO)</b>
9	Name of the Account	<b>RBI, NEFT, Inward Received</b>
10	GST Number	<b>23AAIFR5286M120</b>

### Unpriced Bill of Quantity

**Name of the Work: Design, Supply, Installation, Testing and Commissioning of Roof Top Grid Interactive 50KWp SPV based Solar Power System at Reserve Bank Staff Quarters (Avantika), Char Imli, Bhopal.**

Sl.No.	Description of the item	Qty.	Unit
1.	<p><b>Supply of Rooftop Solar Power Plant at Bank's Staff Quarters, Bhopal:</b></p> <p>Design, Supply, Installation, Testing and Commissioning complete material required for generation of <b>50 KWp</b> grid interactive SPV (Mono crystalline based on Mono PERC) based Roof top Solar Power System at <b>Reserve Bank Staff Quarters (Avantika), Char Imli, Bhopal</b>. The system shall have guaranteed annualized AC energy output of <b>64,000 Kilo watt hour (KWH)</b> per year during the first five years of operation. The rate shall include for all the material required including required quantities of SPV modules formed into arrays, Solar grid tied inverter with their mounting arrangement (all type of major and minor G.I fabrication cum foundation structure), power conditioning units, required DC &amp; AC distribution panels with surge protection units, earth stations with strip/cabling for connecting to the plant, data loggers along with PC based (PC will be provided by the Bank) arrangement for system performance monitoring through licensed software, metering safety arrangements, civil works, copper earthing arrangement, training etc. as defined in Part I of the tender to provide a composite operational system. (The rate shall include for liaison charges of CEIG (M.P), MPMKVCL (formerly MPEB) for installation, sanction and grid connectivity and all other statutory bodies/agencies as required, all-inclusive net metering charges includes replacing of existing meter with net meter, shifting of meter location (if required, along with cable), meter panel, CT, PT etc., GST, taxes, duties, levies, insurance, documentation, agreement, transportation, loading unloading of the material etc., as applicable).</p>	1	Per Job
2.	Supply of 3½ C, 70 sq.mm 1.1KV grade, XLPE insulated	200	Mtr.

	Aluminum armoured cable duly ISI marked as per technical specification. The rate shall include all taxes, duties, levies, transportation etc., as applicable. Approved makes Polycab, Finoex, CCI/ RR.		
3.	Laying of above mentioned cable 3½ C, 70 sq.mm 1.1KV grade, XLPE insulated Aluminum armoured cable duly ISI marked partly direct on wall with saddling/clamping at regular intervals of 300mm and remaining at a depth of 0.5mtr in soft /hard/rocky soil including excavation, sand cushioning (top and bottom), protective covering, refilling the trench and termination of cable using suitable brass glands and aluminum lugs as per technical specification. The work includes removal of paver blocks wherever required and rearranging the same after completion of work including refilling of gaps etc., so as to match with the original finish. Paver blocks, if broken during the process have to be replaced by the contractor. The rate shall include all taxes, duties, levies, transportation etc., as applicable.	175	Mtr.
4.	Laying of above mentioned cable (item no.2) at a depth of 0.5mtr using 50mm dia., 'B' class G.I pipe by cutting of bitumen road and back filling the same so as to match with the original finish. The rate shall include all taxes, duties, levies, transportation, etc., as applicable.	25	Mtr.
5.	Total Capital cost (item no. 1+2+3+4) in INR		
6.	<b>Comprehensive Annual Maintenance Charges (CAMC)</b> Comprehensive annual maintenance charges for periodic maintenance, servicing of complete system as mentioned in above items including cables, providing all spare parts, tools, consumables for servicing as required as per standard engineering practice, recommendation(s) of the respective manufacturer(s) and instructions of engineer-in-charge as per Part I of the tender. The rate shall be applicable after defect liability period/warranty of entire unit. The rate shall include all taxes, duties levies, insurance, renewal charges (sim/license etc.,) and transportation etc., as applicable.	1	Job
<b>Total Cost of Ownership (TCO) = [Item No.5 + (Item No.6*MF)] where MF =7.0476</b>			