

TENDER DOCUMENT

FOR

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 03 PLANTS OF CAPACITY 20 KWP, 22KWP, 32
KWP ON-GRID ROOF TOP SOLAR (PV) POWER SYSTEM**

NOTICE INVITING TENDER

State Bank of India, Local Head office, Premises & Estate dept New Delhi invites two-bid online tenders through GeM portal for **Supply, Installation, Testing & Commissioning of 03 plants of capacity 20 KWp, 22Kwp, 32 Kwp On-Grid Roof Top Solar (PV) Power system**. The other details of the tender are as under:

Buyer Added ATC will prevail over rest of the conditions in case of ambiguity or contradiction.

1.	Scope of Work	a) Supply, Installation, Testing and Commissioning of On-Grid Roof Top Solar (PV) Power system : 03 plants of capacity 20 KWp, 22Kwp, 32 Kwp (Bifacial N-type TOPcon 625 watt and above, PV modules from ALMM List 1 and solar PV cells from ALMM List II , all as per latest MNRE guidelines) b) Complete net metering & SIM based remote monitor feature with one year recharge by vendor. all cost/ fee to be borne by the vendor for net meter and net metering. rate to be quoted accordingly. c) 05 Years Comprehensive Maintenance Maintenance of whole solar Plant after one year Defect liability period. d) Solar plate Cleaning arrangement at rooftop with CPVC water pipe. e) Cleaning of Solar Panels once in a month. f) Graph of hourly solar power generation, E-day, E-total (Kwh) solar power generation details on inverter LED display simultaneously must be available. (Price to include all above)
		Site Address: 1. SBI, Plot No 364 , Dundahera Branch, Gurgaon 2. SBI, 111, Navyug Market Branch, Ghaziabad 3. SBI Semmapuri Branch, New Delhi
2	a) Tender invitation	10 days
	b) Tender technical bid opening	As per GEM
	c) Technical bid clarification time	As per GEM
	d) Price bid opening	As per GEM
3	a) Earnest Money Deposit (EMD) Estimated Cost (40.70 Lacs excluding GST)	Rs 40,700.00 (Rupees fourty thousand & Seven hundred only) to be submitted in the form DEMAND DRAFT in FAVOUR “ AGM(Premises & Estate), SBI ,LHO, New Delhi and payable at Delhi at Asst General Manager (P&E), SBI, 5th Floor, D Block, Local Head Office, 11, Sansad Marg, New Delhi -110001. Exempted for Micro and Small enterprises with uploading valid MSME/UDYAM registration certificate.

b) Experience	The company must have minimum 2 years of experience before the bid opening date, in Supply, Installation, Testing and Commissioning of “On-Grid Roof Top Solar (PV) Power system” Copy to documents as per Experience criteria be uploaded as proof of experience.
c) Minimum Turnover (Average annual in last three years (23-24, 24-25, 25-26) and Provisional of 26-27 may also be considered on producing valid CA certificate.	At least 12 Lacs or above
d) Full-fledged office	The bidder must have full-fledged office/service center/Branch office in any of location within geographical area of Delhi NCR . Copy of electricity bill in the name of firm /GST certificate/ trade license /ESI/PF registration receipt etc to be uploaded. (To a certain that the service center/Office/Branch office is full-fledged, the bank may visit the said office at its own discretion).
e) Past Performance	The company should have completed “On-Grid Roof Top Solar (PV) Power system” either of the following: • At least one work of minimum 32.56 lac (Work Contract Value excluding GST) or above • or • At least two work each of minimum 20.35 lac (work Contract Value excluding GST) or above • or • At least three work each of minimum 16.28 lac (work Contract Value excluding GST) or above In at least one of the last seven financial year. Completion Certificates of the above works, in case completion certificates are not available, the copies of GST invoices raised in the name of client may be considered at the sole discretion of the Bank. (The above certificates/invoices etc. must be of any PSU/ Public Sector Bank/Public limited (Listed) Company/Govt)
f) Certifications	(PV modules from ALMM List 1 and solar PV cells from ALMM List II) (Panels & inverter should be BIS approved and ISI marked), The panels and cells, inverter , complete system should comply the latest MNRE guidelines.

	g) Documents to be submitted along with the Bill	Documents required to be submitted after product installation- 1) Warranty certificate of inverter & panels. 2) Installation and commissioning report. 3) login ID & password, Net metring details etc
4	Initial Security Deposit (ISD)	2% of the total value of the contract including Earnest Money (without GST value) to be submitted in the form DEMAND DRAFT in FAVOUR “ AGM(Premises & Estate), LHO, New Delhi and payable at Delhi . With-in 7 days from date of receipt of work order.
5	Security Deposit (SD)	The Security Deposit (5% of the total contract value) will be refunded on expiry/termination of the complete contract including CAMC period, after adjusting the dues payable by the contractor to the Bank. No interest shall be paid to the amount retained by the Bank as Security Deposit. However, the Security Deposit amount may be released on submission of Bank Guarantee/FDR for equivalent amount valid for total CAMC period. Forfeiting Of Security Deposit : a) The security deposit shall be liable to be forfeited wholly or partly at the sole discretion of the SBI, if the Bidder either fails to execute the Contract or fails to fulfill the contractual obligations or fails to settle in full his dues to the SBI. b) The SBI is empowered to recover from the security deposit for any sum due and for any other sum that may be fixed by the SBI as being the amount or loss or losses or damages suffered by it due to delay in performance and / or non-performance and / or partial performance of any of the conditions of the contract and / or non-performance of guarantee obligations. c) Any default in CAMC
6	Time of completion of work	60 days from the date of award of work
7	Income Tax and GST	1) Income Tax/GST will be deducted at source as per Govt. Guidelines. 2) Reimbursement of GST on contract will be made only on submission of proper GST invoice as per applicable GST provision. The Bidder should comply with the following. 1.0 Bidder should have GST Registration Number 2.0 Invoice should specifically/separately disclose the amount of GST levied at applicable rate as per GST provision

		Bidder should timely file his GST return in accordance with GST provisions to enable the bank to claim the credit of GST paid to the Bidder.
8	Validity of Offer	90 days from the date of opening the Tenders
9	Liquidate Damage(LD)	At the rate of 0.5% of the Contract Value per week which subject to a maximum of 5% of the accepted Contract Value.
10	Terms & mode of payment	• Payment shall be made by way of Electronic fund transfer. The vendor should furnish details of the Bank, A/c no, IFSC code PAN, GST numbers etc. in the Invoice. • The CAMC payment will be made on Quarterly basis after the expiry of the warranty period of one year as per the terms defined in this tender document, on written request after satisfactory services are rendered on completion of each quarter, nothing in advance will be payable to the vendor. No advance payment of any kind shall be made. • The Security Deposit (5% of the total contract value) will be refunded on expiry/termination of the complete contract including the CAMC period, after adjusting the dues payable by the contractor to the Bank. No interest shall be paid to the amount retained by the Bank as Security Deposit. However, the Security Deposit amount may be released on submission of Bank Guarantee/FDR for equivalent amount valid for total CAMC period.
11	Place of opening of tender	Asst General Manager (P&E), SBI, 5 th Floor, D Block, Local Head Office, 11, Sansad Marg, New Delhi -110001 agmpre.lhodel@sbi.co.in
12	Contact person (SBI)	Manager(Electrical), SBI, 5 th Floor, D Block, Local Head Office, 11, Sansad Marg, New Delhi -110001 diwakar.gupta@sbi.co.in , Ph. 01123407139
13	Performance guarantee:	Additional Security deposit (ASD)/Additional performance Guarantee (APG) shall be applicable if the bid price is below 10% of the estimated cost put to tender. The amount of such ASD/ APG shall be the difference between 90% of estimated cost put to tender and the quoted price. ASD in the format of DD / Banker's Cheque / Bank Guarantee shall be submitted within 15 days of intimation of award of work / work order, without which the contractor will not be allowed to start the work and failure of submission of ASD will result in forfeiture of EMD and cancellation of tender. For e.g., if a contractor is quoting 15% below the estimated cost

		put to tender (i.e. 85% of the estimate), then ASD of 5% of estimated cost is required to be obtained from the contractor (90%-85%).
14	Defects Liability Period	72 months from the date of handing over of the project to the satisfaction of Bank. The vendor must rectify all the defects arising any no. of times within the defect's liability period up to the satisfaction of the bank. The vendor must rectify any defect that has come to notice of the Bank within the timelines as prescribed by the Bank for the defect that has occurred within the defect liability period and CAMC period.
15	Documents to be uploaded on GEM Portal	1. Complete tender document signed and stamped. 2. EMD/Exemption as defined in NIT 3(a) 3. Copies of documents as per Experience criteria be uploaded in GEM portal as proof of experience. Sr. No: 3(b) 4. Completion Certificates of the above works, in case completion certificates are not available, the copies of GST invoices raised in the name of client as defined in Experience criteria of this NIT Sr. No: 3 (e), Copies of same to be uploaded in the GEM portal. 5. Copy of electricity bill in the name of firm /GST certificate/ trade license /ESI/PF registration receipt etc to be uploaded to certify full fledged office criteria as defined in this NIT 3(d) 6. Other documents as per gem criteria stating turnover, etc (CA certificate etc). 7. Certifications as defined in NIT 3(f)
16		PLEASE SUBMIT ONLY RELEVANT DOCUMENTS as above or other defined anywhere else in this tender document , non-submission of the above document or others as advised in this tender document may lead to rejection of the bid.
17	Pre-Bid Meeting	NA
18		The SBI reserves the right to cancel or postpone or modify the tender at any stage without assigning any reason thereof.
19	Additional deduction	Bank will also deduct additional 5% of the final value of the work from Final/running bill if the net metering is not completed with in the tender time frame , the same will be released after completion of net metering.

19		The vendor has to obtain all necessary approvals/permissions, Liaisoning if any, from the appropriate government authorities/Local authorities required for the completion of the above contract and obtaining lift license from the appropriate authority at the site mentioned in this tender. The vendor has to comply all the rules and regulations which are necessary for the execution of the contract and shall indemnify the SBI from all legal and monetary liabilities arising due to the violation of the approvals/permissions, rules and regulations.
20	Retention percentage	Besides the ISD, as deposited by the contractor in the above said manner, the retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill, provided the total security deposit i.e., ISD plus Retention Money shall both together not exceed 5% of the contract value.

AGM (Premises & Estate)

ANNEXURE-I

UNDERTAKING

(To be submitted along with the technical Bid)

To
AGM(P&E),
State Bank of India, Local Head office
5th Floor, D Block, 11, Sansad Marg,
New Delhi-11001

Dear Sir,

Sub.: - Supply, Installation, Testing & Commissioning of 03 plants of capacity 20 KWp, 22Kwp, 32 Kwp On-Grid Roof Top Solar (PV) Power system

I/ We refer to the tender notice issued by you for “**Supply, Installation, Testing & Commissioning of 03 plants of capacity 20 KWp, 22Kwp, 32 Kwp On-Grid Roof Top Solar (PV) Power system**” in connection with the above.

1. I undertake to submit in Hard copy the tender document along with all terms & Conditions, Specifications and subsequent annexure and corrigendum's duly signed and stamped by authorized representative/ signatory on becoming L1. However, we accept all the terms and conditions along with the specifications, Drawings, Layouts etc. defined in the tender documents.
2. I/ We hereby offer to perform, provide, execute, complete and maintain the works in conformity with the drawings, designs, conditions of contracts & specifications schedule of quantities relating to the works.
3. I/ We have satisfied myself/ ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions, subject to above, I/ We do hereby agree, should this tender be accepted in whole or in part, to:
 - a. Abide by and fulfill all the terms and provisions of the said conditions annexed hereto
 - b. Complete the works within **(till the validity of the contract)** as per the work programme enclosed with the tender in two or three shifts if considered necessary by the Employer/ Consultants at no extra cost to the Employer.
4. I/ We have deposited an **Rs 40,700.00 (Rupees Forty thousand Seven hundred only)** to be submitted in the form DEMAND DRAFT in FAVOUR “ AGM(Premises & Estate), SBI ,LHO, New Delhi and payable at Delhi /Exemption if applicable respectively which I/ We note, will not bear any interest and is liable for forfeiture.

I. If our offer is withdrawn within the validity period of acceptance by the Employer.
Or

II. If the contract agreement is not executed by us **within 15 days** from the date of receipt of the letter of acceptance.
Or

III. If we fail to pay the initial security deposit as stipulated.

Or

IV. If the work is not commenced **within 15** days after issue of work order.

2. I/We understand that you are not bound to accept the lowest or any tender you receive.
3. The intending bidders shall be asked to quote their offers in terms of Individual item wise unit rate and amount for that item and the total cost of the project he will be willing to execute the work.
4. The "Percentage discount Offer" (if any discount provided by contractor) shall be uniformly applicable to each and every item including all sections/ sub-sections/ sub heads of the Tender.
5. **I agree to enter into CAMC contract after the expiry of the warranty period as per the terms defined in this tender document.**
6. We shall maintain all the necessary registers, record as per the existing Labor Laws and also agree to maintain additional registers, record as directed by the Bank from time to time. All the workmen working with us in SBI residential flats shall be given Identity Cards with photographs and it will be ensured by us that they carry the same without fail.
7. We also agree that in case any workmen working with us, discontinues his service for any reason or terminated, transferred etc., it will be binding on us to report the same to SBI immediately and there will not be any replacement unless agreed to by both the parties.
8. **Additional Security deposit (ASD)/Additional performance Guarantee (APG) shall be applicable if the bid price is below 10% of the estimated cost put to tender. The amount of such ASD/ APG shall be the difference between 90% of estimated cost put to tender and the quoted price. ASD in the format of DD / Banker's Cheque / Bank Guarantee shall be submitted within 15 days of intimation of award of work / work order, without which the contractor will not be allowed to start the work and failure of submission of ASD will result in forfeiture of EMD and cancellation of tender.**

Date:

Contractor's Stamp & Signature

The names of DIRECTORS of our Firm are:

1. _____
2. _____
3. _____
4. _____

Yours faithfully,

Signature

Designation

INSTRUCTIONS TO THE TENDERERS

1.0 Scope of Work

Supply, Installation, Testing & Commissioning of 03 plants of capacity 20 KWp, 22Kwp, 32 Kwp On-Grid Roof Top Solar (PV) Power system

1.1 Site and Its Location

The proposed work is to be carried out at **Site Address:**

1. SBI, Plot No 364 , Dundahera Branch, Gurgaon
2. SBI, 111, Navyug Market Branch, Ghaziabad
3. SBI Semmapuri Branch, New Delhi

2.0 Tender Documents

2.1 The work has to be carried out strictly according to the conditions stipulated in tender consisting of the following documents and the most workman like manner,

- Instructions to tenderers
- General Conditions of Contract
- Special Conditions of Contract
- Additional Conditions for Electrical Installation
- Technical Specifications
- Drawings
- Priced Bid

2.2 The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below:

- Price Bid
- Technical Specifications
- Additional Conditions for Electrical Installation
- Special Conditions of Contract
- General Conditions of Contract
- Instructions to Tenderers

2.3 NA

2.4 The tender documents are not transferable.

3.0 Site Visit

3.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data which may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The Tenderer is

requested satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law & order situation, climatic conditions local authorities' requirement, traffic regulations etc; The tenderer will be fully responsible for considering the financial effect of any or all the factors while submitting his tender.

4.0 Earnest Money

The tenderers are requested to submit the Earnest Money of Rs 40700.00 (Rupees Fourty thousand Seven hundred only) to be submitted in the form DEMAND DRAFT in FAVOUR “ AGM(Premises & Estate), SBI ,LHO, New Delhi and payable at Delhi.

4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.

4.3 No interest will be paid on the EMD.

4.4 EMD of unsuccessful tenderers will be refunded within 30 days of award of Contract.

4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 Initial Security Deposit

The successful tenderer will have to submit a sum equivalent to 2% of contract value less EMD by means of D/D drawn in favour of State Bank of India within a period of 15 days of acceptance of tender.

6.0 Security Deposit

6.1 Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of initial security deposit which includes the EMD. Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bill i.e. deduction from each running bill account will be 10% till total 3% of contract value is reached. **The Security Deposit (5% of the total contract value) will be refunded on expiry/termination of the complete contract including Warranty period/CAMC Period, after adjusting the dues payable by the contractor to the Bank. No interest shall be paid to the amount retained by the Bank as Security Deposit. However, the Security Deposit amount may be released on submission of Bank Guarantee/FDR for equivalent amount valid for total Warranty period. The EMD with quotation shall be released thereafter.**

6.2 No interest shall be paid to the amount retained by the Bank as Security Deposit.

6.3 **Additional Security deposit (ASD)/Additional performance Guarantee (APG) shall be applicable if the bid price is below 10% of the estimated cost put to tender. The amount of such ASD/ APG shall be the difference between 90% of estimated cost put to tender and the quoted price. ASD in the format of DD / Banker's Cheque / Bank Guarantee shall be submitted within 15 days of intimation of award of work / work order, without which the contractor will not be allowed to start the work and failure of submission of ASD will result in forfeiture of EMD and cancellation of tender.**

For e.g., if a contractor is quoting 15% below the estimated cost put to tender (i.e. 85% of the estimate), then ASD of 5% of estimated cost is required to be obtained from the contractor (90%-85%).

7.0 Signing of Contract Documents

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within **15 days from** the receipt of intimation of acceptance of his tender by the Bank. However, the written acceptance of the tender by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

8.0 Completion Period: The time period allowed for completion of the project shall be **60 days** from the date of commencement of work or **7 days** from the date of issuance of work order, whichever is earlier.

9.0 Validity of Tender

Tenders shall remain valid and open for acceptance for a period of **90 days** from the date of opening price bid. If the tenderer withdraws his/her offer during the validity period or makes modifications in his/her original offer which are not acceptance to the Bank without prejudice to any other right or remedy the Bank shall be at liberty to forfeit the EMD.

10.0 Liquidated Damages

The liquidated damages shall be 0.5% per week subject to a maximum of 5% of contract value.

11.0 Rates and Prices

11.1 In case of item rate tender

11.1.1 The tenderers shall quote their rates for individual items both in words and figures in case of discrepancy between the rates quoted in words and figures the unit rate quoted in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated, and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

11.1.2 The tenderers need not quote their rates for which no quantities have been given. In case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.

11.1.3 The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.

The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed, he should immediately bring to the knowledge of the Architect/Bank.

- 11.1.4 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him.
- 11.1.5 Each page shall be totaled, and the grand total shall be given.
- 11.1.6 The rate quoted shall be firm and shall include all costs, allowances, taxes, VAT, levies, etc.
- 11.1.7 **12. In case of any dispute arising regarding the job contract including the interpretation or the scope or working thereof, the decision of the AGM(P&E) shall be final and binding on the Contractor All disputes are subject to local Jurisdictions at Delhi only.**

GENERAL CONDITIONS OF CONTRACT

1.0 Definitions

“Contract” means the documents forming the tender and the acceptance thereof and the formal agreement executed between State Bank of India (Client) and the contractor, together with the documents referred therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Architects/Bank and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

- 1.1 In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.
 - 1.1.1 ‘SBI’ shall mean State Bank of India (client) a body Corporate created under State Bank of India Act 1955, having its Corporate Centre at State Bank Bhavan, Madame Cama Road, Mumbai 400 021 and its LHO at **D Block, Local Head Office, 11, Sansad Marg, New Delhi - 110001** and includes the client’s representatives, successors and assigns.
 - 1.1.2 ‘Site Engineer’ shall mean an Engineer appointed by the Bank as their representative to give instructions to the contractors.
 - 1.1.3 ‘The Contractor’ shall mean the individual or firm or company whether incorporated or not, undertaking the works and shall include legal personal representative of such individual or the composing the firm or company and the permitted assignees of such individual or firms of company.

The expression ‘works’ or ‘work’ shall mean the permanent or temporary work described in the ‘Scope of Work’ and/or to be executed in accordance with the contract and includes materials, apparatus, equipment, temporary supports, fittings and things of all kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

- 1.1.4 'Engineer' shall mean the representative of the Architect/consultant.
- 1.1.5 'Drawings' shall mean the drawings prepared by the Architects and issued by the Engineer and referred to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time 'Contract value shall mean the value of the entire work as stipulated in the letter of acceptance of tender subject to such additions thereto or deductions there from as may be made under the provision herein after contained.
- 1.1.6 'Specifications' shall mean the specifications referred to in the tender and any modifications thereof as may time to time be furnished or approved by the architect/consultant "Month" means calendar month.
- 1.1.7 "Week" means seven consecutive days.
- 1.1.8 "Day" means a calendar day beginning and ending at 00 Hrs and 24 hrs respectively.

CLAUSE:

1.0 Total Security Deposit

Total Security deposit comprise of:

- a) Earnest Money Deposit
- b) Initial Security Deposit
- c) Retention Money
- d) Additional Security Deposit

a) **Earnest Money Deposit:**

The tenderer shall furnish EMD in the form of Demand draft or bankers cheque drawn in favour of **State Bank of India, on any Scheduled Bank**. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time during the period when he is required to keep his tender open acceptance by the SBI or after it is accepted by the SBI the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the work within the stipulated time.

b) **Initial Security Deposit (ISD)**

The amount of ISD shall be 2% of accepted value of tender including the EMD. Balance of ISD (i.e. excluding EMD) is to be submitted in the form of D/D drawn on any scheduled Bank and shall be deposited within 15 days from the date of letter of acceptance of tender.

c) **Retention Money**

Besides the ISD as deposited by the contractor in the above said manner the retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill provided the total security deposit i.e. the ISD plus Retention Money shall both together not exceed 5% of the contract value. **The Security Deposit (5% of the total contract value) will be refunded on expiry/termination of the complete contract including Warranty period and CAMC, after adjusting the dues payable by the contractor to the Bank. No interest shall be paid to the amount retained by the Bank as Security Deposit. However, the Security Deposit amount may be released on submission of Bank Guarantee/FDR for equivalent amount valid for total Warranty period. The EMD with quotation shall be released thereafter.**

d) **Additional Security Deposit: -**

Additional Security deposit (ASD)/Additional performance Guarantee (APG) shall be applicable if the bid price is below 10% of the estimated cost put to tender. The amount of such ASD/ APG shall be the difference between 90% of estimated cost put to tender and the quoted price. ASD in the format of DD / Banker's Cheque / Bank Guarantee shall be submitted within 15 days of intimation of award of work / work order, without which the contractor will not be allowed to start the work and failure of submission of ASD will result in forfeiture of EMD and cancellation of tender.

For eg, if a contractor is quoting 15% below the estimated cost put to tender (i.e. 85% of the estimate), then ASD of 5% of estimated cost is required to be obtained from the contractor (90%-85%).

3.0 Language Errors, Omissions and Discrepancies

In case of errors, omissions and/or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc, the following order shall apply.

- i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.
- ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.
- iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the latter shall be adopted.
- iv) In case of difference between rates written in figures and words, the rate in words shall prevail.
- v) Between the duplicate/subsequent copies of the tender, the original tender shall be taken as correct.

4.0 Scope of Work

The contractor shall carry out, complete and maintain the said work in every respect strictly in accordance with this contract and with the directions of and to the satisfaction of the Bank to be communicated through the architect/consultant. The architect/consultant at the directions of the Bank from time to time issue further drawings and/or written instructions, details directions and explanations which are hereafter collectively referred to as Architect's/Consultant's instructions in regard to : the variation or modification of the design, quality or quantity of work or the addition or omission or substitution of any work, any discrepancy in the drawings or between the BOQ and/or drawings and/or specifications, the removal from the site of any material brought thereon by the contractor and the substitution of any other materials thereof, the demolition, removal and/or re-execution of any work executed by him, the dismissal from the work of any person employed/engaged thereupon.

5 (i) Letter of Acceptance

Within the validity period of the tender the Bank shall issue a letter of acceptance either directly or through the architect by registered post or otherwise depositing at the address of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a binding contract between the SBI and the contractor.

5 (ii) Contract Agreement

On receipt of intimation of the acceptance of tender from the SBI/Architect the successful tenderer shall be bound to implement the contract and within fifteen days thereof he shall sign an agreement in a non-judicial stamp paper of appropriate value.

6.0 Ownership of drawings

All drawings, specifications and copies thereof furnished by the SBI through its architect/consultants are the properties of the SBI. They are not to be used on other work.

7.0 Detailed drawings and instructions

The SBI through its architects/consultants shall furnish with reasonable promptness additional instructions by means of drawings or otherwise necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents, true developments thereof and reasonably inferable there from.

The work shall be executed in conformity therewith and the contractor prepare a detailed programme schedule indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBI through the Architect/Consultant. **Copies of Agreement**

Two copies of agreement/tender document duly signed by both the parties in a non-judicial stamp paper of Rs 500/- with the drawings shall be handed over to the contractors.

8.0 Liquidated Damages

If the contractor fails to maintain the required progress in terms of clause 30 of GCC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBI on account of such breach to pay a liquidated damages at the rate of 0.5% of the contract value per week subject to a maximum of 5% of the contract value.

9.0 Materials, Appliances and Employees

Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment transportation and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. Workman whose work or behaviour is found to be unsatisfactory by the SBI/Architect/Consultant he shall be removed from the site immediately.

10.0 Permits, Laws and Regulations

Permits and licences required for the execution of the work shall be obtained by the contractor at his own expenses.

The contractor shall give notices and comply with the regulations, laws, and ordinances rules, applicable to the contractor. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBI in writing under intimation of the Architect/Consultant. If the contractor performs any act which is against the law, rules and regulations he shall meet all the costs arising there from and shall indemnify the SBI any legal actions arising there from.

11.0 Setting out Work

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect/consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by the architect/consultant the contractor shall be responsible for the same and shall at his own expenses rectify such error, if so, required to satisfaction of the SBI.

12.0 Protection of works and property

The contractor shall continuously maintain adequate protection, of all his work from damage and shall protect the SBI's properties from injury or loss arising in connection with contract. He shall make good any such damage, injury, loss due to his fault or negligence except which are due to causes beyond his control.

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protection of his employees on the works and shall comply with all applicable provisions of Government and local bodies' safety laws and building codes to prevent accidents, or injuries to persons or property of about or adjacent to his place of work. The contractor shall take insurance covers as per clause 24.0 at his own cost. The policy may be taken in joint names of the contractors and the SBI and the original policy may be lodged with the SBI.

13.0 Inspection of Work

The SBI/Architect/Consultant or their representatives shall at all reasonable time have free access to the work site and/or to the workshop, factories or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBI, Architect/Consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBI/Architect/Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner's organization a wing of Central Vigilance Commission.

14.0 Assignment and subletting

The whole of work included in the contract shall be executed by the contractor and he shall not directly entrust and engage or indirectly transfer assign or underlet the contract or any part or share thereof or interest therein without the written consent of the SBI through the architect and no undertaken shall relieve the contractor from the responsibility of the contractor from active superintendence of the work during its progress.

15.0 Quality of Materials, Workmanship & Test

- (i) All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/Consultant instructions and shall be subject from time to time to such tests as the architect/consultant may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory. The contractor shall provide such assistance, instruments, machinery, labour and materials
- (ii) Samples

All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature/test certificate of the same shall be provided to the satisfaction of the Architect/ consultant. Before submitting the sample/literature the contractor shall satisfy himself that the material/equipment for which he is submitting the samples/literature meet with the requirement of tender specification. Only when the samples are approved in writing by the architect/consultant the contractor shall proceed with the procurement and installation of the particular material/equipment. The approved samples shall be signed by the Architect/Consultant for identification and shall be kept on record at site office until the completion of the work for inspection/comparison at any time. The Architect/Consultant shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipment etc shall be to the account of the contractor.

(iii) **Cost of tests**

The cost of carrying out any test shall be borne by the contractor if such test is intended by or provided for in the specifications or BOQ.

(iv) **Cost of test not provided for**

If any test is ordered by the Architect/ Consultant which is either:

If so intended by or provided for or (in the cases above mentioned) is not so particularized or through so intended or provided for but ordered by the Architect/Consultant which is either to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government/approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining Information related to execution of work

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve him from any risks or from the entire responsibility for the fulfilment of contract.

17.0 Contractor's superintendence

The contractor shall give necessary personal superintendence during the execution of the works and as long, thereafter, as the Architect/consultant may consider necessary until the expiry of the defect's liability period, stated hereto.

18.0 Quantities

- i) The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements

The rate quoted shall remain valid for variation of quantity against individual item to any extent subject to maximum variation of the contract value by 25%. The entire amount paid under Clause 20 hereof as well as amounts of prime cost and provisional sums, if any, shall be excluded.

- ii) Variation exceeding 25%: The items of work executed in relation to variation exceeding 25% shall be paid on the basis of provisions of clause 21(e) hereof.

19.0 Works to be measured

The Architect/Consultant may from time to time intimate to the contractor that he required the work to be measured, and the contractor shall forthwith attend or send a qualified representative to assist the Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the Mode of measurements detailed in the specifications. The representative of the Architect/Consultant shall take joint measurements with the contractor's representative and the measurements shall be entered in the measurement book. The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the Measurement book. Should the contractor not attend or neglect or omit to depute his representative to take measurements then the measurements recorded by the representative of the Architect/consultant shall be final. All authorized extra work, omissions and all variations made shall be included in such measurements.

20.0 Variations:

No alteration, omission or variation ordered in writing by the Architect/Consultant shall vitiate the contract.

In case the SBI/Architect/Consultant thinks proper at any time during the progress of works to make any alteration in, or additions to or omission from the works or any alteration in the kind or quality of the materials to be used therein, the Architect/Consultant shall give notice thereof in writing to the contractor or shall confirm in writing within seven days of giving such oral instructions the contractor shall alter to, 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 alteration or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect/Consultant and the value of such extras, alterations, additions or omissions

shall in all cases be determined by the Architect/Consultant and the same shall be added to or deducted from the contract value, as the case may be.

21.0 Valuation of Variations

No claim for an extra shall be allowed unless it shall have been executed under the authority of the Architect/Consultant with the concurrence of the SBI as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

- a) The net rates or prices in the contract 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 herein. Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.
- b) The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of works are carried out, otherwise the prices for the same shall be valued under sub clause (c) hereunder.
- 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 or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the Architect/Consultant of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the Architect/Consultant shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.
- d) Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the Architect/Consultant) the workman's name and materials employed be delivered for verifications to the Architect/Consultant at or before the end of the week following that in which the work has been executed.
- e) It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the contractor shall submit rates duly supported by rate analysis worked on the "market rate basis" for material, labour, hire/running charges of equipment and wastages etc plus 15% towards establishment charges, contractor's overheads and profit. Such items shall not be eligible for escalation.

22.0 Final Measurement

The measurement and valuation in respect of the contract shall be completed within six months of the virtual completion of the work.

23.0 Virtual Completion Certificate (VCC)

On successful completion of entire works covered by the contract to the full satisfaction of the SBI, the contractor shall ensure that the following works have been completed to the satisfaction of the SBI.

- a) Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's labour, equipment and machinery.
- b) Demolish, dismantle and remove the contractor's site office, temporary works, structures including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site, or any land allotted to the contractor by the SBI and not incorporated in the permanent works.
- c) Remove all rubbish, debris etc. from the site and the land allotted to the contractor by the SBI and shall clear, level and dress, compact the site as required by the SBI.
- d) Shall put the SBI in undisputed custody and possession of the site and all land allotted by the SBI.
- e) Shall hand over the work in a peaceful manner to the SBI.
- f) All defects/imperfections have been attended and rectified as pointed out by the SBI to the full satisfaction of SBI.

Upon the satisfactory fulfilment by the contractor as stated above, the contractor shall be entitled to apply to the Architect/Consultant for the certificate. If the Architect/Consultant is satisfied of the completion of the work, relative to which the completion certificate has been sought, the Architect/Consultant shall within fourteen (14) days of the receipt of the application for virtual completion certificate, issue a VCC in respect of the work for which the VCC has been applied.

This issuance of a VCC shall be without prejudice to the SBI's rights and contractor's liabilities under the contract including the contractor's liability for defects liability period nor shall the issuance of VCC in respect of the works or work at any site be construed as a waiver of any right or claim of the SBI against the contractor in respect of works or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies

The SBI/Architect/Consultant reserves the rights to use premises and any portion of the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special

arrangement with the SBI. Such work shall be carried out in such manners not to impede the progress of the works included in the contract.

25.0 Insurance of Works

25.1 Without limiting his obligations and responsibilities under the contract the contractor shall insure in the joint names of the SBI and the contractor against all loss or damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBI and contractor are covered for the period stipulated in clause 28 of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

- a) The works for the time being executed to the estimated current Contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.
- b) The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.
- c) Such insurance shall be effected with an insurer and in terms approved by the SBI which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect/Consultant the policy of insurance and the receipts for payment of the current premiums.

25.2 Damage to persons and property

The contractor shall, except if and so far as the contract provides otherwise indemnify the SBI against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to :

- a) The permanent use or occupation of land by or any part thereof.
- b) The right of SBI to execute the works or any part thereof, on, over, under, in or through any lands.
- c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.
- d) Injuries or damage to persons or property resulting from any act or neglect of the SBI, their agents, employees or other contractors not being employed by the contractor or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent

of the responsibility of the SBI, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

25.3 Contractor to indemnify SBI

The contractor shall indemnify the SBI against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub-clause 25.7.2 of this clause.

25.4 Contractor's superintendence

The contractor shall fully indemnify and keep indemnified the SBI against any action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claim made under or action brought against SBI in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBI if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Architect/Consultant in this behalf.

25.5 Third Party Insurance

25.5.1 Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 26.0 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBI, or to any person, including any employee of the SBI, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 26.0 thereof.

25.5.2 Minimum Amount of Third-Party Insurance

Such insurance shall be affected with an insurer and in terms approved by the SBI which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the Architect/Consultant the policy or policies of insurance cover and receipts for payment of the current premiums.

25.6 The minimum insurance cover for physical property, injury, and death is Rs.5.00 lacs per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

25.7 Accident or Injury to Workmen

25.7.1 The SBI shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the

employment of the contractor or any sub-contractor, save and except an accident or injury resulting from any act or default of the SBI or their agents, or employees. The contractor shall indemnify and keep indemnified SBI against all such damages and compensation, save and except as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

25.7.2 Insurance against accidents etc to workmen

The contractor shall insure against such liability with an insurer approved by the SBI during the whole of the time any person employed by him on the works and shall, when required, produce to the architect/consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any subcontractor the contractor's obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBI is indemnified under the policy but the contractor shall require such sub-contractor to produce to the Architect/Consultant when required such policy of insurance and the receipt for the payment of the current premium.

25.7.3 Remedy on Contractor's failure to insure

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBI may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBI as aforesaid and also deduct 15% of contract value from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

25.7.4 Without prejudice to the other rights of the SBI against contractors, in respect of such default, the Bank shall be entitled to deduct from any sums payable to the contractor the amount of any damages costs, charges, and other expenses paid by the SBI and which are payable by the contractors 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 monies 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 payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

26.0 Commencement of Works

The date of commencement of the work will be reckoned as the recorded date of handing over site by the SBI or 15 days from the date of issue of Letter of Acceptance of Bank, whichever is later.

27.0 Time for completion

Time is the essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a **period of 60 days** from the date of commencement. If required in the contract or as directed by the Architect/Consultant, the contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

28.0 Extension of Time

If, in the opinion of the Architect/Consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/Consultant may submit a recommendation to the SBI to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBI through the Architect/Consultant in writing at least 30 days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reasons in detail and his justification if any, for the delays. The architect/consultant shall submit their recommendations to the SBI in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the SBI the provision of liquidated damages as stated under clause 9 of GCC shall become applicable. Further contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

29.0 **Rate** **of** **progress**

Whole of the materials, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner to the satisfaction of the Architect/Consultant. Should the rate of progress of the work or any part thereof be at any time be in the opinion of the Architect/Consultant too slow to ensure the completion of the whole of the work by the prescribed time or extended time for completion the Architect/Consultant shall thereupon take such steps as considered necessary by the Architect/Consultant to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the Architect/Consultant neither shall relieve the contractor from fulfilling obligations under the contract nor he shall be entitled to raise any claims arising out of such directions.

30.0 Work during nights and holidays

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the Architect/Consultant, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the Architect/Consultant. However, the provision of the clause shall not be

applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required and continued with the prior approval of the Architect/consultant at no extra cost to the SBI.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance.

31.0 No compensation for restrictions of work

If at any time after acceptance of the tender SBI shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not require the whole or any part of the work to be carried out, the Architect / Consultant shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor 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 work fully but which he did not derive in consequence of the foreclosure of the whole or part of the work.

Provided that the contractor shall be paid the charges on the cartage only of materials actually and bona fide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Architect/Consultant shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less.

In case of such stores having been issued from SBI stores and returned by the contractor to stores, credit shall be given to him at the rates not exceeding those at which were originally issued to the contractor after taking into consideration and deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of Architect/Consultant shall be final.

32.0 Suspension of work

The contractor shall, on receipt of the order in writing of the Architect/Consultant (whose decision shall be final and binding on the contractor) suspend the progress of works or any part thereof for such time and in such manner as Architect/ Consultant may consider necessary so as not cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons.

- a) On account any default on the part of the contractor, or
- b) For proper execution of the works or part thereof for reasons other than the default of the contractor, or
- c) For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Architect/Consultant.

If the suspension is ordered for reasons (b) and (c) in sub-Para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.

33.0 Action when the whole security deposit is forfeited

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect/Consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBI.

- a) To rescind the contract (of which rescission notice in writing to the contractor by the Architect/Consultant shall be conclusive evidence) and in which case the security deposit of the contractor shall be forfeited and be absolutely at the disposal of SBI.
- b) To employ labour paid by the SBI and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and materials (the cost of such labour and materials as worked out by the Architect/ Consultant shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract the certificate of Architect/Consultant as to the value of work done shall be final and conclusive against the contractor.
- c) To measure up the work of the contractor, and to take such part thereof as shall be unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess the certificates in writing of the Architects/ Consultant shall be final and conclusive) shall be borne by original contractor and may be deducted from any money due to him by SBI under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBI the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect/Consultant will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.

34.0 Owner's Right to Terminate the Contract

If the contractor being an individual or a firm commit any 'Act of Insolvency' or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Government and of the Official Assignee of the liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him to do so, to show to the reasonable satisfaction of the Architect/Consultant that he is able to carry out and fulfil the contract, and to give security therefore if so required by the Architect/Consultant.

Or if the contractor (whether an individual firm or incorporated Company) shall suffer execution to be issued 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 SBI through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under.

- a) Has abandoned the contract; or
- b) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBI through the Architect/Consultant written notice to proceed, or
- c) Has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBI through the Architect/Consultant that the said materials were condemned and rejected by the Architect/Consultant under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBI's or Architect's/Consultant's instructions to the contrary subject any part of the contract. Then and in any of said cases the SBI and or the Architect/Consultant, may not withstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBI or the Architect/Consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been so determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBI through the Architect/Consultant, their agents or employees may enter upon and take possession of the work and all plants, tools, scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads, use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to complete the work 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 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 SBI or the Architect/Consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receipt thereof by him the SBI sell the same by public auction after due publication and shall adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBI incidental to the sale of the materials etc.

35.0 Certificate of Payment

The contractor shall be entitled under the certificates to be issued by the Architect/ Consultant to the contractor within 10 working days from the date of certificate to the payment from SBI from time to time. The SBI shall recover the statutory recoveries and other dues including the retention amount from the certificate of payment.

Provided always that the issue of any certificate by the Architect/Consultant during the progress of works or completion shall not have effect as certificate of satisfaction or relieve the contractor from his liability under clause.

The Architect/Consultant shall have power to withhold the certificate if the work or any part thereof is not carried out to their satisfaction.

The Architect/Consultant may by any certificate make any corrections required in previous certificate.

The SBI shall modify the certificate of payment as issued by the Architect/Consultant from time to time while making the payment.

The contractor shall submit interim bills only after taking actual measurements and properly recorded in the Measurement book (M.B).

The payment will be made as per the terms defined in the NIT.

The final bill may be submitted by contractor within a period of one month from the date of virtual completion and Architect/Consultant shall issue the certificate of payment within a period of two months. The SBI shall pay the amount within a period of three months from the date of issue of certificate provided there is no dispute in respect of rates and quantities.

The contractor shall submit the interim bills in the prescribed format with all details.

36.0 Settlement of Disputes and Arbitration

Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the work or the execution or failure to execute the same, whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter :

- i) If the contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Architect or in case the contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contract or raise any dispute, the Contractor shall forthwith give notice in writing of his claim, or dispute to the **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi** and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the Bank be in any way liable in respect of any claim by the contractor unless notice of such claim shall have been given by the contractor to the **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi** in the manner and within the time as aforesaid. The contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi** in writing in the manner and within the time aforesaid.
- ii) The **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi** shall give his decision in writing on the claims notified by the contractor. The contractor may within 30 days of the receipt of the decision of the **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi** submit his claims to the conciliating authority namely the **Circle Development Officer SBI, LHO, New Delhi** for conciliation along with all details and copies of correspondence exchanged between him and the **Assistant General Manager (Premises& Estate), SBI, LHO, New Delhi**
- iii) If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned **Chief General Manager SBI, LHO, New Delhi** of the Bank for appointment of an arbitrator to adjudicate the notified claims failing which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.
- iv) Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the contractor as aforesaid and all claims of the Bank shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the **Chief General Manager SBI, LHO, New Delhi** It will also be no objection to any such appointment that the Arbitrator so appointed is a technically competent person not below the rank of Superintending Engineer or equivalent position in Public Sector Banks / CPSEs, CPWD, LIC, RBI etc. If the arbitrator so appointed is unable or unwilling to act or resigns

his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said **Chief General Manager SBI, LHO, New Delhi**. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

- v) It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.
- vi) It is also a term of this contract that no person other than a person appointed by such Chief General Manager aforesaid should act as arbitrator.
- vii) The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof and the rules made there under.
- viii) It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties.
- ix) It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

37.0 Power Supply

The contractor shall make his own arrangements for power and supply/distribution system for driving plant or machinery for the work and for lighting purpose at his own cost. The cost of running and maintenance of the plants are to be included in his tender prices. He shall pay all fees and charges required for the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approval from the appropriate authorities, if required.

38.0 Water supply

The contractor shall make his own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions:

- j) That the water used by the Contractor shall be fit for construction purpose to the satisfaction of the Architect/Consultant.
- k) The Contractor shall make alternative arrangements for the supply of water if the arrangements made by the Contractor for procurement of water in the opinion of the Architect/Consultant is unsatisfactory.

- 37.1 The Contractor shall construct temporary well/tube well in SBI land for taking water for construction purposes only after obtaining permission in writing from the SBI. The contractor has to make his own arrangements for drawing and distributing the water at his own cost. He has to make necessary arrangements. To avoid any accidents or damages caused due to construction and subsequent maintenance of the wells. He has to obtain necessary approvals from the local authorities, if required, at his own cost. He shall restore the ground to its original condition after wells are dismantled on completion of work or hand over the well to the SBI without any compensation as directed by the Architect/Consultant.

39.0 Treasure Trove etc.

Any treasure trove, coin or object antique which may be found on the site shall be the property of SBI and shall be handed over to the Bank immediately.

40.0 Method of Measurement

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date.

Rules laid down by the Bureau of Indian Standards. In the event any dispute/disagreement the decision of the Architect/Consultant shall be final and binding on the contractor.

41.0 Maintenance of Registers

The contractor shall maintain the following registers as per the enclosed format at site of work and should produce the same for inspection of SBI/Architect/Consultant whenever desired by them. The contractor shall also maintain the records/registers as required by the local authorities/Government from time to time.

- i) Register for secured advance
- ii) Register for hindrance to work
- iii) Register for running account bill
- iv) Register for labour

42.0 PRICE VARIATION ADJUSTMENT (PVA) FOR ALL MATERIALS (INCLUDING CEMENT & STEEL) & LABOUR: NA

43.0 Force Majeure

- 43.1 Neither contractor nor SBI shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as war, hostilities, revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of god or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other

party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.

43.2 As soon as the cause of force majeure has been removed the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

43.3 From the date of occurrence of a case of force majeure obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and inability resulting there from having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events.

43.4 Should one or both parties be prevented from fulfilling the contractual obligations by a state of force majeure lasting to a period of 6 months or more the two parties shall mutually decide regarding the future execution of this agreement.

44.0 Local Laws, Acts, Regulations

The contractor shall strictly adhere to all prevailing labour laws inclusive of contract labour (regulation and abolition act of 1970) and other safety regulations. The contractor shall comply with the provision of all labour legislation including the latest requirements of all the Acts, laws, any other regulations that are applicable to the execution of the project.

- (i) Minimum Wages Act, 1948 (Amended)
- (ii) Payment of Wages Act 1936 (Amended)
- (iii) Workmen's Compensation Act 1923 (Amended)
- (iv) Contract Labour Regulation and Abolition Act 1970 and Central Rules 1971 (Amended)
- (v) Apprentice Act 1961 (Amended)
- (vi) Industrial Employment (Standing Order) Act 1946 (Amended)
- (vii) Personal Injuries (Compensation Insurance) Act 1963 and any other modifications
- (viii) Employees' Provident Fund and Miscellaneous Provisions Act 1952 and amendment thereof
- (ix) Shop and Establishment Act
- (x) Any other Act or enactment relating thereto and rules framed there under from time to time.

45.0 SAFETY CODE:

Safety as per annexure 4.32 should be followed.

46.0 Accidents

The contractor shall immediately on occurrence of any accident at or about the site or in connection with the execution of the work report such accident to the Architect/Consultant. The contractor shall also report immediately to the competent authority whenever such report is required to be lodged by the law and take appropriate actions thereof.

47.0 BANK'S BUILDING PROJECTS – MAINTENANCE OF RECORDS

A.	Registers at the site office
1	Measurement Books.
2	Cement Register (Daily Record).
3	Steel Register.
4	Steel Consumption Register – Bill wise.
5	Drawings register
6	Materials at site register.
7	Hindrance Register.
8	Concrete cube Test Register.
9	File and register for extra / variation items.
10	Materials test Register and File.
11	Site Order Book (in triplicate).
12	Lead caulking Register.
13	Labour Reports and progress Reports Register.
14	Site Visit & Instructions Register.
15	Certified true copies of the contracts.

TECHNICAL SPECIFICATIONS

1.1 INTRODUCTION:

In grid-connected Solar Photo-Voltaic (SPV) systems, **solar energy is fed into the building loads through net meter** that are connected to the public electricity grid through a service connection with surplus energy being fed into the grid and shortfall being drawn from the grid. Fee for net-meter/ net billing and Obtaining NOC from Competent department for the purpose shall be processed and shall be borne by the vendor. The vendor should submit the complete design and layout and got approved by the SBI, before commencement of the project.

1.2 QUALITY AND WORKMANSHIP:

Solar PV modules are designed to last 25 years or more. It is therefore essential that all system components and parts, including the mounting structures, cables, junction boxes, distribution boxes and other parts also have a life cycle of at least 25 years. Therefore all works shall be undertaken with the highest levels of quality and workmanship. During inspection of Bank Engineer and its representatives will pay special attention to neatness of work execution and conformity with quality and safety norms. Non-compliance works will have to be redone at the cost of the Installer.

1.3 DEFINITION:

A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and should be designed with necessary features to supplement the grid power during day time. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable.

Solar PV system shall consist of following equipments/components.

- Solar PV modules consisting of required number of **(Bifacial N-type TOPcon 625 watt and above, PV modules from ALMM List 1 and solar PV cells from ALMM List II , all as per latest MNRE guidelines)**
- Grid interactive Power Conditioning Unit with 5G SIM based Remote Monitoring System.
- Mounting structures.
- Junction Boxes.
- Earthing and lightening protections (both DC & AC sides).

- IR/UV protected PVC Cables, pipes and accessories.
- Water pipeline with necessary pump etc for cleaning of solar plates.
- Data acquisition system

1.4 SOLAR PHOTOVOLTAIC MODULES:

1.4.1 The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards **(Bifacial N-type TOPcon 625 watt and above) (PV modules from ALMM List 1 and solar PV cells from ALMM List II as per latest MNRE guidelines) (Panels & inverter should be BIS approved and ISI marked)**

- For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC codes and BIS .
- The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar Bifacial N-type TOPcon 625 watts and above above wattage.**
- Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
- The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.
- The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. Bank shall allow only minor changes at the time of execution.

1.4.2 Other general requirement for the PV modules and subsystems shall be the Following:

- The rated output power of any supplied module shall have tolerance of +/- 3%.
- The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
- The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.

1.4.3 Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each modules (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions).

- a) Name of the manufacturer of the PV module.
- b) Name of the manufacturer of Solar Cells.
- c) Month & year of the manufacture (separate for solar cells and modules).
- d) Country of origin (separately for solar cells and module).
- e) I-V curve for the module Wattage, I_m , V_m and FF for the module.
- f) Unique Serial No and Model No of the module.
- g) Date and year of obtaining IEC PV module qualification certificate.
- h) Name of the test lab issuing IEC certificate.
- i) Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.

1.5. ARRAY/MODULE MOUNTING STRUCTURE:

- i. Hot dip galvanized MS mounting structures shall be used for mounting the modules/ panels/arrays. Each structure will have angle of inclination as per the site conditions to take maximum insolation.
- ii. The Mounting structure must be Elevated structure (height 8-10 ft upper 6-7ft lower)for structure type to be used as particular site, SBI, decision in this regard will be final and binding on the vendor, layout must to be got approved by SBI) type proper grouted with fasteners and civil foundation in the roof The design details are as follows:
 - a. The inclination of module should be within 10-15 degrees.
 - b. The upper edge of the module must be covered with wind shield so as to avoid bulk air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.
- iii. The mounting structure shall have to be designed by the Contractor after spot verification elevated roof structure.
- iv. For Elevated Structure Hot dip galvanized MS angles & poles to be used adhering to IS standards. The thickness of galvanization should be minimum of

- 90 microns. All the nuts, bolts are made of good quality Stainless Steel (SS 304). Space must be provided in between rows for proper maintenance and cleaning.
- v. Bidders have to submit detailed designs and Drawings to SBI for acceptance and approval before execution of work SBI, decision in this regard will be final and binding on the vendor..
 - vi. The array structure shall be grounded properly using maintenance free earthing kit suitable for mounting over building terrace.
 - vii. Bidder has to design MMS as per the actual site conditions and loads of roof top. Elevated systems to be installed on any roof, if the obstacles found within the terrace area. Structural integrity and safety is afforded the topmost priority during the design process. The expected life of a solar power plant is 25 years and ensure that structures are designed in a manner to ensure achieving of said milestone
 - viii. The mounting structure should be as per latest and galvanization of the mounting structure shall be in compliance of latest IS Codes.
 - ix. The fasteners should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.
 - x. The total load of the structure (when installed with PV modules) on the terrace should be less than 60 kg/m². The load shall be well distributed so that point loads are well within the limits.
 - xi. The minimum clearance of the structure from the roof level should be as approved by the SBI.
 - xii. The structures should be suitably loaded with reinforced concrete blocks of appropriate weight made out of M25 concrete mixture.
 - xiii. Special care should be taken while designing all structures for modules to cater to heavy rainfall.
 - xiv. The array shall be located sufficiently inside the boundary wall of the terrace (parapet wall) and should not be projecting out. PV array shall be installed in the terrace space free from any obstruction and/or shadow. PV array shall be installed utilizing optimum terrace space to minimize effects of shadows due to adjacent PV panel rows.
 - xv. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.
 - xvi. Additional waterproofing shall be provided in the areas where RCC blocks are placed on the terrace.
 - xvii. The support structure shall be free from corrosion when installed.
 - xviii. PV modules shall be secured to support structure using screw fasteners and/or metal clamps. Screw fasteners shall use existing mounting holes provided by module manufacturer. No additional holes shall be drilled on module frames. Module fasteners/clamps shall be adequately treated to resist corrosion.

- xix. Adequate spacing shall be provided between any two modules secured on PV array for improved wind resistance.
- xx. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.
- xxi. The structure should be appropriately designed to withstand high wind velocities up to 200 km per hour. (The bidder is required to submit a certificate from an authorized chartered engineer with regards to the strength and durability of the structure)
- xxii. Arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The vendor should provide concrete foundation 5 to increase the strength. Non-invasive strictures are recommended to avoid leakage in roof.
- xxiii. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Necessary protection towards rusting need to be provided either by coating or anodization.
- xxiv. The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Lay out should allow for easy access for panel cleaning.
- xxv. Regarding civil structures the bidder need to take care of the load baring capacity of the roof and need arrange suitable structures based on the quality of roof.
- xxvi. The total load of the structure (when installed with PV modules) on the terrace should be within permissible limit.

1.6 JUNCTION BOXES (JBs):

- a. The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy/PC with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands.
- b. Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP65 standard and IEC Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthing. It should be placed at 5 feet height or above for ease of accessibility.
- c. Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) /SPDs, suitable Reverse Blocking Diodes. Suitable earthing

should be provided to SPD. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.

d. 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.

1.7 DISTRIBUTION BOARD:

i. Distribution panel to receive the DC output from the array field.

ii. DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size and suitable capacity.

a) CBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

1.8 AC DISTRIBUTION PANEL BOARD:

a. Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.

b. All switches and the circuit breakers, connectors should conform to relevant IEC Codes

c. The changeover switches, cabling work should be undertaken by the bidder as part of the project.

d. All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz

e. All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.

f. Should conform to Indian Electricity Act and rules (till last amendment).

g. All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions

Variation in supply voltage	+/- 5 %
Variation in supply frequency	+/- 3 Hz

1.9. PCU/ ARRAY SIZE RATIO:

- a) **Total Inverter capacity should be greater than or equal to the Rooftop Power Plant Capacity.**
- b) **Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.**

1.10 PCU/ Inverter:

As SPV array produces direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the power conditioning unit/inverter. The Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

- Switching devices: IGBT/MOSFET.
- Control: Microprocessor /DSP.
- Nominal AC output voltage and frequency: 415V, 3 Phase, 50 Hz (In case single phase inverters are offered, suitable arrangement for balancing the phases must be made.).
- Output frequency: 50 Hz.
- Grid Frequency Synchronization range: + 3 Hz or more.
- Ambient temperature considered: -20o C to 80o C.
- Humidity: 95 % Non-condensing.
- Grid Frequency Tolerance range: + 3 or more.
- Grid Voltage tolerance: - 20% & + 15 %.
- No-load losses: Less than 1% of rated power.

- Inverter efficiency (minimum): >93%.
 - THD: < 3%.
 - PF: > 0.95.
- a. Three phase PCU/ inverter shall be used with each power plant system (10kW and/or above) but In case of less than 10kW single phase inverter can be used.
 - b. PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
 - c. The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
 - d. Built-in meter and data logger to monitor plant performance through external computer shall be provided.
 - e. The power conditioning units / inverters should comply with applicable IEC and BIS standard for efficiency measurements and environmental tests as per standard codes IEC and Equivalent BIS Std.
 - f. The charge controller (if any) / MPPT units environmental testing should qualify IEC and Equivalent BIS std. The junction boxes/ enclosures should be IP 65(for outdoor)/ IP 54 (indoor) and as per IEC specifications.
 - g. The PCU/ inverters should be tested from the MNRE approved test centers / NABL /BIS /IEC accredited testing calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

1.11 INTEGRATION OF PV POWER WITH GRID:

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. 4 pole isolation of inverter output with respect to the grid need to be provided.

1.12 DATA ACQUISITION SYSTEM / PLANT MONITORING:

- i. Graphical representation of hourly solar power generation, with details of E-day, E-total (Kwh) solar power generation details simultaneously on inverter LED display.

ii. Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, Metering and Instrumentation for display of systems parameters and status indication to be provided.

iii. Data from the inverter shall be uploaded to internet via sim card based device. The monitoring details with login ID and password should be shared by the Bank.

v. All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.

vi. Remote Monitoring and data acquisition through Remote Monitoring System software at the Bank location with latest software/hardware configuration and service connectivity for online /real time data monitoring/control complete to be supplied and operation and maintenance/control to be ensured by the supplier. Provision for interfacing these data on [NAME OF THE ORGANISATION] server and portal in future shall be kept.

1.13 METERING: bi-directional net meter to record export and import.

1.14 POWER CONSUMPTION:

Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Decisions of appropriate authority like DISCOM, state regulator may be followed.

1.15 PROTECTIONS:

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

1.15.1 LIGHTNING PROTECTION:

The SPV power plants shall be provided with lightning & overvoltage 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,. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC standard. Lightning conductor should be made as per Provision of IS. Necessary concrete foundation to be provided for holding Lightning conductor considering the wind speed. It should be earthed through 20x3 GI flat from pit with proper insulation. Height of Lightning conductor from array structure should be min 4 meter.

1.15.2 SURGE PROTECTION:

SPD should be provided in AC and DC side of solar PV system. It should have protection voltage of 2.5kv and nominal discharge current of 5kA (8/20) micro sec. SPD earthing terminals should be connected to earthing system.

1.15.3 EARTHING PROTECTION:

- a. Each array structure of the PV yard should be grounded/ earthed properly as per IS codes. In addition the lightning arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of Bank engineer as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly. Minimum 03 GI pipe earth pit to be provided as per relevant IS code.
- b. Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

1.16. Grid Islanding:

- a. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnecting from the grid (due to islanding protection), disconnection due to under and over voltage conditions shall also be provided.
- b. A manual disconnect 4pole isolation switch (MCB/ MCCB) as per max inverter output current beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

1.17 CABLES:

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

- i. Shall meet IEC standards.
- ii. Temp. Range: -10°C to $+80^{\circ}\text{C}$.
- iii. Voltage rating 660/1000V.
- iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation Flexible.
- v. 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 compound formulated for outdoor use.

Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray, Conduits as required and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.

The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.

The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cabling sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.

Multi Strand, Annealed high conductivity copper conductor PVC type A pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured cable for underground laying. All cable trays/Conduits including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V ,UV resistant for outdoor installation IS /IEC 69947.

The size of each type of DC selected shall be based on minimum voltage drop however the maximum drop shall be limited to 1%.

The size of each type of AC cable selected shall be based on minimum voltage drop however the maximum drop shall be limited to 2%.

1.18 TOOLS & TACKLES AND SPARES:

Operation and maintenance guide and consumable spares like fuses should be provided by vendor.

1.19 DANGER BOARDS AND SIGNAGES:

Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Three signage shall be provided one each at battery –cum- control room, solar array area and main entry from administrative block. Text of the signage may be finalized in consultation with Bank.

1.20 DRAWINGS & MANUALS:

Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.

I. Approved ISI and reputed makes for equipment be used.

II. For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to Bank before progressing with the installation work.

1.21 PLANNING AND DESIGNING:

i. The bidder should carry out the considering optimal usage of the space, material & labour. The bidder should submit the array layout, drawings along with shadow analysis report to Bank for approval. Bidders should submit detailed SLD for approval.

ii. Bank reserves right to change/modify sub-systems and components at any stage as per the local site conditions/ requirements. the bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder shall submit three sets and soft copy in CD of final drawing for formal approval to proceed with installation work.

1.22 METERING: Net Metering: Bi Directional Meter (As per state guidelines, the procedure and all technical specifications, standards of the solar rooftop system) ,shall have the provision for measurement for Current, Voltage, frequency, Energy, Power/Load, power factor, maximum demand with RS232 with class 0.5 accuracy.

Net metering shall be provided by the contractor for the captioned sites of SBI. The scope of work for net metering is detailed as below:

- Preparation of necessary documentation and submission of application (Online /offline) to State Electricity board/Power supply company/Any other Competent Authority authorized for the work for net metering.

Obtaining site feasibility report from State Electricity board/Power supply company/Any other Competent Authority authorized for the work.

Obtaining net metering approval from State Electricity board/Power supply company/Any other Competent Authority authorized for the work.

Contractor shall work with State Electricity board/Power supply company/Any other Competent Authority authorized for the work to enable SBI's signing of Power Purchase Agreement (PPA). Supply & Testing of net meter (Main & Check meter) and related accessories (Cubicle, CTs, PTs, earthing etc.) as per requirements of State Electricity

board/Power supply company/Any other Competent Authority authorized for the work shall be in the scope of the contractor.

Replacement of existing meter and related accessories (Cubicle, CTs, PTs, earthing etc.) with new metering systems as per requirements of State Electricity board/Power supply company/Any other Competent Authority authorized for the work shall be in the scope of the contractor..

State Electricity board/Power supply company/Any other Competent Authority authorized for the work inspectorate approval for supply, testing and replacement of new net metering system including preparation and submission of necessary documentation work shall be in the scope of the contractor.

State Electricity board/Power supply company/Any other Competent Authority authorized for the work, inspectorate approval of Solar Power Plant including preparation and submission of necessary documentation work shall be in the scope of the contractor.

Synchronization / Commissioning approval from State Electricity board/Power supply company/Any other Competent Authority authorized for the work shall be in the scope of the contractor.

Synchronization/Commissioning certificate for the Plant from State Electricity board/Power supply company/Any other Competent Authority authorized for the work shall be in the scope of the contractor.

Note:

The contractor shall take up net metering for SBI on turnkey basis including any statutory fees, fee towards testing of net meter etc. to be paid by the Contractor, SITC of CTs, PTs, Cubicle, Main MCCB, ELR, Net meter etc. all work complete will be in the scope of the Contractor . Any other item / supply/ activity / approvals/NOCs/fees/any expenditure not specifically defined in the above clause but required for successful completion of net metering with State Electricity board/Power supply company/Any other Competent Authority authorized for the work as per the latest Net Metering Policy and MNRE guidelines shall be in the scope of the Contractor. In other cases of non- applicability of Net metering as per the regulatory authority, Contractor must take care of approval of alternative mechanism as per state electricity regulatory norms & latest revisions of state grid code, all the required fees/NOC/other activity adhering to alternative mechanism shall be responsibility of contractor only.

1.23 DRAWINGS TO BE FURNISHED BY BIDDER AFTER AWARD OF CONTRACT:

- i. The Contractor shall furnish the following drawings Award/Intent and obtain approval.

ii. General arrangement and dimensioned layout Schematic drawing showing the requirement of SV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc. Structural drawing along with foundation details for the structure.

iii. Itemized bill of material for complete SV plant covering all the components and associated accessories.

iv. Layout of solar Power Array.

1.24 Safety - The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act , CEA guidelines , subsequent amendments and any other guidelines from Central/state/ local etc.

QUALITY CERTIFICATION, STANDARDS AND TESTING FOR GRID-CONNECTED ROOFTOP SOLAR PV SYSTEMS/ POWER PLANTS

Quality certification and standards for grid-connected rooftop solar PV systems are essential for the implementation of this technology. Hence, all components of grid-connected rooftop solar PV system/ plant must conform to the relevant IEC , IS standards and Electricity ACT or any other relevant standards applicable.

APPROVED MAKE

1	Solar PV modules (Topcon Bi-facial only)	Vikram Solar/ Waaree Solar/ Goldi Green Technologies/ Tata Power Solar Systems Ltd./ BEL/ BHEL/ Renewsys / REIL/ Adani or equivalent MNRE ALMM approved LIST I & II (PV modules from ALMM List 1 and solar PV cells from ALMM List II) (should be BIS approved and ISI marked) Should be compatible with latest MNRE guidelines
2	Inverters:	Growwatt/ DELTA/ SMA/ /Solar age /Polycab/ Radius/ Sungrow or equivalent BIS approved / relevant IEC approved (Should be BIS approved and ISI marked)
3	DC cables	Havells/ Polycab/ KEI /Finolex/L&T/ KEI/ KEC/ UNIVERSAL/ NICCO Equivalent
4	AC Distribution Board	Legrand/Schneider/ MDS/Hager/L&T or Equivalent BIS approved

5	DC Distribution Board	Legrand/Schneider/ MDS/ Hager/ L&T or Equivalent BIS approved
6	LV Switchgear	ABB/L&T/Schneider/ MDS or Equivalent approved
7	String Combiner Box	Robotina/Trinity Touch/Hensel/Cape Electric, AKG or Equivalent BIS approved
8	Weather Monitoring station	Pyranometer: Kipp & Zonnen or Equivalent
9	Energy Meter	Secure/L&T/Schneider/ABB or Equivalent
11	Connectors	MC4/or Equivalent
12	Surge protection (spd)	MDS/ L&T/ Hager/ Schneider/ABB/Legrand/HPL or Equivalent
13	Solar Charge Controller	Morningstar/ Schneider/ Blue Sky/ Genasun/ Midnite Solar/ Outback Power/ Magnum Energy or Equivalent
Important: Please Tick (/) the make of materials considered in the Tender. The vendor has to comply with all State & Central Government, MNRE norms for choosing the make, supply and erection.		

Note: -

1. The contractor should obtain prior approval from SBI before placing order for any specific materials. All materials should conform to relevant standards and codes of BIS. Materials with I.S.I. mark shall be used duly approved by the SBI Engineer.
2. Any material is found to be not up to the mark, the contractor will have to produce original bills/certificate from the manufacturer or his authorized Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBI. The same will not be considered for payment.

Signature of contractor With Seal

CAMC of SOLAR POWER PLANT COMPLETE SETUP

- a) The CAMC charges quoted should include the cost of all labour, consumables, repair/replacement of all components/spare parts **or any other faults** as identified and **any other** spare parts required for maintaining the Solar Plants (Complete system including accessories) as stated in the tender document in perfect working condition,. The rates quoted also includes all other **taxes, levies, duties**, loading, unloading, transportation, lifting, shifting, or **any other expenses etc.** from and to the site. Only GST (As Applicable) shall be paid extra.
- b) Preventive maintenance of Solar plants.
- c) **Attending unlimited numbers of emergency call/ complaints/ Breakdown calls within 1-2 hours of lodging of complaint by any means of communication. The faults must be rectified within 4-6 Hours and in case of major repair maximum within 24 Hours. If the complaint is not resolved within the stipulated period as above the same will be treated as unsatisfactory service until proper justification of same is not provided. The penalty in way of liquidated damages as stated in subsequent clauses will be imposed.**
- d) The contractor shall carry out preventive maintenance / checks as per CPWD specification, respective trade practice and maintenance instruction manuals for installation and the maintenance is to be carried out as per instructions of Engineer -in-charge and CPWD specification. The contractor shall record the entries and complaint details in the proper register along with the time schedule of lodging of the complaint to the rectification of the issue.
- e) The contractor shall take over the Complete Solar Plant before commencement of the work and hand over the same at the time of completion of contract in original condition. However, normal wear and tear will not be the responsibility of the contractor.
- f) **The CAMC contract shall initially be for 5-year period after expiration of warranty period. In case the service of the contractor is not found satisfactory, Bank may terminate the contract after giving one month's notice and invoke the security deposit and assign the work to other agency at his risk and cost.**

ANNEXURE-4.9 BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT

Place:

Date:.....

(On non-judicial stamp paper of Rs.-----/-)

BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT

B.G.No.

Value Rs.

State Bank of India,

(Address)

Sub: Bank Guarantee of Rs.....towards Security Deposit for the work offer State Bank of India.

(Name of Branch/Office)

Dear Sir,

WHEREAS (Name and address of contractor/ vendor) (hereinafter called the Contractor) have entered into contract for (Name of Work) with State Bank of India (SBI) as mentioned in the letter of SBI's Consultants (Name & address of consultants) vide their letter No..... datedand the correspondence and tender relating thereto which is hereinafter referred to as "the said contract" the Contractor has now agreed to produce a Bank Guarantee amounting to 2% of the contract value less earnest money deposit of Rs..... (Rupees only), to State Bank of India for performing their part of the contract obligations.

AND WHEREAS in terms of said contract, the contractor is required to furnish to State Bank of India a Guarantee of a Scheduled Bank for a value of Rs..... to be valid upto (date).

AND WHEREAS (Name of Bank and its branch) having their office at (address) the Guarantor, at the request of the contractor hereby furnishes a PBG in favour of State Bank of India and Guarantees in the manner hereinafter appearing.

In consideration of the premise, we (name of Bank and its branch) having our office at

(address)here after called the "Guarantor" (which expression shall include its successors and assigns) here by expressly, irrevocably &unreservedly undertake and guarantee under that if the Contractor fails to execute the work according to his obligations under the said contract, then notwithstanding any dispute between State Bank of India and the contractor the Guarantor shall, on demand without demur and without reference to the contractor pay to State Bank of India immediately any sum claimed by State Bank of India under the said contract up to a maximum amount of Rs. (Rupees only).

In case the amount demanded by State Bank of India is not paid within 48 hours of receipt of demand, the Guarantor agrees to pay the aforesaid amount of Rs. _____/- (Rupees _____ only).

- (i) Such payment shall be notwithstanding any right the contractor may have directly against State Bank of India, or any disputes raised by the Contractor with State Bank of India or any suits or proceedings pending in any competent court or before any arbitrator. State Bank of India's written demand shall be conclusive evidence to the Guarantor that such payment is payable under the terms of the Contract and shall be binding in all respect on the guarantor.
- (ii) The Guarantor shall not be discharged or released from the undertaking and Guarantee, by any arrangement, variations made between SBI and the Contractor and or indulgence shown to the contractor by SBI, with or without the consent and knowledge of the guarantor or by alterations in the obligations of the contractor by any forbearance, whether as to payment, time performance or otherwise.
- (iii) This guarantee shall remain valid until or as may be caused to be extended by the contractor or until discharged by SBI in writing whichever is earlier.
- (iv) This guarantee shall be a continuing guarantee and shall not be revocable during its currency except with the previous written consent of SBI.
- (v) This guarantee shall not be affected by any change in the constitution of the contractor, by absorption with any other body or corporation or dissolution or otherwise and this guarantee will be available to or enforceable against such body or corporation.
- (vi) In order to give effect to this guarantee SBI will be entitled to act as if the Guarantor were the Principal debtor and the Guarantor hereby waives all and any of its rights or surety ship.
- (vii) This guarantee shall continue to be in force notwithstanding the discharge of the contractor by operation of law and shall cease only on payment of the full amount by the Guarantor to SBI of the amount hereby secured.
- (viii) This guarantee shall be in addition to and not in substitution for any other guarantee or security for the contractor given or to be given to SBI in respect of the said contract.
- (ix) Any notice by way of request and demand or otherwise here under may be sent by post or any other mode or communication to the guarantor addressed as aforesaid and if sent by post it shall be deemed to have been given at the time when it would be delivered in due course of post and in providing such notice when given by post it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of SBI that the envelope was so posted shall be conclusive.
- (x) These presents shall be governed by and constructed in accordance with Indian Law.

Notwithstanding anything contained hereinbefore the liability of the guarantor under this guarantee is restricted to a sum of Rs. _____.

This guarantee will remain valid upto _____ unless a demand or claim under this guarantee is made in writing on or before _____ the guarantor shall be discharged from all liability under the guarantee thereafter.

Dated the

For (Name of Bank)

(Signature/s with designation/s of signatory/ies)

(Name and Stamp of Bank)

ANNEXURE-4.13: FORM VI-B: FORMAT OF NOTICE OF COMMENCEMENT/COMPLETION OF
CONTRACT WORK

1. Name and Principal Employer & address.
2. No. and Date of certificate of registration
3. I / We hereby intimate that the contract work _____ (Name of work)
given to _____ (Name and address of the contractor)
having Licence No. _____ dated _____ has commenced/has been
completed with effect from _____ (date)/ on _____ (date).

Signature of the Principal Employer

The Inspector,

ANNEXURE-4.17: FORMAT OF MEASUREMENT BOOK

1ST Page:

STATE BANK OF INDIA

.....office,

Measurement Book No.

(Pages 1 to.....)

This book is issued to Shri.....

Signature of A.G.M. (Premises& Estate) / D.G.M. (Premises)

Certified that this book contains..... pages

Signature of the official (to whom the book is issued)

MEASUREMENT BOOK PAGES NOS. 1 TO.....

Item No.	Description	Measurement No.LB D/H	Quantity	Remarks

Site Engineer Architect Contractor

Checking/Test checking Engineer Date of checking/Test checking

NOTE:

Checking and test checking pertains to items wherever initialed.

ANNEXURE-4.18: FORMAT FOR RUNNING BILL

I. Running A/C Bill

- (i) Name of Contractor / Agency:
- (ii) Name of work:
- (iii) Sr, No. of this Bill:
- (iv) No. and date of previous bill:
- (v) Reference to Agreement No.:
- (vi) Date of written order to commence:
- (vii) Date of completion as per agreement:

Sr. No.	Item Description	Estimated Quantity	Unit	Rate (Rs.)	Tendered Amount (Rs.)
	1.	2.	3.	4.	5.
Up to previous R/A Bill		Up to date (Gross)		Present Bill (7-6)	
				Remark	
Qty.	Amount (Rs.)	Qty.	Amount (Rs.)	Qty.	Amount (Rs.)
6.		7.		8.	9.

Note :

- (i) If part rate is allowed for any item, it should be _____ indicated with reasons for allowing such a rate 'Net value since'

(ii) If adhoc payment is made, it should be mentioned previous bill specifically.

II. ACCOUNT OF SECURED ADVANCE, IF ADMISSIBLE ON MATERIALS HELD AT SITE BY THE CONTRACTOR

No.	Item	Quantity	Unit	Amount	Remarks
1.	2.	3.	4.	5.	6.

Total value of materials at site.

Secured Advance @ _____ % of above value B

CERTIFIED (i) that the materials mentioned above have actually been brought by the contractor to the site of the work and no advance on any quantity of any of this item is outstanding on their security (ii) that the materials are of imperishable nature and are all required by the contractor for use in the work in connection with the items for which rates of finished work have been agreed upon.

Dated signature of Site Engineer

preparing the bill

Designation _____

Dated signature of Bank's

Architects

(Name of the Architects)

Dated signature of Contractor

CERTIFICATE

The measurements on the basis of which the above entries for the Running Bill No. _____ were made have been taken jointly on _____ and are recorded at pages _____ to _____ of _____ measurement book No. _____.

Signature and Signature and date of Signature and date of

Date of contractor Architect's representative the Site Engineer

(seal)

The work recorded in the above mentioned measurements has been done at the site satisfactorily as per tender drawings, conditions and specifications.

Architect/ Site Engineer/ Bank's Engineer

**ANNEXURE-4.19: FORMAT OF UNDERTAKING IN CONNECTION WITH PAYMENT OF ADVANCE ON
MATERIALS BROUGHT BY THE CONTRACTOR TO THE SITE**

The Undertaking made this _____ day of _____ 20____ between the State Bank of India, _____ and having its _____ office at _____ (hereinafter called the Bank) of the one part and _____ (hereinafter called the contractors of the other part).

The Bank and the Contractors have entered into an Agreement dated _____ hereinafter called as the said agreement and in terms of Clause No. _____ of the conditions in the agreement, the Bank has agreed that the Contractors will be paid an advance of 75% of the cost of non-perishable building materials brought by the Contractor to the site for consumption in the works at the discretion of the Bank.

The Contractors have applied to the Bank that they be allowed advances on the security of materials absolutely belonging to them and brought by them to the site of work. The Bank has agreed to do so on the terms and conditions hereinafter set out.

Now this Letter of Undertaking witnesses that in consideration of the said agreement and in consideration of the amount paid / payable to the Contractors by the Bank and./ or any further advances as may be made to the Contractors as aforesaid, the Contractors hereby agree with the Bank and undertake as under:

- (i) The amount advanced by the Bank to the Contractors as aforesaid and all or any further sum or sums advanced as aforesaid shall be employed by the Contractors in or towards expediting the execution of the said works and for no other purpose whatsoever.
- (ii) That the materials which have been offered to and accepted by the Bank as security are absolutely the Contractor's own property and free from encumbrances of any kind and the Contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractors indemnify the Bank against all claims to any materials in respect of which an advance has been made to them as aforesaid.
- (iii) That the materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereinafter called the said materials) shall be used by the Contractors solely in the execution of the said works in accordance with the directions of Deputy General

Manager (Premises) / Assistant General Manager (Premises & Estate) of the Bank and in accordance with the terms of the said agreement.

- (iv) That the Contractors shall take at their own cost all the necessary and adequate arrangement for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid, the said materials shall remain at the site of the said works in the Contractor's custody and on their own responsibility and shall at all times be open to inspection to the Bank's Engineers or any Officer authorized by the Bank. In the event of the materials or any part thereof being stolen, destroyed or damaged, the Contractor will further replace the same with other materials of like quality or repair and make good the same as required by the Bank.
- (v) That the said materials shall not or on any account be removed from the site of the said works except with the written permission of the Deputy General Manager (Premises) / Assistant General Manager (Premises & Estate) the Bank.
- (vi) That the advances shall be repayable in full when or before the Contractors receive payment from the Bank of the price payable to them for the said works under the terms and the provisions of the said agreement provided that if any intermediate payments are made to the Contractors on account of work done, then on occasion of each such payment, the Bank will be at liberty to make a recovery from the Contractor's bill for such payment by deducting therefrom the value of the said materials then actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.
- (vii) That if the Contractors shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents, the total amount of advance or advances that may still be owing to the Bank, shall immediately, on the happening of such default, be repayable by the Contractors to the Bank together with interest thereon at 12% per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Bank in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of the Contractors and the Contractors hereby covenant and agree with the Bank to repay and pay the same respectively to him accordingly.

(viii) That the Contractors hereby charge all the said materials with the repayment to the Bank of the sum or sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the powers contained therein if any whenever the covenant for payment and repayment hereinabove contained shall become enforceable and the money owing shall not be paid in accordance therewith, the Bank may at any time thereafter adopt all or any of the following courses as he may deem best :

- (ix) (a) Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the Contractors in accordance with the provisions in that behalf contained in the said agreement debiting the Contractor with the actual cost of effecting such completion and the amount due in respect of advances under these presents and crediting the Contractors with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractors, they are bound to pay the same to the Bank on demand.
- (b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale, retain all the sums aforesaid repayable or payable to the Bank under these presents and pay over the surplus (if any) to the Contractor.
- (c) Deduct all or any part of the money owing out of the Security Deposits or any sum due to the Contractor under the said agreement.
- (x) That except in the event of such default on the part of the Contractors as aforesaid, no interest shall be payable on the said advance.
- (xi) That in the event on any conflict between the provisions of these presents and the said agreement, the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been herein before expressly provided for the same shall be referred to the Officer-in-Charge, Premises Department, whose decision shall be final and no appeal shall lie against his decision before any court, arbitrator or authority.
- (xii) The provision of this Undertaking shall be deemed to be supplemental to the said agreement.

IN WITNESS WHEREOF the Contractors have set their hands to these presents the day and year first hereinabove written.

Signed, sealed and delivered by the said contractors in the presence of

Witness :Signature, Name & Address

Witness :Signature, Name & Address

ANNEXURE-4.20: FORMAT OF CERTIFICATE OF PAYMENT BY ARCHITECT

Certificate No. Interim /	Dated	
Client:	Project No.	Building work / Interior work
	Particulars:	
Contractor:	Contract / Letter No.	Dated:
	Contractor's Bill No.	Dated:

This is to certify that the amount given below (*) is due to your Contractors for the work done by them and/or against materials delivered at site and/or for advance towards contract on the above referred project.

Advance against contract Rs _____

Less: Advance adjusted to-date Rs. _____

Balance Advance Rs. _____

Advance against material delivered at site Rs. _____

Amount of work done to-date Rs _____

Total Rs _____

Less: Retention on work done Rs _____

Less: Previously certified upto Rs _____

PRESENT CERTIFICATE (*)Rs. _____

RUPEES.....

The cost of cement or any other material supplied by you or payments made by you directly, if any and not covered herein above, should be adjusted before making the payment of the certified amount (*).

Necessary Deduction U/S194C of the income Tax 1961 and sales tax may be made before paying the above certified amount.

By a copy of this letter, we are intimating the Contractors to call on you for the necessary payment.

Remarks if any:
The details of Insurance policy are given in the next page.

Signature of Architects
Enclosures: Bill

ANNEXURE-4.24: FORMAT FOR APPLICATION BY CONTRACTOR FOR EXTENSION OF TIME

1.	Name of the Contractor				
2.	Name of the work as given in the Agreement				
3.	Agreement WO				
4.	Tender amount				
5.	Date of commencement of work				
6.	Period allowed for completion as per agreement				
7.	Date of completion as per agreement				
8.	Period for which extension of time has been given				
			<u>Date</u>	<u>Month</u>	<u>Year</u>
	a)	1 st extension vide Bank's Letter No.			
	b)	2 nd extension vide Bank's Letter No.			
	c)	3 rd extension vide Bank's Letter No.			
9.	Reasons for which extensions have been previously given (copies of the previous applications should be attached)				
10.	Period for which extension is applied for and the reasons thereof including hindrances, time for extra work assigned, if any etc.				

Signature of Contractor

Recommendations of Architects

Signature of Architect.

ANNEXURE-4.25: FORMAT OF HINDRANCE REGISTER

Name of Work	:	Date of state of work	:
Name of Contractor	:	Period of completion	:
Agreement No.	:	Date of completion	:

Sr. No.	Nature of Hindrance	Date of occurrence of hindrance	Date which of hindrance was removed	Period of hindrance	Signature Site Engineer/ Project Engineer	Remarks
1	2	3	4	5	6	7

ANNEXURE-4.31: DETAILS OF INSURANCE POLICIES

Type of policies	Name of Insurance	Amount Rs.	Policy No.	Validity
CAR policy including 3 rd party liability				
Workmen's Compensation				

Remarks:

1. This is only an 'on-account' payment and is not to be interpreted either as approval of work, materials brought or affixed at site or for that matter approval of any sort.
2. The quantum of work done and materials delivered at site have been certified by.....
3. should you wish to audit such work, kindly contact the undersigned and oblige.

Architects _____

ANNEXURE-4.32: SAFETY CODE

SAFETY MEASURES AT SITE:

1. All personnel at site should be provided with Helmets and Safety Boots with some Identification Mark. Visitors also should be provided with Helmets. It should be ensured that these are used properly.
2. First Aid Box should be kept at site with all requisite materials.
3. No one should be allowed to inspect / work at a height without Safety Belt.
4. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground, or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and handholds shall be provided on the ladder, and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
5. Scaffolding or staging more than 3.5 meters above the ground or floors, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
6. Working platforms, Gangways, and Stairways should be so constructed that they do not sag unduly or unequally, and if the height of the platform or the Gangway or the Stairway is more than 3-5 Meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described.
7. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 Meter.
8. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Meters in length while the width between side rails in rung ladder shall in no case be less than 30cms for ladder up to and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 30 cms. Uniform step spacing shall not exceed 30 cms.
9. Adequate precautions shall be taken to prevent danger from electrical equipment's. For electrical online works gloves, rubber mats, and rubber shoes shall be used.

10. All trenches 1.2 Meters or more in depth shall at all times be supplied with at least one ladder for each 30 Meters length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 1 Meter above the surface of the ground. The sides of the trenches, which are 1.5 Meters or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials 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. Cuttings shall be done from top to bottom. Under no circumstances undermining or under cutting shall be done.
11. Before any demolition work is commenced and also during the process of the work: -
- a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected.
 - b) No electrical cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
 - c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.
 - d) All necessary personal safety equipment as considered adequate by the Site Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
 - e) Workers employed on mixing Asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
 - f) Those engaged in whitewashing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
 - g) Those engaged in welding works shall be provided with Welder's protective eye-shields.
 - h) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - i) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals and boards to prevent accident to the Public.

12. Use of hoisting machines and tackle including their attachments, anchorage and support shall conform to the following standard or conditions: -
- a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.
 - b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffold, winch or give signals to the operator.
 - d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means.
 - e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - f) Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced.
 - g) When workers are employed on electrical installation, which are already energized, insulating mats, wearing apparel such as gloves, sleeves, and boots as may be necessary should be provided. The workers should not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.
13. All scaffolds, ladders and other safety devices, mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

ANNEXURE-4.33: SAMPLE AGREEMENT WITH CONTRACTORS

ARTICLES OF AGREEMENT

This agreement made theday of between AGM/ DGM ,State Bank of India, -----(hereinafter called the Bank or SBI) which expression shall include the successors and assigns) of the one part and M/s. company / partnership for registered under the Indian

Companies Act/ Partnership Act having its registered office..... (hereinafter called 'the Contractors' which expression shall include the present directors / partners and also the directors / partners from time to time as also their respective heirs, legal representatives, administrators and assigns) of the other part. WHEREAS the employer is desirous of execution of _____(Name of work)_____ and has caused drawings and specifications describing the works to be done prepared by Project Architects M/s _____ having their offices at _____ (hereinafter called "the Architect")

AND WHEREAS THE SAID Drawings numbered as mentioned in the tender documents hereinafter mentioned and to be issued from time to time, the specifications and the Schedule of items and quantities have been signed by or on behalf of the parties hereto.

AND whereas the contractors have agreed to execute upon and subject to the condition set forth herein and Schedule of items and quantities, General & special Conditions of Contract, specification etc. contained in the tendered documents including all correspondences exchanged by or between the parties from the submission of tender till the award of work, both letters inclusive, (all of which are collectively hereinafter referred to as "the said conditions"). The works shown upon the said drawing and /or described in the said specification and included in the schedule of Items and Quantities at the respective rates therein set forth amounting to the sum of Rs_____ (Rupees _____in words_____) as there in 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:

1. In consideration of the said Contract amount to be paid at the times and the manner set forth in the said Conditions, the Contractors 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 items and quantities.
2. The employer shall pay the Contractors the amount or such other sum as shall become payable, at the times and in the manner specified in the said conditions.
3. The term "the Architect" in the said condition shall mean the said "M/s _____" or in the event of their 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 purpose 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 persons subsequently appointed to be Architect under this contract shall be

entitled to disregard or over rule any previous decisions or approval or direction given or expressed in writing by the architect for the time being.

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 plans, 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 contract but is a contract to carry out the work in respect of the entire project on item rate basis to be paid for according to actual measured quantities at the rates contained in the schedule of quantities and rates or as provided in the said conditions.

7. The Bank / Employer reserves to itself the rights of altering the specifications and nature of work by adding to or omitting any item of work or having portions of the same carried out without prejudice to the contract.

8. Time shall be considered as the essence of this contract and the contractor here by agrees to commence the work soon after the site is handed over to him or from the 14th day after date of issue of formal work order as provided for in the said conditions of contractor whichever is later and to complete the entire work within ____ (period of contract) months subject never the less to the provisions for extension of time.

9. All payments by the Employer under this contract will be made only at _____.

10. Any dispute arising under this Agreement shall be referred to arbitration in accordance with the stipulations laid down in the tender.

11. That all the parts of this contract have been read by the contractor and fully understood by the contractor. They further agree to complete the said work to fullest satisfaction of architect / Employer.

12. IN WITNESS WHEREOF the Employer and the contractors have set their respective hands to these presents through their duly authorized official and the said two duplicates hereof to be executed on its behalf of the day and year first herein above written.

13. Signed on behalf of the

STATE BANK OF INDIA

In the presence of :

1. Signature :

Signed-on behalf of the

CONTRACTORS

In the presence of :

1. Signature :

Name :

Address :

In the presence of :

2. Signature :

Name :

Address :

Name :

Address :

In the presence of :

2. Signature :

Name :

Address :

GENERAL SPECIFICATIONS

- All the works specified and provided for in the tender/ schedule and drawing or which may be required to be done in order to perform and complete any part there of shall be executed in accordance with the technical specification, workmanship, quality control, as prescribed whether enclosed/ not enclosed in this document, in the specification & codes, with up-to-date amendments, in the following order: -
 - a) CPWD/ DSR
 - b) IS (BIS) Codes, IEC and provisions of Electricity ACT.
- All works under this contract (wherever grey cement is used) have to be executed in OPC.
- The quantities given in the tender are approximate. However the payment shall be made on the basis of actual measurements taken on site and in conformity with CPWD Specification and BIS Codes. It is clarified that all quantities are subject to change and no claims whatsoever on this behalf shall be entertained.
- All materials used in the works shall be of their respective kind and quality specified in the tender document or approved by the SBI and/ or Architect and shall comply strictly with the requirements of the latest specifications of CPWD and Indian Standard Codes.
- The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, Drawings etc. (FPS units wherever indicated are for guidance only).
- The drawings for services are diagrammatic but shall be followed as closely as actual construction permits. Any deviations from the drawings shall be in conformity with Consultant and structural drawings. The dimensions designated by the manufacturers shall take precedence over the drawings.
- At completion of work the Contractor shall submit one set of tracings and two sets of prints of "As-Built-Drawings". These drawings shall, among others, include invert levels, pipe runs, diameters, location of valves, access panels, layout of equipment, piping connections and such other information for maintenance & future extensions. Guarantees given by manufacturers shall be assigned to the Employer along with names & addresses of manufacturers, suppliers and information about spare parts.
- All site test shall be carried out with prior intimation to the Bank Engineer/ Consultant. All defects shall be rectified and tests conducted again to the satisfaction of the Bank Engineer/ Consultant. In addition to the test required by the specifications, the Contractor shall also conduct tests required by the Consultant and by the Municipal or other Authorities.
- All work shall be executed by competent and licensed persons. The contractor shall maintain liaison with Municipal and other controlling Authorities. He shall obtain their approvals and certificates as

required by the bye – laws at appropriate stages.

- No cutting / chasing shall be done in load bearing structural members without prior approval of the Asstt. Engineer. Sleeves and openings shall be provided during the progress of construction in preference to cutting at later date.
- The Consultant may require typical mock up(s) to be installed in advance for approval. Undamaged materials from the mock up shall be allowed to be reused in the work.
- The materials shall conform to the specifications and in absence thereof to Indian Standards. The products should bear the ISI Mark.
- The makes of materials for use in this work are broadly approved as per list given below. The Contractor shall, however, get particular makes and samples approved before ordering:
- Notwithstanding any interim or final approval the Contractor remains responsible for satisfactory performance of all fittings & fixtures. The liability of the Contractor is not limited by any approval of the make of materials.

BILL OF QUANTITY

PREAMBLE:TO BE READ ALONG WITH DRAWINGS.

1. Rates to be quoted both in figures and words.
2. All pages to be signed and stamped by the tenderer.
3. The rate of the items shall be applicable for any floor level/ any number of floors, or any quantity.
4. The specification of the items shall be as per latest indian standard codes unless otherwise specified.
5. All materials shall be as per approved list and should be of 1st quality unless otherwise specified.
6. The rates are inclusive of all duties and taxes (except GST) of all government, municipal or any other statutory body applicable from time to time.
7. Rates shall be for items complete in all respects as per drawing, instructions and approval of the consultant/ bank's engineer.
8. The quantities are approximate and tentative which may vary during course of execution. the rates quoted against particular item shall not be changed with variation in quantities.
9. Making of any cutout / opening for electrical / air – conditioning wiring / fitting in any of the item of false ceiling, partitions, paneling masonry work etc. and finishing edges jambs / cills / soffits of the opening shall not be paid extra.
10. The tenderer shall visit the site and shall satisfy himself as to conditions under which the work is to be performed. he shall also check, ascertain the locations of any existing structures or equipment or any other situation which may affect the work. no extra claim as a consequence of ignorance or on ground of insufficient description will be allowed at a later date.
11. The quoted price for items shall include all accessories, consumables etc. as required to make the item complete in all respects, compatible with other related / associated items and fully functional.
12. Contractor shall be fully responsible for any error, difficulty in execution / damages incurred owing to discrepancy in drawings which has been overlooked by him and has not been brought to the notice of the consultant.
13. There are number of items given in the tender where in basic rates including all taxes expected has been mentioned in the tender. these items shall be purchased by the contractor from the market only after the approval of quality and rates by the consultant.
14. All hidden surfaces of board / ply / wood work to be painted with anti bacterial paint from nav air international fr 881 (viper) (white colour as per manufacturer's specifications on wood / board).
15. Contractor shall appoint technically qualified full time site supervisor to monitoring the day to day progress of work at site on their own cost.
16. **Only Relevant formats given above applicable as per the tender, the decision of SBI will be final and binding of the Contractor.**

**PRICE BID : SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
03 PLANTS OF CAPACITY 20 KWP, 22KWP, 32 KWP ON-GRID ROOF TOP
SOLAR (PV) POWER SYSTEM**

Site Address:

- 1. SBI, Plot No 364 , Dundahera Branch, Gurgaon**
- 2. SBI, 111, Navyug Market Branch, Ghaziabad**
- 3. SBI Semmapuri Branch, New Delhi**

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
1	a) Supply, Installation, Testing and Commissioning of On-Grid Roof Top Solar (PV) Power system : 01 plants of capacity 32 KWp (Bifacial N-type TOPcon 625 watt and above, PV modules from ALMM List 1 and solar PV cells from ALMM List II , all as per latest MNRE guidelines) at SBI, Plot No 364 , Dundahera Branch, Gurgaon b) Complete net metering & SIM based remote monitor feature with one year recharge by vendor. all cost/ fee to be borne by the vendor for net meter and net metering. rate to be quoted accordingly. c) 05 Years Comprehensive Maintenance Maintenance of whole solar Plant after one year Defect liability period. d) Solar plate Cleaning arrangement at rooftop with CPVC water pipe. e) Cleaning of Solar Panels once in a month. f) Graph of hourly solar power generation, E-day, E-total (Kwh) solar power generation details on inverter LED display simultaneously must be available. (Price to include all above)	No	1.00		-

2	a) Supply, Installation, Testing and Commissioning of On-Grid Roof Top Solar (PV) Power system : 01 plants of capacity 22 KWp (Bifacial N-type TOPcon 625 watt and above, PV modules from ALMM List 1 and solar PV cells from ALMM List II , all as per latest MNRE guidelines) at SBI, 111, Navyug Market Branch, Ghaziabad b) Complete net metering & SIM based remote monitor feature with one year recharge by vendor. all cost/ fee to be borne by the vendor for net meter and net metering. rate to be quoted accordingly. c) 05 Years Comprehensive Maintenance Maintenance of whole solar Plant after one year Defect liability period. d) Solar plate Cleaning arrangement at rooftop with CPVC water pipe. e) Cleaning of Solar Panels once in a month. f) Graph of hourly solar power generation, E-day, E-total (Kwh) solar power generation details on inverter LED display simultaneously must be available. (Price to include all above)	No	1.00		-
3	a) Supply, Installation, Testing and Commissioning of On-Grid Roof Top Solar (PV) Power system : 01 plants of capacity 20 KWp (Bifacial N-type TOPcon 625 watt and above, PV modules from ALMM List 1 and solar PV cells from ALMM List II , all as per latest MNRE guidelines) at SBI Semmapuri Branch, New Delhi b) Complete net metering & SIM based remote monitor feature with one year recharge by vendor. all cost/ fee to be borne by the vendor for net meter and net metering. rate to be quoted accordingly. c) 05 Years Comprehensive Maintenance Maintenance of whole solar Plant after one year Defect liability period. d) Solar plate Cleaning arrangement at rooftop with CPVC water pipe. e) Cleaning of Solar Panels once in a month. f) Graph of hourly solar power generation, E-day, E-total (Kwh) solar power generation details on inverter LED display simultaneously must be available. (Price to include all above)	No	1.00		-
4	Total (1+2+3)				-
5	GST @ 18% (or as applicable)				-
6	Total including GST (to be filled in GEM)				-
Notes:-					

1	The rates quoted includes all other taxes , duties , loading, unloading , transportation, other expenses etc to site. only GST will be paid Extra				
2	The Plant must Comply with latest MNRE guidelines, IS, IEC , BIS and other relavent standards applicable in india				
3	Only Blue Color Boxes to be filled				

AGREED AND ACCEPTED ALL THE TERMS & CONDITIONS, SPECIFICATIONS ETC. FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 03 PLANTS OF CAPACITY 20 KWP, 22KWP, 32 KWP ON-GRID ROOF TOP SOLAR (PV) POWER SYSTEM

SIGNATURE OF CONTRACTOR

DATE:

SEAL:

