

# WEST BENGAL KHADI & VILLAGE INDUSTRIES BOARD



A Government of West Bengal Enterprise under  
Micro, Small and Medium Enterprises and Textile Department  
12, B.B.D.Bag, Kolkata – 700 001  
Website: wbkvib.org.in / Web Portal: banglarkhadi.in



Memo No: 2209 /ENGG/01/Solar of Head Office and District Office/2024-25

Date: 02/09/24

## NOTICE INVITING e-TENDER REFERENCE No. WBKVIB/CEO/NIT/145/2024-25 OF CHIEF EXECUTIVE OFFICER WEST BENGAL KHADI & VILLAGE INDUSTRIES BOARD

The Chief Executive Officer, Khadi & village Industries Board, invites-tender for the work detailed below which are to be executed through Engineering Section of WBKVIB: -

**Name of Work: -**

**Estimated Amount: -**

**Earnest Money: -**

**Completion: -**

**Location District: -**

**Defect Liability Period: -**

**Eligibility of Bidder: -**

Supply, Installation & Maintenance of Roof Top Grid Connected Solar PV Power Plant at Different Places in West Bengal under WBKVIB

₹ 3,32,29,600.00 (Including all Taxes, GST, Cess etc.)

₹ 6,64,592.00 (2% of Estimated Amount) DD in favour of "WEST BENGAL KHADI AND VILLAGE INDUSTRIES BOARD" payable at Kolkata and positively submitted before opening the Technical Bid at Head Office Receiving Section.

365 Days from Work Order

Kolkata & Different District of West Bengal

05 (Five) Years after Completion

Bonafide, Resourceful, Experienced & Reliable, Government Licensed Contractor having credential of similar nature of work credential is Eligible Through Pre-Qualification.

### Note: -

- In the event of e-filing intending bidder may download the tender document from the website, <https://wbtenders.gov.in> indirectly by the help of Digital Signature Certificate & necessary Earnest Money
- Successful Tenderer will not have to pay the cost of tender documents for the purpose of participating in e-tendering, but the successful L1 (Lowest) Bidder will have to pay the cost of **Tender Documents (2911) of 2 (two) A/PW/0/10C-35/10 Dated: - 26/07/2011 of secretary PWD Govt. of West Bengal**

### • Important Date & Time (Online): -

1. Documents Download Start	:	02-Sep-2024 from 06.00pm Onwards
2. Documents Download End	:	23-Sep-2024 up to 06.00pm
3. Bid Submission Start	:	02-Sep-2024 from 06.00pm Onwards
4. Bid Submission End	:	23-Sep-2024 up to 06.00pm
5. Opening of Technical Bid (Open by Authorized Officer):	:	26-Sep-2024 from 11.00am Onwards
6. Opening of Financial Bid	:	To be Notified

### 3. Eligibility criteria for participation in tender:

- Intending Tenderers should produce credentials of a similar nature of completed work, of the minimum value of 40% of the Estimated Amount put to Tender during 5(five) years prior to the date of issue of the Tender Notice.

**NB:-** Completion certificate should contain a) Name of work, b) Name & address of Client, c) Amount put to tender, d) Date of Commencement of work, e) Date of Completion of work.

**OR**

- Intending Tenderers should produce credentials of 2(two) similar nature of completed work, each of the minimum value of 30% of the Estimated Amount put to Tender during 5(five) years prior to the date of issue of the Tender Notice.

**OR**

- Intending Tenderers should produce credentials of 1(one) single running work of similar nature which has been completed to the extent of 75% or more and the value of which is not less than the desired value at (i) above.

## General Instructions

### **1. Documents to be Submitted Online: -**

- a. Income Tax Return (For last 3 years)
- b. Balance Sheet (For last 3 years)
- c. Audit Report (For last 3 years)
- d. Bank Solvency Certificate not less than 30% of Estimated Amount.
- e. Pan Card.
- f. Latest professional Tax Paid Challan & P-Tax Enrollment Certificate, Professional Tax Payment Certificate.
- g. Valid 15-digit Goods and Services Taxpayer Identification Number (GSTIN) under GST Act, 2017 & Latest
- h. GST Return in Form No. 3B.
- i. Latest Valid Trade License.
- j. Work Order along with Payment Certificate, Completion certificate for the work in technical credential.
- k. Affidavit before Notary mentioning the NIT No. as well as the correctness of the documents and declaration of penalty, debarment etc.
- l. Registered Partnership Deed, if applicable.
- m. The Power of Attorney for signing the tender by partner.
- n. Electrical Contractor License

### **2. Other Terms & Conditions: -**

- a. Pan Card, Professional Tax receipts Challan Current last 3 Years, Current GSTIN registration Certificate along with current GST payment receipt to be accompanied with the Technical Bid document. Income Tax (SARAL) Acknowledgement Receipt for assessment year (Last 3 Years) to be submitted.
- b. The Working Capital shall not be less than 15(Fifteen) percent of the amount put to tender out of which minimum 10% shall be of applicant's own resource.
- c. Bidder must have office in West Bengal.
- d. Additional Performance Security when the bid rate is 80% or less of the Estimate put to tender and no increase in scope of work of projects during execution phase vide order no 4608-F(Y) Dt. 18.07.22018. In tenders for Government works, bids are sometimes received at a much lower rate than the Estimated Amount put to tender. In such cases, to ensure the quality and proper execution of the work in public interest, the Governor is pleased to decide that Additional Performance Security @ 10% of the tendered amount shall be obtained from the successful bidder if the accepted bid value is 80% or less of the Estimate put to tender.
- e. The Additional Performance Security shall be submitted in the form of Bank Guarantee from any Scheduled Bank before issuance of the Work Order. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of Letter of Acceptance, his Earnest Money will be forfeited and other necessary actions as per NIT like blacklisting of the contractor, etc., may be taken. The Bank Guarantee shall have to be valid up to end of the Contract Period and shall be renewed accordingly.
- f. The prospective bidders shall have in their full-time engagement experienced engineering personnel.
- g. The Bid should be submitted in two parts digitally super scribing "TECHNICAL BID" and "FINANCIAL BID". FINANCIAL bid of only those bidders shall be opened who are technically qualified on evaluation according to the predefined qualification criteria as mentioned in this N.I.E.T by the 'Tender Committee' formed for the purpose. The decision of the 'Tender Committee' will be final and absolute in this respect. The list of Qualified Bidders will be displayed in the Notice Board of this Office on the scheduled date and time as mentioned NIT.
- h. Issuance of work order as well as payment will depend on availability of fund and no claim whatsoever will be entertained for delay of Issuance of work order as well as payment, if any. Intending tenderers may consider these criteria quoting their rates.
- i. Constructional labour Welfare Cess @ 1(One)% of cost of construction will be deducted from every bill of the elected agency, Vat, Royalty & all other statutory levy/Cess will have to be Borne by the contractor as per rule.
- j. Defect Liability Period mentioned in NIT front page\*\*
- k. Adjustment of price (increase or decrease): - No escalation of cost will be allowed even in extension period of time, granted by WBKVIB.
- l. The available Bid capacity (to be calculated on the basis of prescribed format) of the prospective applicant shall not be less than the estimated amount put to tender.
- m. No Mobilization advance and Secured Advance will be allowed.
- n. Price preference will not be allowed.
- o. Security deposit @ 8% will be deducted from the running bill till completion of the work.
- p. Security deposit & Earnest Money Deposit will be released after 5(Five) year from the date of completion of the work and recommendation of Engineer in Charge.

- q. Agencies shall have to arrange land for creation of plant and machineries, storing of materials, labour shed, laboratory etc. at their own cost and responsibility.
- r. The Chief Executive Officer, WBKVIB reserves the right to cancel the NIT due to unavoidable circumstances and no claim in this respect will be entertained.
- s. Before issuance of the work order, the tender inviting authority, may verify the credential & other documents of the lowest tenderer if found necessary. After verification, if it is found that such documents submitted by the lowest tenderer is either manufactured or false in that case, work order will not be issued in favor of the tenderer under circumstances.
- t. The intending tenderers are required to quote the rate online only. No offline tender will be entertained.
- u. The intending tenderer is required to quote the rate in figures as well as in words as percentage above / below than or at per with the relevant price schedule of rates.
- v. No **CONDITIONAL / INCOMPLETE TENDER** will be accepted under any circumstances.
- w. In case of Quoting rates, no multiple lowest rates will be entertained by the Department.
- x. Qualification Criteria.

The Tender Inviting & Accepting Authority through a 'Tender Committee' will determine the eligibility of each bidder, the bidders shall have to meet all the minimum criteria regarding: -

- a) **Financial Capacity**      b) **Technical capability**      c) **Experience**

The eligibility of a bidder will be ascertained on the basis of the self-attested documents in support of the minimum criteria as mentioned in a, b, c above, and the declaration executed through prescribed affidavit in non-judicial stamp paper of appropriate value duly notarized in Annexure -X. If any document submitted by a bidder is noticed either manufacture or false, in such cases the eligibility of the bidder/ tenderer will be out rightly rejected at any stage without any prejudice. The bidder would also be liable for the criminal proceeding as per law.

**NB-** All the above documents are to be submitted in separate .pdf file properly named with a forwarding letter in company letter head pad addressed to the CEO, WBKVIB listing all the documents submitted online. The letter head must contain full address telephone no / Mobile No. and e-mail ID. No other papers are required.

3. Estimate of the work (BOQ) is attached herewith. The same is to be submitted online as financial bid.
4. Location of critical events: All meetings related to selection of L1 will be done at the office of the CEO, WBKVIB, Hemanta Basu Bhavan, 12 BBD Bag, Kolkata- 700 001.
5. The technical & financial proposal should be developed by the agency after reading the project summary, details of hardware intervention required, site map and quantity of works to be taken up. The agency may also visit the executing site before preparation of proposal.
7. For any further query one can e-mail to ceowbkvib@gmail.com or call at 9674312318 According to clause 19 of 2911 (ii) contractor should have valid license under the contract labour (Regulation and Abolition) Act 1970 betaken commencement of work and continue it until completion.
8. Contractor will have to maintain qualified technical employees and / or Apprentices of site as per prevailing Apprentices Act or as stipulated at the contact.
9. Contractor shall have to make his own arrangements for water for both for the work and use by the worker. contractor will be responsible for the payment of all water charges payable to corporation / municipality / panchayet.
10. Contractor shall have to make arrangement make electricity for construction purpose and contractor will be responsible for payment of all electric charges to CESC, WBSEDCL, WBSEB.

**\*\* Defect Liability Period: -**

- 03 (Three) Months
- 12 (Twelve) Months

: Full security deposit shall be refunded to the contractor on expiry of the time period from the actual date of completion of the work.

<ul style="list-style-type: none"> <li>▪ <b>36 (Thirty-Six) Months</b></li> </ul>	<ul style="list-style-type: none"> <li>: i) 30% of the security deposit shall be refunded to the contractor on expiry of 2 (Two) years from the actual date of completion of the work.</li> <li>ii) The rest 70% of the security deposit shall be refunded to the contractor on expiry of 3 (Three) years from the actual date of completion of the work.</li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>60 (Sixty) Months</b></li> </ul>	<ul style="list-style-type: none"> <li>: i) No security deposit shall be refunded to the contractor for 1st 3 (Three) years from the actual date of completion of work.</li> <li>ii) 30% of the security deposit shall be refunded to the contractor on expiry of 4 (Four) years from the actual date of completion of work.</li> <li>iii) The rest 70% of the security deposit shall be refunded to the contractor on expiry of 5 (Five) years from the actual date of completion of work.</li> </ul>
<p><b>4. Interest free security deposit</b></p>	<p>: Full security deposit shall be refunded to the contractor after receiving the requesting letter from the contractor and 6 (Six) months after expiry of agreement with the Board.</p>

## Technical Specifications

### **1. Scope of the Project**

- a. The scope of the tender includes supply, service, Installation and Commissioning along with onsite warranty support for a period of 5 years with quarterly maintenance for Grid Connected Solar PV systems of various capacities to be installed at various locations of West Bengal Khadi and Village Industries Board. Warranty for the project will be for a period of 5 Years which includes all components. PV Modules will carry manufacturer's warranty of 10 Years and 80% power output guarantee for a period of 25 Years.

### **2. Supply Scope of the Project**

- a. Supply of Mono perc / Topcon based ALMM approved PV Modules with a minimum capacity of 540 Wp each and cumulative capacity matching the tender BOQ for each site.
- b. Supply of Grid Connected Solar Inverter of individual capacity 10 kW – 60 kW with remote monitoring system. Inverter total capacity in kW must be more than or equal to the KWp of module capacity as per the tender BOQ.
- c. Supply of PV Module mounting structure for accommodating the supplied PV Modules on the roof facing South Direction at 23 deg tilt angle. The supply will also include chemical anchoring (if required) and civil materials for fixing the PV modules mounting structure on the roof.
- d. Supply of Array Junction Box (AJB)
- e. Supply of Inverter Interfacing Panel (IIP) with Energy Meter
- f. Supply of Grid Interfacing AC Panel (GIP)
- g. Earthing System
  - i. For Systems Earthing
  - ii. For Structure earthing
- h. Supply of AC, DC and Earthing Cables as per the site requirements
  - i. Supply of Fire extinguishers
- j. Supply of Module cleaning arrangement
- k. Supply of Project Signage
- l. Supply of Nuts and bolts, cable glands, lugs, heat sleeves and other tit bit items required for proper installation and Commissioning

**3. Service Scope of the Project**

- a. Commissioning of the PV Module structure on the roof along with the civil works required for installation
- b. Module mounting on the structure with necessary stainless-steel nuts and bolts with suitable spring washers and neoprene gaskets.
- c. AC, DC and Earthing system along with necessary cabling and layout
- d. Inverter, AJB, IIP and GIP installation, commissioning and cable terminations
- e. Configuration of remote monitoring system
- f. Laying out of the necessary pipeline for module cleaning
- g. Any other services not specifically mentioned but required for proper functioning of the solar power plant
- h. After Sales Service Support with Quarterly Maintenance for the Warranty period of 5 Years.
- i. West Bengal Khadi and Village Industries Board (District Offices) will arrange for submission of all forms etc. for application of solar metering as per the relevant clauses of the WBERC regulations. The vendor will arrange for site inspection and co-operation will all documentation for availing of these facilities.

4. **Required Specifications for the Solar Modules (to be submitted in Agency Letter Head)**

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference
1	Manufacturer	Must be ISO 9001 certified and must be ALMM approved. Please enclose certificate and Sl No of ALMM approval		
2	Module Technology	Mono perc or TOPCON		
3	Minimum Module capacity	540 Wp or more with no negative tolerance		
4	Module certifications	1. BIS as per MNRE requirements 2. IEC 61215 / IS 4286 3. IEC 61730 4. IEC 61701 / IS 61701 5. IEC 62804		
5	Pv Module Junction Box	Must be IP65 or above, bypass diodes need to be provided		
6	Frame of PV module	Anodized aluminum frame		
7	Manufacturers Authorization Form (MAF)	Manufacturer of the PV Module must provide <b>tender specific</b> MAF to the bidder for the project. MAF should clearly announce the manufacturer's warranty offered for this project.		
8	Total Module Capacity	Total Module capacity must not be less than the Wp rated power of the power plant as per the BOQ		

5. **Required Specifications for Solar Inverter (to be submitted in Agency Letter Head)**

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference
1	Type of Inverter	Transformer less Grid Connected Solar Inverter		
2.1	Inverter Rating kVA	Rated 12 kVA - 66 kVA		
2.2	Inverter Rating kW	Rated - 10 kW - 60 kW		
3.1	Input DC Voltage Maximum	Minimum 1100 VDC		

3.2	MPPT Voltage Range	Minimum 200VDC -1000VDC		
3.3	Number of MPPTs	a. For Inverters from 10 kW – 30 kW minimum 2 Nos MPPT Trackers b. For Inverter > 30 kW minimum 4 Nos of MPPT Tracker per Inverter		
3.4	Number of Inputs	To be matched with the stringing design		
3.5	Rated Input Current per MPPT	15-40 Amps per tracker matched with the proposed stringing design		
3.6	Maximum Short Circuit Current per MPPT	20-50 Amps per MPPT matched with the stringing design		
4.1	Rated Voltage with Variation	400/415VAC Rated +/- 20%		
4.2	Frequency	50 Hz rated and range +/- 10%		
4.3	THDi	< 3% of rated power		
4.4	DC Current Injection	<0.5% of rated current		
4.5	Power Factor	>0.99 adjustable between 0.8 lagging and leading		
5.0	Protections	1. DC Switch inbuilt 2. Anti Islanding Protection 3. AC over current protection 4. Type II AC and DC surge arrestors 5. Insulation detection 6. Leakage detection		
6.1	Ingress Protection	Degree of Protection IP65 minimum		
6.2	Night Self Consumption	< 1 W		
6.3	Cooling	Natural / Forced Cooling		
6.4	Operating Temperature	-25 deg C to + 60 deg C		
7.1	Man, Machine Interface	Through LCD display		
7.2	Communication Ports	Bluetooth – For communication with smart phones both on android as well as iPhone. Bluetooth communication will allow for visualizing of inverter running parameters, software update, download generation data.		

7.3	Communication Ports	RS485 – MODBUS for connecting to a central remote monitoring equipment		
7.4	Communication Port	RS232 for serial data communication		
7.5	Monitoring requirements	Through remote cloud portal – accessible through web browser and mobile phone app. Data from inverter should be transmitted to the remote portal through WIFI or GPRS.		
7.6	Cloud Portal	<p>Three-tiered remote monitoring with password restricted access for each level</p> <ul style="list-style-type: none"> <li>- Level 1 for the entire project for all the plants in the project</li> <li>- Level 2 for the system integrators for the plants executed by that specific system integrator</li> <li>- Level 3 for the Individual plant</li> </ul> <p>Cloud portal will store data for minimum 7 years data will compromise of</p> <ol style="list-style-type: none"> <li>1. Chart for daily generation</li> <li>2. Chart for monthly generation</li> <li>3. Chart for yearly generation</li> <li>4. Fault data</li> </ol> <p>All data should be downloadable in excel</p>		
8.1	Certifications	<ol style="list-style-type: none"> <li>1. IEC 61727</li> <li>2. IEC 62116</li> <li>3. IEC 62109</li> <li>4. IEC 61683</li> <li>5. IEC 60068</li> <li>6. IEC61000</li> </ol> <p>Please attach the <b>test certificates</b></p>		
8.2	BIS	Inverters must be BIS certified for IS 16221 and IS 16169 – please provide the registration number		
9.0	Inverter Enclosure	Aluminum Die cast enclosure preferably with forced cooling		
10.0	Inverter Manufacturer Credentials	<ol style="list-style-type: none"> <li>1. Inverter manufacturer must have their own service center in Kolkata – please provide trade license of the location</li> <li>2. Inverter manufacture must arrange for factory inspection for the offered items prior to dispatch</li> </ol>		



		3. Inverter manufacturer must have ISO 9001 - please enclose certificate		
11.0	Manufacturers Authorization Form (MAF)	Manufacturer of the Inverter must provide <b>tender specific</b> MAF to the bidder for the project. MAF should clearly announce the manufacturer's warranty offered for this project.		
12.0	Total Inverter capacity	Cumulative Inverter capacity in KW must not be less than the rated KWp capacity of the modules as per BOQ of the tender		

6. **Specifications for Module Mounting Structure (to be submitted in Agency Letter Head)**

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference
1	Material	MS structure hot dip galvanized		
2	Certification	IS certified members should be used Jindal / Tata preferred		
3	Tilt angle	Should be between 22-24 deg and should be oriented towards the south		
4	Galvanization	Minimum 80 microns		
5	Material for accessories	Structure should be interconnected only using GI nuts and bolts and spring washers		
6	Mounting on Roof	Roof mounting should be done either using dead load concept or by using chemical anchoring. Even in case of chemical anchoring suitable PCC pedestals must be used to prevent water ingress		
7	Design	The design of the PV module structure has to be vetted by a structural engineer with supporting STAAD report and it should withstand wind speeds of 160 km/hr. Design document needs to be submitted for approval prior to execution.		

7. **Specifications for Array Junction Box (to be submitted in Agency Letter Head)**

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference

1	Enclosure	UV protected Polycarbonate IP 65 enclosure with suitable polyamide glands for cable entry		
2	Input DC cable Entry and exit	Through Panel Mounted MC4 connectors. 2 Nos of Input should be considered for each MPPT tracker		
3	Surge Protective device	Minimum 1000 VDC rated Type II, 20 kA SPDs should be used. 1 Nos per MPPT tracker of the Inverter. SPD make Dehn / OBO / Mersen / Phoenix or equivalent		
4	Earthing	Earthing Terminal should be provided through suitable terminal		
5	Mounting	AJB will be wall mounted and components in AJB will be Din rail Mounted.		
6	Cabling and Busbars	Cabling will be done with Type I DC cable, double insulated, weather proof, UV protected, tinned copper cables. Bus bars should be tinned copper		

8. **Specifications for Inverter Interfacing Panel (IIP) / Inverter Combiner Panel (ICP) to be placed nearer to the Inverter (to be submitted in Agency Letter Head)**

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference
1	Enclosure	UV protected Polycarbonate IP 65 enclosure with suitable polyamide glands for cable entry		
2	Surge Protective device	Minimum 415 VAC rated Type II, 25 kA 4 Pole Three Phase SPDs should be used. SPD make Dehn / OBO / Mersen / Phoenix or equivalent		
3	MCB / MCCB	In case of use of one Inverter only 1 MCB/ MCCB is required. MCB / MCCBs required will be 4 Pole with MCB have a fault current 10 kA and MCCBs having a fault current of 25 kA.  In case of multiple Inverters then 1 input MCB / MCCB is required per Inverter and 1 Nos additional Outgoing MCB / MCCB is required per box. MCB / MCCBs required will be 4 Pole with MCB have a fault		

		current 10 kA and MCCBs having a fault current of 25 kA.  MCB / MCCBs make will be ABB / L&T/ Siemens or equivalent		
4	Earthing	Earthing Terminal should be provided through suitable terminal		
5	Mounting	IIP Or ICP will be wall mounted and components in IIP / ICP will be Din rail Mounted.		
6	Cabling and Busbars	Bus bars should be tinned copper. Cables should be flexible Copper cables.		
7	Energy Meter	IIP should have a Class I accuracy Multi-Function Energy meter which should measure the generation of the solar Inverter(s). Meter make should be Schneider / L & T or Secure		

9. **Specifications of Grid Interfacing Panel (to be submitted in Agency Letter Head)**

Grid Interfacing panel will be placed nearer to the grid before connecting to the customer's meter

Sl	Specification	Requirement	Compliance (Yes/ No)	Compliance with document cross reference
1	Enclosure	UV protected Polycarbonate IP 65 enclosure with suitable polyamide glands for cable entry		
2	MCB / MCCBs	1 nos MCB / MCCB will be provided of required rating. MCB / MCCBs required will be 4 Pole with MCB have a fault current 10 kA and MCCBs having a fault current of 25 kA.  MCB / MCCBs make will be ABB / L&T/ Siemens or equivalent		
3	Earthing	Earthing Terminal should be provided through suitable terminal		
4	Mounting	GIP will be wall mounted and components in GIP will be Din rail Mounted.		
5	Cabling and Busbars	Bus bars should be tinned copper. Cables should be flexible Copper cables.		
6	RYB Indicators	Should be provided both at Input and Output		

## 5. Specifications of Cables to be used in the project

### a. DC Cable -

1. Minimum 6 sq mm double insulated weather proof, UV protected DC cables are to be used. Cables should be PV Type I cables and should be tin copper type preferred makes Lapp / Polycab. Dc cables should be routed indoor and outdoor through uPVC conduits of suitable sizes.

### b. AC Cables

- i. Indoor cables will be single / three and half or four core Cu cables PVC insulated. Cable makes RR Kable / Polycab / Lapp. Minimum rating of the cables will be 6 sq mm. Cables need to be dimensioned according to the system design and approved SLD
- ii. Outdoor AC Cables will be three and half or four core Al cables XLPE insulated. Cable makes will be Polycab or equivalent. Minimum rating of the cables will be 16 sq mm. Cables need to be dimensioned according to the system design and approved SLD.

### c. Earthing Cables

- i. Earthing cables for termination in Inverter will be flexible Yellow green Copper cables.
- ii. Earthing cables used for module structure mounting will be Aluminum Three core cables minimum 10 sq mm or GI strips can be used.
- iii. For System Earthing Three core 6 sq mm XLPE insulated Cu cable must be used. The same will be terminated in an earth bus bar which will be tinned copper type.

## 6. Specifications for Earthing System

- a. For System Earthing - 2 Nos Chemical Gel copper bonded earthing system of minimum 3 meters rod length with 25 Kgs of earth enhancing compound should be used. Suitable PVC cover should be provided for each earthing.
- b. For Structure Earthing - 2 Nos GI Chemical Gel earthing system should be used for plants upto 20 kWp and 4 Nos to be used for plants above 20 kWp with minimum 3 meters rod length and 25 kgs of earth enhancing compound. Suitable PVC cover should be provided.

## 7. Specification of Project Signage

Project information Signage: The Project Signage will be made up of ACP (Aluminium Composite Panel) base of minimum size 3'x 2'. One (01) no. project signage must be provided. Details of the project signage will be provided during execution phase.

## 8. Specification of Fire Extinguishers

ABC type dry power portable fire extinguishers of minimum capacity 6 kg shall be provided.

## 9. Specifications for Module Cleaning Arrangement

Water pipeline has to be created by the vendor using uPVC pipes and three numbers of uPVC taps at various points in the PV array yard for plants upto 20 KWp and six number taps for plants upto 60 KWp and nine number Taps for plants above 60 KWp for easy cleaning of the PV Modules. This pipeline will be connected to the customer tank on roof top.

2 Nos rubber wiper, 2 Nos 15L bucket and 2 Nos mug has to be provided for module cleaning.

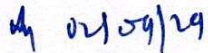
This is a turnkey project and various items like nut, bolts, insulators, cable lugs etc will be required for execution of the project and all such materials need to be considered by the bidder in their project scope even if not specifically mentioned. Bidders should consider these items while bidding

**10. Bill of Material Templates for (10, 15, 20, 25, 30, 35, 45, 60 KWp) to be submitted in Agency Letter Head for different KWp:**

Sl No,	Item Description	Item Code	Make	Qty.	Units
1.	PV Array for PV Power Plants ranging from _____ kWp as per Technical specification (Min: 540 Wp MONO PERC )				Nos.
2.	PV Module Mounting Structure suitable suitable for installation of Cumulative _____ kWp PV Array for the PV power Plant ranging from Technical specification				Set.
3.	PV Array Junction Boxes (AJB) suitable for installation of _____ kWp PV Array for the PV power Plant ranging as per Technical specification				Set.
4.	Grid Connected String Inverters as per Technical specification (Minimum DC : _____ kW)				Nos.
5.	Data Logger required for collection of datas from Solar PV Power plants as per Technical specification .				Set.
6.	Web enable on line Remote Monitoring Unit as per Technical specification for enabling of datas Solar PV Power plants Technical specification				Set.
7.	Inverter Combiner LT Panel / LT panel suitable for installation of the _____ kWp Solar PV power Plant as per Technical specification				Set.
8.	Grid interfacing LT panel suitable for installation of _____ kVA Grid connected Inverter for the PV power Plant				Nos.
9.	Export Import Energy Meter suitable for installation of _____ kVA Grid connected Inverter for the PV power Plant as per Technical specification				Set.
10.	DC Cables and conduits suitable for installation of _____ kWp PV Array for the PV power Plant as per Technical specification				Lot.
11.	AC Cables and conduits suitable for installation of _____ kWp Grid connected Inverter for the PV power Plant ranging from 10 kWp to 60 kWp as per Technical specification				Lot.
12.	Earthing Pit required to complete PV Power Plants of _____ KW as per Technical specification				Lot.

13.	Equipment, and Array structure Earthing strips and earth Bus required to complete the PV Power Plants of _____KW as per Technical specification				Lot.
14.	Project Signage as per Technical specification				Lot.
15.	Schematic Diagram as per Technical specification				Lot.
16.	Safety Signage as per Technical specification				Lot.
17.	Fire extinguisher as per Technical specification				Lot.
18.	Fire Buckets and Holding stand (Type II) (Two Tire) as per Technical specification				Nos.

**NB:- The successful L1 (Lowest) Bidder will have to submit Specification of Material, Bill of Material, Different Material Certificate in a provided format at the time of "Letter of Acceptance".**

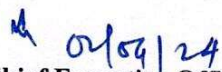
  
 Chief Executive Officer  
 W.B. Khadi & V.I. Board

Memo No: 2209/1(13)/ENGG/01/Solar of Head Office and District Office/2024-25

Date: 02/09/24

**Copy Forwarded for wide publicity through the office Notice Board to: -**

1. The Chairman, WBKVIB
2. The Joint Secretary, MSME & T Dept.
3. The District Magistrate, (Coochbehar, Jhargram, Birbhum, North 24 PGS, Bankura, Nadia, Dakshin Dinajpur, Hoogly, Murshidabad, Malda, Purulia, Jalpaiguri)
4. The Secretary, WBKVIB.
5. The FA & CAO WBKVIB.
6. The AEO, WBKVIB
7. The PO(R&T), WBKVIB
8. The PEO, WBKVIB
9. The Executive Engineer, WBKVIB
10. The District Officer (Coochbehar, Jhargram, Birbhum, North 24 PGS, Bankura, Nadia, Dakshin Dinajpur, Hoogly, Murshidabad, Malda, Purulia, Jalpaiguri), WBKVIB
11. The Assistant Engineer, WBKVIB
12. Notice Board
13. Office Website (Ansuman Ghosh).

  
 Chief Executive Officer  
 W.B. Khadi & V.I. Board

To be Submitted in Firm Letter Head

**PRE-QUALIFICATION APPLICATION**

To,  
The Chief Executive Engineer,  
The WBKVIB,  
12, B.B.D Bag,  
Kolkata -700 001.

Ref: - Tender No:.....

For.....

(Name of work) .....

NIT No.: ..... of Chief Executive Officer of WBKVIB.

Dear Sir,

Having examined the Statutory, non-statutory & NIT documents, I / we hereby submit all the necessary information and relevant documents for evaluation.

The application is made by me / us on behalf

of.....in the capacity

.....duly authorized submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this letter.

We understand that:

- a) Tender Inviting & Accepting Authority/Engineer-in-Charge can amend the scope & value of the contract bid under this project.
- b) Tender Inviting & Accepting Authority/Engineer-in-Charge reserve the right to reject any application without assigning any reason.

Encl: - e-Filling: -

- 1. Statutory Documents.
- 2. Non-Statutory Documents.

Date: - .....

Signature of applicant including title  
and capacity which applicant is made.

The WBKVIB.

**Annexure: - 'X'**

**Affidavit**

**(To be furnished in Non – Judicial Stamp paper of Rs. 100/- of appropriate value duly notarized)**

**Ref: NleT NO:** .....

**Name of Work:** .....  
.....  
.....

1. I, the under – signed do certify that all the statements made in the attached documents are true and correct. In case of any information submitted proved to be false or concealed, the application may be rejected and no objection / claim will be raised by the under signed.
2. The under signed also hereby certifies that neither our firm nor any of constituent partner had been debarred to participate in tender.
3. The under signed would authorize and request any bank, person, firm or Corporation to Furnish pertinent information as deemed necessary and / or as request by the department to verify this statement.
4. The under-singed understood that further qualifying information may be requested and agree to furnish any such information at the request of the department.
5. Certified that I have applied in the tender in the capacity of individual / as a partner of a firm & I have not applied severally for the same job.

**Signed by an authorized Officer of the firm  
Title of the Officer  
Name of the firm with Seal**

**Date:**



To be Submitted in Firm Letter Head

**DECLARATION BY THE TENDERER**

**Notice Inviting e-Tender No.** .....

I/We have carefully gone through the Notice Inviting Tenders and other tender documents mentioned therein. I/We have also carefully gone through the bill of Quantities (BOQ), General terms and conditions, Special terms and conditions, technical specifications, WBKVIB Form and all other documents, Corrigendum's uploaded before the last date of submission which will be part& parcel of the Contract Document. I/We shall be bound to sign all hard copies of uploaded documents under the NIT, during execution of formal agreement. My/Our tender is offered taking due to consideration of all factors, and if the same be accepted I/We promise to abide by the stipulation of the contract documents and carry out and complete the work up to the entire satisfaction of the Department.

**Full Address with phone no & valid Email Id:**

**Name of the Tenderer**

**Signature of the Tenderer**

To be Submitted in CA Letter Head

NieT No. ....

**FINANCIAL STATEMENT**

- B.1** Name of Applicant:  
**B.2** Summary of assets and liabilities on the basis of the audited financial statement of the last five financial years.  
 (Attach copies of the audited financial statement of the last five financial years)

Sl No.	Details	Year (₹ In Lakh)	Year (₹ In Lakh)	Year (₹ In Lakh)
A)	Current Assets: <b>(It should not include investment in any other firm)</b>			
B)	Current liabilities: <b>(It should include bank over draft)</b>			
C)	Working capital: <b>(A) -(B)</b>			
D)	Net worth: <b>(Proprietors Capital Partners Capital or Paid-up Capital + Resource &amp; surplus)</b>			
E)	Bank loan/ Guarantee: <b>(As per clause G.2. with all sub clauses)</b>			

Signature of applicant including title  
and capacity in which application is made

To be Submitted in CA Letter Head

NieT No. ....

Work in hand i.e., Work order issued	As on 31.03.2024	As on 31.03.2023	As on 31.03.2022

Work in progress				Work order issued but work not started		
Sl. No.	Name of the work with Tender No.	Estimate Amount	% of the executed	Sl. No.	Name of the work with Tender No.	Tender Amount

**B.4** Bid Capacity:

**(A.N.2-B)**

A= Maximum value of work done in a single during last years

B= Value at current price level of existing commitments and ongoing work to be Complete in the next N years.

N= Time of completion of the work in years for which tender has been invited

**N.B.** The Audited Balance Sheet and Profit & Loss Account with all the schedules and annexure forming part of the Balance Sheet and Profit & Loss Accountant for the last five years should be given. All these financial statements should be signed by a competent authority for the last five years (Ref: - 5-I.) of "Other terms and conditions".

..... Signed by an authorized Officer of the firm

..... Title of the Officer

..... Name of the Firm with Seal