

**KAZI NAZRUL ISLAM MAHAVIDYALAYA,
CHURULIA, WEST BENGAL**

NOTICE INVITING TENDER

e-Procurement

NITNo:KNIM_SP/NIT-01/22-23

Domestic Competitive Bidding

For

Design & Engineering, Manufacture/Procurement, Testing, Supply, Installation and Commissioning of 15kwp Rooftop Solar System including five(5) years Comprehensive Maintenance on turnkey basis at various buildings of Kazi Nazrul Islam Mahavidyalaya, Churulia.

Bidding Document



January 2023

KNI Mahavidyalaya, Paschim Bardhaman, WB

These documents are meant for the exclusive purpose of bidding against this NIT and shall not be transferred, reproduced or otherwise used for purposes other than that for which they are specifically issued.

Section Detail

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KNI Mahavidyalaya, WB
ABRIDGED NOTICE INVITING e-TENDER

(Domestic Competitive Bidding)

NIeTNo:KNIM_SP/NIeT-01/22-23

KNIM college invites e-tender for “Design & Engineering, Manufacture /Procurement, Testing, Supply,Installation andCommissioning of 15kwp Rooftop Solar System includingfive(5)yearsComprehensiveMaintenanceonturnkeybasisat various Building of KNIM.Interested bidders may obtain the bidding documents by registering themselves to the e-tendering portal (<https://wbtenders.gov.in>) and thereby downloading the bidding documents from **12 noon on 27-01-2023 and the offer shall be submitted online up to 03-02-2023 up to 2:00 PM.**

Sd/-
Teacher-in-Charge,
KNIM, CHURULIA

BID DETAILS

Sl.No.	Aspect	Description of Aspect
1	NIT No.	KNIM_SP/NIT-01/22-23
2	Name of work	Design & Engineering, Manufacture/Procurement, Testing, Supply, Installation and Commissioning of 15kwp Rooftop Solar System including five(5) years Comprehensive Maintenance on turnkey basis at various Buildings KNIM
3	Tender Fee (Non-refundable)	Rs.4000.00 (Rupees Ten Thousand only)
4	Estimated Cost of the total Project	R s 840000 (Rupees EIGHT LACKS FORTY THOUSAND). Total Project capacity–15kw
5	Quantity to be quoted by each bidder	Cumulative Capacity–15kw
6	Estimated cost of the quantity to be Quoted by each bidder (reference to Sl:5 of the table)	Rs.840000
7	Bid Security (Earnest Money Deposit-EMD)	Rs.16,800
8	Validity of offer	180 (One Hundred and Eighty) days from the date of opening of Technical Bid.
9	Date of Commencement	From the date of issuance of Letter of Award (LoA).
10	Time of completion of work	As per schedule mentioned in the Tender
11	Defects Liability Period	12 calendar months from the date of commissioning of the power plant.
12	Tender Inviting Authority	TIC, KNIM Mahavidyalaya, Paschim Bardhaman, West Bengal, 713368 Website : www.knimchurulia.in Contact No. (M): 9002512689, 9475173432 Email id: knimchurulia@gmail.com

Definition of Terms

Unless the context otherwise requires, the following terms whenever used in this document have the respective meaning:

- i) **“Purchaser”** shall mean “KNI Mahavidyalaya, Paschim Bardhaman, WB and shall include its successors and assigns
- ii) **“WBREDA”** shall mean “West Bengal Renewable Energy Development Agency”
- iii) **“Beneficiary”** shall mean “the institutions where the GCRT SPV Systems shall be installed.
- iv)
- v) **“WBERC”** shall mean “West Bengal Electricity Regulatory Commission”
- vi) **“DISCOM”** shall mean Electricity Distributions Company
- vii) **“WBSEDCL”** shall mean “West Bengal State Electricity Distribution Company”
- viii) **“CESC Ltd”** shall mean “Calcutta Electric Supply Corporation Ltd”
- ix) **“MNRE”** shall mean “Ministry of New and Renewable Energy”, Government of India
- x) **“GCRTSPV”** shall mean “Grid Connected Roof Top Solar PV”
- xi) **“Bidder”** shall mean Bidding Individual or a Bidding Firm or a Bidding Company or Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Individual/Bidding Partnership Firm / Bidding Company / Limited Liability Partnership / Bidding Consortium/Consortium, Member of a Bidding Consortium including its successors, executors and permitted assigns and Lead Member of the Bidding Consortium jointly and severally, as the context may require. Bidder shall have legal statute as per relevant applicable law of India
- xii) **“Bidding Company”** shall refer to such single Bidding Individual / Bidding Partnership Firm / Bidding Company / Limited Liability Partnership having legal entities that has submitted the Bid in accordance with the provisions of this Tender
- xiii) **“Bidding Consortium” or “Consortium”** shall refer to a group of legal entities that has collectively submitted the Bid in accordance with the provisions of this Tender (All of the member of Bidding Consortium must be registered in India)
- xiv) **“Member of a Bidding Consortium” or “Member” or “Consortium Member”** shall mean each legal entity in the Bidding Consortium, which has executed the Consortium Agreement as provided in **Form-4** of this tender

- xv) **“Lead Member of the Bidding Consortium” or “Lead Member”** shall mean the Member who submits the Bid and so designated by other Member(s) of the Bidding Consortium in accordance with the Consortium Agreement Specified in **Form** of this tender.
- xvi) **“Contract”** means all the Contract Agreement(s) entered into between the Purchaser and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract and the term Contract shall in all such documents be construed accordingly.
- xvii) **Contract Document”** means the documents listed in of the Contract Agreement(including any amendments thereto)
- xviii) **“Contract Price”** means the sum total of contract price stated in all the Letter of Award(s) as payable to the Contractor for supply, execution and commissioning of the entire Works under the scope of Contract subject to such addition& adjustments thereto or deductions there from as may be made pursuant to the Contract(s). In cases where separate identifiable Works can be completed and taken over by the Purchaser and for which separate completion schedule is provided in the Contact, in relation to such Works, the Contract Price shall mean the price relatable to such Works completed and taken over by the Purchaser.
- xix) **“Contractor”** means the successful bidder and, in case of a Consortium bid, the designated leader, whose bid has been accepted by the Purchaser, named as such in the Contract Agreement and included its legal successors and permitted assigns.
- xx) **“Contractor's Equipment”** means all appliances or things of whatsoever nature required for the purposes of execution of work and which are to be provided by the Contractor but does not include any Equipment/ Materials intended to form part of Works
- xxi) **“Project Manager”** means the person appointed by the Purchaser in the manner provided in **Clauses of GCC** here of and named as such in the SCC to perform the duties delegated by the Purchaser
- xxii) **“Letter of Award”** means notice of acceptance of the bid in writing to the successful bidder, indicating the sum KNIM college will pay for the Works as per ITB
- xxiii) **“Price Schedule”** means the schedules or any part or individual schedule thereof, submitted by the bidder with his bid and forming a part of the Contract Documents

- xxiv) The **'Engineer-in-Charge'/'Controlling Officer'/'Project Manager of KNIM** shall mean the Engineer designated by the KNIM or for the purpose of carrying out this contract.
- xxv) **'KNIM'S representative'** shall mean any person or persons or consulting firm appointed/authorized by the College to supervise, inspect, test and examine workmanship and materials of the work under this scope.
- xxvi) The **'Sub-Contractor'** shall mean any person/agency to whom any part of the contract has been sublet by the contractor with the consent in writing of the Company and will include the legal representatives, successors and permitted assigns of such persons/agency.
- xxvii) **'Equipment/materials'** shall mean and include all type of construction equipment& materials etc. required for true and satisfactory completion of the work under this contract.
- xxviii) **'Workmanship'** shall mean the method/manner in which the jobs of the different items, whether included in the schedule or not but are required for true & satisfactory completion of the work under this contract, are executed.
- xxix) **'General conditions'** shall mean all the clauses of General conditions of the proposed contract stated hereinafter. These specifications shall mean the specification annexed to or issued with the General Conditions and shall include the schedule and drawings attached thereto
- xxx) The term **'Services'** shall mean all works to be undertaken by the contractor as laid down under the head "scope of work" or elsewhere in the specification enclosed. When the words "approved", "subject to Approval". "As directed", "Accepted", "Permitted" etc. are used, the approval, judgment, direction etc. are understood to be a function of Company.
- xxxi) **'Day'** means a calendar day beginning and ending midnight.
- xxxii) **'Month'/'Calendar month'** means not only the period from the first of a particular month, but also any period between a date in a particular month ,and the date previous to the corresponding date in subsequent month unless specifically stated otherwise.
- xxxiii) **'Week'** means seven consecutive calendar days.

- xxxiv) **‘Writing’** shall include any manuscript, typewritten, printed or other statement reproduced in any visible form.
- xxxv) **“Site”** means the place or places, where Works are to be executed by the Contractor or to which Equipment machinery are to be delivered, together with so much of the area surrounding the same as the Contractor shall with the consent of the Purchaser, use in connection with the work other than merely for the purposes of access.
- xxxvi) **‘Date of Contract’/‘Commencement Date’** shall mean the as per Tender
- xxxvii) **‘Zero Date’** will be started as mentioned in the tender.
- xxxviii) **“Program”** means the Program to be submitted by the Contractor in accordance with GCC and any approved revisions thereto.
- xxxix) **“GCC”** means the General Conditions of Contract
hereof.
- xl) **“SCC”** means the Special Conditions of Contract.
- xl) **“Specifications”** shall mean collectively all the terms and stipulations contained in this document including the conditions of contract, technical provisions and attachments thereto and list of corrections and amendments.
- xli) **“Drawings”** means collectively all the accompanying general drawings as well as all detailed drawings, which may be used from time to time or desired by KNIM
- xlii) **“Approval”** shall mean the written approval of KNIM and/the statutory authorities, wherever such authorities are specified by any codes or otherwise.
- xliii) **“Manufacturer”** shall refer to the party proposing to design/engineering and construct incomplete or in part a particular job/work at their works/premises.
- xliv) **“Labours”** shall mean all categories of labour engaged by the Contractor, his sub-contractors and his piece workers for work in connection with the execution of the work covered by the specifications. All these labours will be deemed to be employed primarily by the Contractor.

- xlvi) **'Plant'/'Equipment'/'Stores'** means and include plant and machineries to be provided under the contract.
- xlvi) **'Delivery of Plant'/'Delivery of Equipment'** shall be deemed to take place on delivery of the plant/equipment in accordance with the terms of the contract complete in all respect after approval by Kazi Nazrul Islam Mahavidyalaya, Churulia.
- xlvi) **"Tests on Completion"** shall mean all such tests as are prescribed by the specification to be made by the Contractor to the satisfaction of KNIM before the plant and equipment are taken over by Kazi Nazrul Islam Mahavidyalaya, Churulia and this also includes those tests not specifically mentioned in the specification but required under various BIS codes and relevant Electricity Acts and Rules.
- xlvi) **'Commissioning'** shall mean all equipment as per rated capacity has been installed to put the system in operation after all necessary initial tests, checks and adjustments and energy has flown into the grid as per terms of the order.
- xlix) **'Urgent Works'** shall mean any urgent measures, which in opinion of the Engineer-in-Charge, become necessary at the time of execution and/or during the progress of work to obviate any risk of damage to the structure, or required to accelerate the progress of work or which become necessary for security or for any other/KNIM may deem expedient.

NOTICE INVITING TENDER

Section–I

TIC, KNI Mahavidyalaya, Paschim Bardhaman, West Bengal, 713368

Website: www.knimchurulia.in

Contact No.(M):9002512689, 9475173432

Email id: knimchurulia@gmail.com

(Domestic Competitive Bidding)

NOTICE INVITING TENDER

For

Design & Engineering,

Manufacture/Procurement, Testing, Supply, Installation and Commissioning of 15kw Rooftop Solar System including five(5) years Comprehensive Maintenance on turnkey basis at various Buildings of Kazi Nazrul Islam Mahavidyalaya, Churulia.

NieTNo: WBREDA/NieT-01/22-23

1.1 Introduction

KNIM, Churulia here in after referred to as Kazi Nazrul Islam Mahavidyalaya, Churulia invites e-tender (Submission of Bid through **online**) through Domestic Competitive Bidding (DCB) from eligible bidders for setting up of 15kw Rooftop Solar System including five (5) years Comprehensive Maintenance on turnkey basis at various Buildings of KNIM

1.2 Title of the Work

Design & Engineering, Manufacture/Procurement, Testing, Supply, Installation and Commissioning of 15kw Rooftop Solar System including five (5) years Comprehensive Maintenance on turnkey basis at various Buildings of KNIM.

1.3 Brief Scope of the Work

The work is to be executed on turkey basis. Kazi Nazrul Islam Mahavidyalaya, Churulia will not supply any material departmentally. The scope of work will include but not limited to the followings:

- (a) Site visit and Detail field survey at the premises of the Prospective Beneficiaries [List of the prospective beneficiary will be provided by Kazi Nazrul Islam Mahavidyalaya, Churulia]
- (b) Submission of site survey report as perform at of Kazi Nazrul Islam Mahavidyalaya, Churulia indicating technical suitability of site for installation of the Power Plant with roof plan.
- (c) Design of the system
- (d) Obtaining technical approval from Kazi Nazrul Islam Mahavidyalaya, Churulia
- (e) Project Monitoring during implementation of the Project and during maintenance period.
- (f) Procurement and transportation of materials at site in properly packed condition of all equipment, materials and miscellaneous item required to complete the project
- (g) Receiving, unloading, pilfer proof and safest or age at site
- (h) Final check-up of equipment, installation, testing and commissioning of power plant and putting the system into successful functional operation.
- (i) Providing of training material to the endusers during onsite training
- (j) Assisting Beneficiary in the process for obtaining Net Metering Facility from DISCOM.
- (k) Documentation
- (l) Handing over of power plant
- (m) Providing of routine and breakdown maintenance of grid connected solar PV power plants during comprehensive maintenance period.
- (n) Fulfillment of warranty obligation as may arise
- (o) The contractor shall warrant that all equipment, hardware and accessories are new, unused, most recent or current models and incorporate all recent improvements in design and in accordance with the contract documents and free from defects in material and workmanship. The contract or shall also warrant for defect free operation of the materials supplied and workmanship towardserction for a period of **sixty (60) calendar months** commencing immediately from the date of Commissioning of the solar System.

The complete work shall be done as per direction of Engineer-in-Charge.

In addition to facilitate the installation work following work may have to take up be the contractors per site condition.

The activities, however, deemed to be included in the scope of work.

- i. Titbit repairing work mainly plastering, whitewashing, painting, mending good damages and other related miscellaneous work etc.
Details are available at the online e-tendering portal <https://wbtenders.gov.in>

1.4 Locations of Installation

Various Buildings of Kazi Nazrul Islam Mahavidyalaya, Churulia Campus

1.5 Validity of offer

The bids submitted by the bidder shall remain valid for a minimum period of **180 days** from the date of the opening of Technical Bid (online). However, it may have to be extended in case of exigencies with due intimation to successful bidder(s).

1.6 Total capacity of Project

- i) Total Project capacity–**15kw**

1.7 Quantity to be quoted by each bidder:

Bidder shall have to quote for fixed quantity as follows:
335 WATT X 45 NOS

1.8 Estimated Cost

- a) Estimated total project cost for 15kwp Solar system is **Rs 840000(Rupees EIGHT LACKS FORTY THOUSAND ONLY)**

1.9 Cost of Tender Document (Tender Fee)

Cost of Tender document is **Rs 4000.00 (FOUR Thousand only)**. The cost of tender document is non-refundable. The tender fee may be remitted through online <https://wbtenders.gov.in>.

1.10 Bid Security (EarnestMoneyDeposit(EMD))

The Bid Security/EMD is Rs.16400. Necessary Earnest Money (EMD) may be remitted through online <https://wbtenders.gov.in>. EMD waived off for MSME registered bidders.

1.11 Other Details of Tender fees and Bid Security

1.12 Additional Performance Security(APS)

- (p) If **L1 bidder** has quoted bid rate 80% or less of the estimated cost put to the tender then additional Performance Security @10% of the tendered amount has to be submitted by the bidder in the form of Bank Guarantee from any scheduled bank within 7 working days from the date of issuance of Letter of Acceptance by the bidder.

If the bidder fails to submit the Additional Performance Security within schedule time, his EMD will be forfeited.

The Additional Performance Security shall remain valid up to Defect Liability Period of **Twelve (12) Calendar months**, with an additional claim period of thirty (30) days, failing which his bid security may be forfeited.

- (q) The above clause no 1.12 (a) of Additional Performance Security (APS) shall also be applicable on pro-rata basis for the bidders accepting the L1 price as per **clause no 1.16** “Distribution of Work”.
- (r) The format of Additional Performance Security is as per **Annexure 3** under **Section VII**

1.13 Schedule of Dates for e-Tendering

SL.NO.	PARTICULARS	DATE & TIME
1.	Documents upload date(Online)	27-01-2023 from 12 noon
2.	Documents download start date(Online)	27-01-2023 from 3:00PM
3.	Pre-bid Meeting	28-01-2023 at 3:00PM
4.	Bid proposal submission start date(Online)	27-01-2023 From 03:00PM
5.	Bid proposal Submission end date(Online)	03-02-2023 up to 2.00PM.
6.	Bid opening date for Techno-Commercial proposal (Online)	04-02-2023 at 2:00PM
7.	Date of Opening of financial bid	Will be intimated later on

1.14 Place of Pre-bid meeting:

Kazi Nazrul Islam Mahavidyalaya, Churulia, WB

1.15 Completion time

Irrespective of quantity, completion time shall be 90 days only from the date of availability of site name from KNIM. The completion time includes the time for survey.

In case of providing new list of sites after LoA (with first list of sites), Zero Date for new set of sites will be calculated from that date of providing new set of sites.

1.16 Distribution of Work

Kazi Nazrul Islam Mahavidyalaya, Churulia will preliminarily distribute the total work of 15kwp rooftop solar system during placement of LOA in the following manner

Only L1 Price matching technically qualified bidder:

Kazi Nazrul Islam Mahavidyalaya, Churulia, however, reserves the right of Distribution of Works if the situation so demand

- i) If such situation is so aroused to distribute additional quantity of work over and above the quoted quantity, the respective bidder may opt to submit their consent to receive additional quantity of work by satisfying their credential with respect to the financial eligibility and submission of equivalent amount of additional EMD.

- ii) If the performance of any contractor is not found satisfactory toward achievement during implementation of project, the allocation of the said contract or may be reduced and may be reallocated to the well-performing vendors. The performance of the contractor shall be judged on regular basis.

1.17 Qualifying Requirement for Bidders

The Bidder must have to meet the following minimum qualification for the work as follows:

1.17.1 General Qualification

- a) **“Bidder”** shall mean Bidding Individual or a Bidding Firm or a Bidding Company or Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Individual/Bidding Partnership Firm/Bidding Company/Limited Liability Partnership/Bidding Consortium/Consortium, Member of a Bidding Consortium including its successors, executors and permitted assigns and Lead Member of the Bidding Consortium jointly and severally, as the context may require. Bidder shall have legal statute as per relevant applicable law of India

- b) **“Bidding Company”** shall refer to such single Bidding Individual/Bidding Partnership Firm /Bidding Company/Limited Liability Partnership having legal entities that has submitted the Bid in accordance with the provisions of this Tender.

- c) Bidder must meet the eligibility criteria independently as Bidding Company.
- d) A Bidder shall not have a conflict of interest. Any Bidders found to be having a conflict of interest shall be disqualified. The bidder may be considered to have conflict of interest with one or more parties in this bidding process, if:
 - i. They have a controlling partner in common,
 - ii. They receive or have received any direct or indirect subsidy from any of them; or
 - iii. They have the same legal representative for purpose of this bid; or
 - iv. They have a relationship with each other, directly or through common third parties, that puts them in position to have access to information about or influence on the bid of another

Bidder, or influence the decisions of Kazi Nazrul Islam Mahavidyalaya, Churulia regarding this bidding process; or

- v. This results in disqualification of all such bids. However, this does not limit the participation of a Bidder as a sub-contractor in another Bid, or of a firm as a sub-contractor in more than one bid;
- vi. Bidder shall have a local office/service center in Asansol or are willing to setup one 30 days from the date of LOA by Kazi Nazrul Islam Mahavidyalaya, Churulia.

1.17.2 Minimum Financial Capability

The Bidder, who intends to participate in the Bid, must have to meet the following criteria:

- a) The bidder should have a Minimum Average Annual Turnover (MAAT) is **Rs. 8400000.00** during any 03 (three) financial year out of last seven (07) consecutive year ending on 31st March 2021
- b) Bidder shall have the Liquid Asset (LA) and/or evidence of access to or availability of credit facility of equivalent amount not less than **Rs.5 lacs**.
- c) Net Worth during any 03 (three) financial year out of last seven (07) consecutive year ending on 31st March 2022 should be positive

1.17.3 Minimum Technical Capability

- a) The Bidder shall have experience in Supply, Installation & Commissioning Solar PV Power plants having / Solar Pump of cumulative capacity of not less than 200kw capacity anywhere in India under similar institutional/ organization as Kazi Nazrul Islam Mahavidyalaya, Churulia during preceding 03 (Three) years ending last day of month previous to the one in which NIEt are invited. The maximum technical capacity of each PV power plant shall be of 20kW.

1.18 Other Information

1.18.1 Kazi Nazrul Islam Mahavidyalaya, Churulia reserves the right to accept or reject any bid partly or fully or cancel the bidding without assigning any reason thereof and in such case no bidder/ intending bidder shall have any claim arising out of such action. If the offer is submitted without or inadequate Bid, Security (Earnest Money), the bid shall be considered as rejected. Incomplete offer will be liable for rejection.

1.18.2 A prospective bidder requiring any clarification on bidding documents may notify KNIM, Churulia. The soft copy of the same must be sent in spreadsheet at the mail address: knimchurulia@gmail.com. Kazi Nazrul Islam Mahavidyalaya, Churulia will issue clarification(s) as they may think fit after pre-bid meeting prior to the deadline/ extended deadline for submission of bids prescribed by Kazi Nazrul Islam Mahavidyalaya, Churulia. Written copies of the Kazi Nazrul Islam Mahavidyalaya, Churulia response (including an explanation of the query but without identifying its source) will be uploaded in the e-tendering portal in the corrigendum folder which shall be available to all the participant bidders. Any queries sent by the bidders after the date and time notified in NIEt or any extended date, if any, shall not be entertained.

1.18.3 Any evidence of unfair Trade Practices including over-charging, price-fixing, cartel etc. as defined in various statutes, will automatically disqualify the bidders.

1.18.4 If the dates of any offline activity (Pre-bid meeting, Last Date of submission of original Tender Fees, Earnest Money Deposit in original at the office etc) and opening of Technical Bid and Financial Bid fall on holidays or on days of strike or natural calamity, the dates get deferred to next working days at same hours without any further notice.

1.18.5 The Tender Inviting Authority reserves the right to modify, amend or supplement the Tender Document. Any corrigendum, notification concerned to this tender will be published in the e-tender portal <https://wbtenders.gov.in> and it will be part & parcel of the tender. The bidders are therefore advised to follow the e-tender portal <https://wbtenders.gov.in> for such corrigendum, notification etc.

1.18.6 Joint Venture for this work will not be considered as a bidder.

1.18.7 Other information as well as terms and conditions, which are not covered in the NleT, have been incorporated in **Instructions to Bidders (Section II)**, General Condition of Contract (**Section III**) **Special Conditions of Contract (Section IV)**, **Technical specification (Section-V)** of this e-tender.

1.18.8 Help desk communication:

You may contact with Kazi Nazrul Islam Mahavidyalaya, Churulia help- desk for any assistance between 10:30 am to 5:30 pm on any working days (Monday to Friday). The contact details are as follows:

- | | |
|-------------------------|------------|
| 1. Prof. Soumitra Roy | 9333152850 |
| 2. Sri. Biswanath Gupta | 9851149264 |

1.18.9 Address for communication:

Teacher-in-Charge KNI Mahavidyalaya, Paschim Bardhaman, WestBengal,713368

Website: www.knimchurulia.in

Contact No. (M):9002512689, 9475173432

Email id:knimchurulia@gmail.com

Sd/-

Teacher-in-Charge,
Kazi Nazrul Islam Mahavidyalaya, Churulia

TERM AND CONDITIONS

S.N.	On-Site Warranty	Comprehensive Annual Maintenance Contract
1	Attending Breakdown call 24X 7 or as per mutual consent	Attending Breakdown call 24X7 or as per mutual consent
2	Comprehensive coverage of System/gadgets	Comprehensive coverage of System/gadgets.
3	Quarterly visit for Preventive maintenance with test/performance report.	Quarterly visit for Preventive maintenance with test/performance report

1. **Safety Violation:** The bidder shall be responsible for the safety of persons employed by him on the works and shall report serious accidents to any of them, however and wherever occurring on the works, to the Employer and Owner who shall make every arrangement to render all possible assistance. This shall be without prejudice to the responsibility of THE bidder under the Insurance Clause of the General Conditions.

2. THE bidder shall maintain services log book/file containing copy of the Job cards duly signed by the users and countersigned by KNIM official.

3. **Guarantees/ warranty:** THE bidder must guarantee the system/ equipment/ materials/ supplied against faulty design/ material/ components/ workmanship giving rise to breakdowns/under efficiency, increase in power consumption/ reworks/ replacements etc. Comprehensive onsite warranty should be valid for a period of Five years from the date of handing over, irrespective of the date of deliveries shall be provided by THE bidder. Failure to make-up the breakdowns for during the guarantee period shall automatically attract invocation of the Bank Guarantee/No payment shall be paid for any substandard quality.

1. **Preventive Maintenance:** In order to extend the life of plant, regular check-up of the plant on monthly basis is essential. Mainly string inverters, all types of cable connections, Solar Modules and structures, Earthing, Junction boxes, ACDB & DCDB as well as remote monitoring system etc. are to be checked properly to ensure that the solar plants are running in good condition.

2. **Breakdown Maintenance:** In case, any plant at any roof of the building is reported to be under breakdown, the party shall take an action to arrange to identify the fault and rectify/repair the defect and will replace the defective part of component or equipment during the 5-year period if found essential to do so to minimize the generation loss

3. Cleaning of Solar Modules on regular basis: In order to maximize the generation of the power and maintaining the plant in good condition, proper cleaning work of Solar modules is essential which shall be done on regular basis i.e., twice in a month. Due care has to be taken while cleaning the solar modules which should be cleaned thoroughly and gently using sufficient water and soft wiper.

4. Monthly Reporting: The party will submit a monthly report to KNIM Concerned /Designated official within 3 working days after completion of previous month in the proper format showing details of energy generation.

1. Scope of Work:

- a. Design, Supply, Installation & Commissioning (with Net metering) including 5 Years Comprehensive Maintenance of cumulative 15 KWP (at various buildings in KNIM campus) Grid connected Roof Top Solar PV Power Systems on complete turnkey basis.
- b. Net Metering and Grid synchronization related approvals, Liaisoning and Bidirectional meters and CT's to be provided as per local discom norms are in the scope of EPC holder/Bidder.
- c. Detailed planning of smooth execution of the project.
- d. Warranty & comprehensive maintenance for 5 years included in bidders offer.

2. Detailed Scope of Work:

- a. Supply of all components, sub components, spares and tools etc. necessary to make the system complete shall be the responsibility of successful bidder.
- b. The installation is to be on the rooftops of individual separate buildings. 15 KWP with Mono crystalline PV modules and String Inverter technology and with synchronization with Grid connected Net metering.
- c. Total erection works and material item supplies should be carried out as per applicable latest CE, IS, IEC & IEEE standards / codes with solar grade with appropriate Ingress protections.
- d. PERT / CPM detailed project monitoring charts & schedules along with critical tasks /activities to be monitored along with dates for easy reviews to be submitted with in 15days from the date of LOI.
- e. Total Associated Engineering Works (both supply & erection)
 - i. Electrical: -Power cables, communication cables & control cables of armored and Solar grade
 - ii. Synchronizing / Paralleling equipment to achieve flaw less synchronizing with electricity board grid and captive diesel generator grid (if any) as desired /required by KNIM i.e.100% utilization solar power.
- f. Lighting arresters, earthing, cable trays, cable trenches, terminations and etc.
- g. Armored copper cables for power should be laid up to AC junction box.
- h. From AC junction box to main junction box armored aluminum powercable should be considered.
- i. Checking the feasibility of existing Control Panel/Switch Gear and if required, Modification of existing outgoing feeder protection which may include extension

of bus bars in the Bus and outgoing section, metering and control circuits and energy meter to suite for receiving solar power for both grid connections with prior approval from KNIM.

- j. Suitable earthing with GI strips for following items provided at each plant
- k. Civil supporting structure. Modules. Inverters , DC junction, Distribution & combiner boxes , AC junction & combiner boxes, Lighting arrester & Weather station

Approval of KNIM should be obtained on designed drawing before executions

Recommendations:

1. Solar Module: Vikram Solar / Sova Solar/ Rayzon Solar
2. Inverter: Growatt/ Sungrow / Solis with String level monitoring system.
3. Cables:
 - a) PV array to Solar Inverter – PTFE Nickel plated Cu 4mm-1C.
Make: SSI cables, Meerut PTFE Products,
 - b) Inverter to ACDB – Cu XLPE Polycab, Havells
 - c) ACDB to LT panel – Al armored XLPE - Polycab, Havells
 - e) Earthings Cu conductor: SABO, remedy

1. Civil: -

- i. GI structural supports to mount PV panel as per KNIM approved design and drawings given along with tender document.
- ii. If Drilling holes deep in Roof Concrete Slab grouting the same with injectable grout before and after inserting the M20 & 6inch long anchor bolts and to be casted with RCC block of 400x400x400mm as per the approved Drawings.
- iii. Providing concrete pedestal as per drawing and laying M20, 6inch length anchor bolts at the time of casting.
- iv. Providing, fabricating and laying galvanized structural steel section, plates, nuts washer and bolts, and cable tray as per drawing with thickness of galvanizing of 80 microns.
- v. Providing and laying cement plaster and doing water proof treatment around the pedestals to prevent leakage of water.
- vi. All GI structural steel section should be certified by a structural Engineer.
- vii. Damaged existing water proofing sheet should be re-laid with new one and also around the civil pedestals, to ensure no rain water will leak inside the building after completion of the total erection works.
- viii. The civil & structural works should be carried out as per the civil drawings enclosed
- ix. The structural design should be for 180KM / hours wind speed with STAAD report submitted.
- x. Providing concrete pedestal as per drawing and laying M20 6inch length anchor bolts at the time of casting for the sites where the Solar Panels are intended to be mounted on RCC flat roof
- xi. Providing, fabricating and laying galvanized structural steel section, plates, nuts washer and bolts, and cable tray as per drawing with thickness of galvanizing of minimum 90 microns.
- xii. Providing and laying cement plaster and doing water proof treatment around the pedestals to prevent leakage of water.

2. Data Acquisition, Performance monitoring & Reporting:

- a. Remote Monitoring system shall be provided to monitor the Solar Power Generation such that all (i.e., AC & DC) electrical parameters (cumulative & instant) in graphical presentation from string level, next inverter and so on as desired by KNIM.
- b. Bidder shall coordinate and take care on behalf of KNIM including the charges (including Liasoning) on all the necessary electrical approvals for synchronizing with Grid the Solar power Plant. KNIM will sign on application forms. The Proof of documentation to be submitted to KNIM.

Testing and Inspection

Inspection and Testing During Manufacture

KNIM or its designated representative shall be entitled during manufacture to inspect, examine and test the materials and workmanship and check the progress of manufacture of all Equipment to be supplied under the Contract. This shall take place on the Bidders premises during working hours

No such inspection, examination or testing shall relieve the Bidders of his obligation under the Contract regarding quality of material and soundness of manufacture.

No inspection call will be valid before drawings are approved without adverse comments.

Dates for Inspection and Testing

After getting the related drawings approved the Contractor shall give KNIM notice of inspection along with factory test results in writing of the date and the place at which any Equipment/Materials will be ready for testing as provided in the Contract. KNIM Representative shall attend at the place so named within **fifteen (15)** days of the date which the Contractor has stated in his notice. K N I M shall give the Bidder notice, in writing, of his intention to attend the tests. The above notices shall be given at first by the quickest possible means and confirmed later in writing. The Contractor shall render all possible assistance in carrying out inspection in time.

Facilities For Testing

Where the Contract provides for tests on the premises of the Bidder or Sub- contractor, the Bidder shall provide such assistance, labor, materials, electricity, fuel, stores, apparatus and instruments as may be necessary to carry out the tests efficiently without any extra charges. If the facilities are inadequate to carry out tests as per standard, the Bidder shall have to arrange suitable testing place having all such required facilities and the cost towards this will be on Bidder's account. The Bidder shall also bear all charges towards travelling expenses of the Inspecting Team of KNIM or the authorized representatives of the Outside Inspecting Agency consisting of **maximum two (2) persons for to and fro journey by Air** from Purchaser's Headquarters, including boarding and lodging local transport with comfort at the place of inspection and transit, if any, for the purpose of Inspection and testing anywhere in India or outside India.

KNIM, if desired, may test the delivered product (especially solar module) at site from any accredited laboratory of Govt. of India. The result of that test and subsequent decisions taken by the controlling officer will be bound to the contractor

SPECIFICATIONS OF MAJOR COMPONENTS OF THE SYSTEM 1.SPV

ARRAY:

The Solar PV Modules shall be of made of Mono Crystalline Silicon Solar Cells and of capacity of **540 Wp**

or above with Solar cells connected in series to give required Power output. The Solar Modules should be IEC Certified and BIS Approved and in the list of ALMM RFID Tag: The PV module will have a RF Identification tag (RFID), which will contain the following information. The RFID will be inside the module laminate to withstand harsh environmental condition:

- a) Name of the manufacturer of PV Module
- b) Name of the manufacturer of Solar Cells
- c) Month and year of the manufacture (Solar Cell & Module).

N.B.

- ❖ **Estimated cost given in our schedule inclusive of GST.**
- ❖ **There will be no exemption on EMD. Interested bidder has to submit EMD of Rs. 16800/- before opening the bid (01.02.2023).**
- ❖ **Payment Condition: - 40% Payment after complete delivery of materials as site. 40% after successful installation and commissioning with net metering facility done with discom. 15% after three months of successful testing of system from the date of commissioning. 5% performance security after twelve months from date of commissioning.**
- ❖ **BSES net metering with local DISCOM.**
- ❖ **Regarding ELCB for net metering – each system should be connected with proper generation meter and ELCB of reputed make of rating 100A to be installed and tested.**
- ❖ **Regarding eligibility criteria: - Minimum 15kw cumulative solar power plant installation during the last 12 months from the date of issue of this tender notice. Experience of Institutional or similar organization as of KNIM will be considered.**
- ❖ **Bidders who have a service center/office in Asansol will be eligible to participate in the tender.** Supporting document upload in other important documents folder online.

Sd/-
Teacher-in-Charge,
Kazi Nazrul Islam Mahavidyalaya, Churulia

