NATIONAL INSTITUTE OF SOLAR ENERGY

(An Autonomous Institute of Ministry of New & Renewable Energy, Govt. of India)
Gurugram-Faridabad Road, Gwal Pahari, Gurugram, Haryana-122003, INDIA
Telephone No.: +91-124- 2853108, Website: www.nise.res.in

e-Tender Document

for

"Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana".

RFQ No: 05/02/48/2020-21/HEFC/BB/T-6

Last Date of Submission: 24th August, 2021 (11:00 P.M. Indian Standard Time)

Deputy Director General
National Institute of Solar Energy
Gurugram-Faridabad Road
Gwal Pahari, Gurugram – 122 003, Haryana, India
Tele No. : (+91)124-285 3108 (Office)
E-mail: banerjee.mnre@gov.in
Website: www.nise.res.in

NATIONAL INSTITUTE OF SOLAR ENERGY

(An Autonomous Institute of Ministry of New & Renewable Energy, Govt. of India)
Gurugram-Faridabad Road, Gwal Pahari, Gurugram, Haryana-122003, INDIA
Telephone No.: +91-124- 2853001/2853128/2853108
Website: www.nise.res.in

Subject: Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana

The important dates and information for quotation are given below in the table:

S. No	Description	Details
1.	Notice Inviting Tender/Bid (NIT) No/Request for Quotation (RFQ) No.	**No: 05/02/48/2020-21/HEFC/BB/T-6**
2.	Tender Type (open/Limited/Auction/EOI/Single)	**Open**
3.	Tender Issued Through •Expressions of interest (EOI) •Request for information (RFI) •Request for proposal (RFP) •Request for quotation (RFQ) •Request for tender (RFT)	**RFQ**
4.	Tender Category (Services/Goods/works/Supply)	**Goods**
5.	Scope of Work	**Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana**
		(i) The scope of work to be tendered are available in the complete bid documents, which can be viewed /downloaded from the e- tender portal (i.e., http://www.tenderwizard.com/NISE) and Central Procurement Portal (CPP) (i.e.,

6.	Submitting of Tenders	**https://eprocure.gov.in). Both Technical and Financial Bids, duly digitally signed, will be concurrently submitted through the e-tender portal http://www.tenderwizard.com/NISE. No claim shall be entertained on account of disruptions/non-availability of internet services being used by bidders. Bidders are advised to upload their bids well in time to avoid the last-minute technical snags in the website/portal.** **(ii) All Corrigendum/ Amendments/ Corrections, if any, will be published on the website http://www.tenderwizard.com/NISE and CPPP (https://eprocure.gov.in).** **(iii) All the applicants must have a Class-III Digital Signature Certificate (in the name of a person who will sign the bid documents) from any of the licensed certifying agencies.** **(iv) To participate in the e-tendering process, it is mandatory for the applicants to get their firm/joint venture registered with the e-tendering portal of http://www.tenderwizard.com/NISE which will enable them to have user ID & Password from M/s ITI Ltd for participating in the e-tender.**
7.	Bid Validity	**Bids shall be valid for at least 6 months from the last date of submission of bids specified for this e-tender. However, in case NISE requires further extension in validity due to some unforeseen conditions, the same will have to be extended by the bidder at the same price and terms & conditions as quoted in the original bids submitted against this e-tender on the request of NISE.**
8.	Bid Security Declaration	**Bidders will provide "Bid security declaration" along with their bids, wherein it must be stated that they will not withdraw or modify their bids during the period of bid validity. If the bidders do not comply with these conditions,**

		they will be suspended from participating in any tender floated by the NISE for a period of three years from the date of expiry of the validity of the bid submitted against this e-tender.
9.	Security/ Performance Guarantee	**The successful bidder will convey acceptance of the work order placed by NISE within 7 days from the date of its issue and thereafter deposit within 7 days, 3% of contract value (excluding Taxes) in the form of Demand Draft/Fixed Deposit Receipt/Bank guarantee from a commercial bank in India as Security, which will be valid for a period of 60 days beyond the date of supply, installation, commissioning and testing of the system supplied as per the work order. If required, NISE may ask vendor to extend date without any financial implications on NISE. On expiry of duration of security guarantee, the vendor will either extend the validity of Demand Draft/Fixed Deposit Receipt/Bank guarantee for another five years towards performance guarantee of the system or deposit fresh Demand Draft/Fixed Deposit Receipt/Bank guarantee of 3% of the contract value, valid for a period of five years towards performance security.** ***In case the successful bidder either fails to convey the acceptance of the work order placed by NISE against this e-tender or fails to submit security guarantee within the stipulated period specified hereinabove, NISE will be free to take the necessary action for cancellation of the work order and award the work on the second lowest bidder.*** **The format for the "Security/Performance Bank Guarantee (BG)" is given at Annexure-II.**

10.	Address for communication	**The Deputy Director General** **National Institute of Solar Energy, Gurugram-Faridabad Road,** **Gwal Pahari, Gurugram – 122 003, Haryana, India** **Tele No.: (+91)-124-285 3001 (Office)** **E-Mail: banerjee.mnre@gov.in**
	For related query or clarifications contact:	**Prakash Jha** **0124-285 3108 (10:00 A.M. to 5:00 P.M.)**
11.	Period of validity of quotation	**Bids shall be valid for at least six months from the last date of submission of bids for this e-tender.**
12.	Pre-bid Meeting	**Prospective Bidders should attend the pre-bid meeting on 10th August, 2021 sharp at 11:00 A.M. in Room No. 203, Surya Bhawan, National Institute of Solar Energy,** **Gurugram-Faridabad Road** **Gwal Pahari, Gurugram – 122 003, Haryana, India**
13.	Last date & time of submission of bids	**To be submitted online by 2300 hours Indian Standard Time (IST) on 24th August, 2021 to website:www.tenderwizard.com/NISE**
14.	Date (time) of opening of Technical bids	**25th August, 2021 at 11:00 A.M.**
15.	Opening of Price Bids	**Technically qualified bidders will be notified separately by e-mail.**
16.	Time of starting and completing the work	**Immediately after deposition of security guarantee to NISE by the successful bidder.** **The entire work of supply, installation, commissioning and testing is to be completed within 90 days of the acceptance of the work order.**
17.	Client list *(as per Annexure- VI)*	**The Bidders are requested to provide a list of recent clients (with contact details and complete address) to whom similar goods have been satisfactorily supplied (*copy of Work Order and Performance Certificate for satisfactory operation of the equipment to be***

		attached in support)*, during the period from 1st January, 2018 to 31st December, 2020. (*The list before this period will not be considered)
18.	Note	**1. The Bidders should be well-versed and equipped to carry out the obligations indicated in the conditions of the present e-tender document.** **2. The bidders eligible as per the Notification issued by Government of India vide No. 6/18/2019-PPD and dated 23rd July, 2020 and subsequent notifications, if any be allowed to participate in the e-tender. Those bidders not fulfilling the criteria stipulated in the notification(s) will be disqualified at technical evaluation stage of the bids. Appropriate certificate to be provided as per Annexure-VII.** **3. The bidders are requested to sign on each page of the tender document along with the company seal which should be clearly visible.** **4. Technical bid and price bid format are given at Annexures - III and IV respectively. These are to be submitted on the Company's official letter head by the bidder.** **5. The bidders have to provide a self-declaration stating that the material / goods / equipment / machinery have minimum 50% of the local content on official letter- head of their organisation as per the Notification vide No. 283/22/2019-GRID SOLAR and dated 09th February, 2021 (issued by Ministry of New and Renewable Energy, Government of India)**

1. Introduction

The National Institute of Solar Energy (NISE), an autonomous institution of the Ministry of New and Renewable (MNRE), is the apex National R&D institution in the field of Solar Energy. NISE is to assist the Ministry in implementing the National Solar Mission and to coordinate research, technology development and other related works in the field of solar energy. The institute is involved in demonstration, standardization, interactive research, training and testing of solar technologies and systems. It is an effective interface between the Government and academic institutions, industry & user organizations for development, promotion and widespread utilization of solar energy in the country.

2. Invitation for Quotation:

On behalf of the Director General, NISE, Gurugram, online bids are invited from the suitable vendors for "**Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank consisting at National Institute of Solar Energy (NISE), Gurugram, Haryana.**"

3. Instructions to Bidders:

The following **KEY INSTRUCTIONS** must be assiduously adhered to by the bidders:

i. Obtain an individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline from the authorized agencies.

ii. Register your organization on M/s ITI E-tender Site well in advance of the deadline of submission of your first tender for obtaining credentials by paying Annual registration charges.

iii. Get the concerned executives of your organization's trained for submission of e-tender.

iv. Submit the tender well in advance by paying non-refundable Tender Processing Fee (TPF) and other relevant documents before the end of deadline on M/s ITI E- tender Site as there could be last minute problems due to internet timeout, breakdown, etc. While the first three instructions mentioned above are especially relevant to first-time users of M/s ITI E-tender Site, the fourth instruction

is relevant at all times.

v. **Vendors Training Programme:** Vendors are requested to contact at Tender Wizard Helpdesk ITI Officers for any information regarding E-tendering / training.

a) For online registration, the interested bidders may write to at twhelpdesk680@gmail.com or contact no. 011-49424365.

b) For any further query related to Training Session, Tender Uploading/downloading or any other query related to tender, please contact Tender Wizard Helpdesk of M/s. ITI Ltd. Tel no. 011-49424365 or write a mail on Email Id:- eprochelpdesk.nise@gmail.com / Executives Contact Number: 8800112479/ 9650520101.

I. Eligibility of Bidders:

(i). **Eligibility of Bidders:**

a. The Bidder should be a manufacturer of repute who must have designed, manufactured, tested and supplied the Battery Banks of similar type and having annual manufacturing capacity of more than 2000 units of 2V, 1000 Ah or higher Ah capacity VRLA battery as specified in the Specifications of this e-tender.

b. Availability of at least one authorized service Centre(s) located either in Gurugram or Faridabad or New Delhi/Delhi or Noida that must be equipped for providing technical support facilities for attending to any operational problems after the warranty period of the equipment.

c. The bidder should be approved by BIS or NABL accredited battery testing laboratory for supply and installation of the same type of battery. Self-certified copies of the certificates issued in this regard is to be submitted with the technical bid.

d. Should have supplied and installed successfully similar type of battery system to at least five clients during the three-year period i.e. from 1st January, 2018 to 31st December, 2020. Copies of the work order placed by the clients along with copies of letters issued by the clients for successfully completing the job within the stipulated period specified in the Purchase Order/Work Order and satisfactory performance of the system for at least two years after commissioning of the system be provided along with technical bid.

e. The bidder should have turnover of at least Rs. 10.00 crore (Rupees ten crores) during each of the last three financial years i.e. 2017-18, 2018-19 and 2019-20. Copies of the audited statement to this effect from a Chartered Accountant is to be provided with the technical bid.

(ii). **Disqualification:** The Bidders/Vendors will be subject to disqualification if they do not meet the eligibility criteria given above or if they have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification requirements or have a record of poor performance of not properly

completing the contract, causing inordinate delays in completion or having financial failures etc.

(iii). If a bidder/ vendor quote NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.

(iv). The bidders may not participate in the bid if any of the directors/proprietor/partners of the company have been convicted of an offence – (a) under the Prevention of Corruption Act, 1988 or (b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of public procurement contract or blacklisted by Government /Department. In addition, the bidder will submit an undertaking that the company does not employ the services of minor children in any manner for their business activities. (A comprehensive format for the undertaking to be included as one of the Annexures)

(v). **Pre-Dispatch Testing of Battery Cells:** The successful bidder on which NISE would place purchase order would inform NISE about completion of manufacturing of the ordered cells. The representative of NISE will visit the manufacturing works of the vendor during the manufacturing and pick up at random six cells in total for testing. These cells would be got tested by the vendor on its own cost from the approved testing laboratory or NISE before the material is dispatched. If the specimen tested are not found to conforming to the test report submitted by the bidder at the time of submission of the bidder, NISE will be at its liberty to fully reject the lot.

(vi). Prospective Bidders should attend the pre-bid meeting on 10th August, 2021 sharp at 11:00 A.M. in Room No. 203, Surya Bhawan, National Institute of Solar Energy, Gurugram-Faridabad Road, Gwal Pahari, Gurugram – 122 003, Haryana, India.

(vii). NISE reserves the right to accept or reject any tender in part or full without

assigning any reason whatsoever.

(viii). *"The bidders to Confirm:*

a) that their company is not engaging child labour and is complying with various legislations as applicable from time to time as per the various labour laws/ statutes of the land applicable to them with regard to engagement of child labour.

b) Unconditional acceptance that any bidder making a false claim would have its contract terminated forthwith, if detected later."

II. Detailed Scope of Work:

A. Specifications of the battery:

Description	**Specifications**
System Voltage (V)	240
Float Voltage (V)	2.23-2.25 V/cell
Boost Voltage (V)	2.30-2.32 V/cell
Capacity @C10 at 27°C or Nominal Rating	4500Ah (±5%)
Cell/ Module Type	2V cells
Battery Type	SMF VRLA
Max Allowable ripple	0.5 - 1.5% of float voltage
Shelf Life	6 months
Battery rack	required
Ah efficiency	>95%
Wh efficiency	>85%
Self-Discharge / week	<1% of the rated capacity
Operating Temperature Range	-5 °C to +50 °C
Connection method between Cells	Bolted (lead coated Heavy duty copper strips)
Test Certificates	IS 15549: 2005
	IEC 61427
	IEC 60896-21&22:2004, Part-II
Casing of Cell	Polypropylene co-polymer (PPCP)
Separator	AGM
Plates (+ve/-ve)	Flat pasted
Battery Rack Material	Mild steel coated with acid resistance paint/powder coating

B. Technical Specifications for Valve Regulated Lead Acid (VRLA) battery:

(i) **Introduction:** This section specifies the technical requirements of VRLA batteries, which shall be used for meeting the backup power requirement for a hydrogen production cum dispensing facility at NISE.

The Contractor shall furnish technical details along with all arrangements and supporting structures, for each type of VRLA battery bank during detail engineering.

(ii) **Batteries:** VRLA battery sets shall be maintenance free, sealed type and in thermoplastic containers. The batteries shall include battery mounting racks, and other equipment required to provide a complete operational battery subsystem. The average ambient temperature shall be 35°C. Battery shall not require water addition ever and shall suppress generation of hydrogen gas by means of such a system that the oxygen generated at positive plate is absorbed by negative plate by reaction in the battery. The bidder shall submit temperature vis-a-vis life curve along with the bid. The offered battery sets shall be compact and shall require no regular maintenance. All safety equipment required for installation shall be provided by the bidder.

Battery stacking shall be done with a view to optimize floor space and loading. The bidder shall provide the necessary installation arrangements including grouting, base frames etc.

1. **Technical Experience**

The batteries shall be offered by BIS/NABL approved manufacturers , who have been manufacturing VRLA batteries for the last five (5) years and at least three thousand (3000) numbers of VRLA batteries of capacity specified or of higher capacity manufactured by such manufacturers should have been in satisfactory operation for at least two (2) years as on 31st December, 2020.

Bidder shall furnish the details/document in support of above qualifying requirements of manufacturer along with bid.

2. **General Requirements of Batteries**

Battery bank of 240V shall be formed by connecting 2V (nominal) cells of the rated capacity in series. The total Ah capacity of the battery bank will be minimum 4500 Ah.

The manufacturer supplying the cells/batteries shall be responsible to replace/repair free of charge, the battery/cell becoming faulty, owing to defective workmanship or material as per the provisions of the document.

3. **Constructional Requirements**

The design of battery shall be as per field proven practices. Partial plating of cells is not permitted. The cells shall be so designed as to be suitable of Horizontal Stacking.

a. Containers: Should be made of polypropylene co-polymer plastics. They shall be sufficiently robust and not liable to deformation under internal operating pressures and within the temperature ranges normally encountered. It should be leak-proof, non-absorbent and resistant to the acid with low permeability. The cells above 500 Ah should have ribbed exterior to facilitate heat dissipation as well as to provide mechanical robustness.

The container material shall have chemical and electro-chemical compatibility and shall be acid resistant. The material shall meet all the requirements of VRLA batteries and be consistent with the life of battery. The container shall be fire retardant and shall have an Oxygen Index of at least 28%. The porosity of the container shall be such as not to allow any gases to escape except from the regulation valve. The tensile strength of the material of the container shall be such as to handle the internal cell pressure of the cells in the worst working condition. Cell shall not show any deformity or bulge on the sides under all working conditions. The container shall be capable of withstanding the rigors of transport, storage and handling. The containers shall be enclosed in a steel tray.

b. Cell Covers: The cell covers shall be made of suitable material compatible with the container material and permanently sealed with the container. It shall be capable to withstand internal pressure without bulging or cracking. It shall also be fire retardant. Fixing of Pressure Regulation Valve & terminal posts in the cover shall be such that the seepage of electrolyte, gas escapes and entry of electrostatic spark are prevented.

c. Separators: The separators used shall be of glass mat or synthetic material having high acid absorption capability, resistant to sulphuric acid and good insulating properties. The design of separators shall ensure that there is no misalignment during normal operation and handling. Minimum of two layers of separator shall be provided between the plates. The uncompressed water absorption of separator shall be at least 5 gms of water per gram of separator material.

d. Pressure Regulation Valve: Each cell shall be provided with a pressure regulation valve. The valve shall be self-re-sealable and flame retardant with explosion proof vent closure. The valve unit shall be such that it cannot be opened without a proper tool. The valve shall be capable to withstand the internal cell pressure specified by the manufacturer.

e. Terminal Posts:

(i). The positive plates shall be flat pasted type and made of lead calcium tin alloy for low water loss and low self-discharge characteristic during float operation. Antimony or Cadmium is not acceptable in positive plate alloy. Composition of Calcium & Tin in the positive alloy shall not exceed 0.09% and 1.7% respectively. The plates shall either be tank formed or container formed. Design shall have provisions for grid growth, during the service life time preferably through one leg design. Plates shall be parallel to the ground to minimize stratification effect.

(ii). The negative plates shall be of flat pasted type and made of lead calcium-tin alloy. Negative plates shall be designed to match the positive plates and combination of positive and negative plates shall ensure long life and trouble free operation of battery.

(iii). Both the positive (+ve) and negative (-ve) terminals of the cells shall be capable of proper termination and shall ensure its consistency with the life of the battery. The surface of the terminal post extending above the cell cover including bolt hole shall be coated with an acid resistant and corrosion retarding material. Terminal posts or any other metal part which is contact with the electrolyte shall be made of the same alloy as that of the plates or of a proven material that does not have any harmful effect on cell performance. Both -ve and +ve posts shall be clearly and unambiguously identifiable. All exposed metal parts (connectors, terminals etc.) shall be protected with heat shrinkable silicon/PVC sleeves for reducing the environmental impact including a corrosive environment.

f. Connectors, Nuts & Bolts, Heat Shrinkable Sleeves: Where it is not possible to bolt the cell terminals directly to assemble a battery, separate non-corroding lead or copper connectors of suitable size shall be provided to enable connection of the cells. Copper connections shall be suitably lead coated to withstand corrosion due to sulphuric acid at a very high rate of charge or discharge. The area of cross-section of the connectors shall be rated at 2Amp/mm2 minimum at 6 hour rate of discharge. The coating shall be of minimum 25 micron.

Nuts and bolts for connecting the cells shall be made of copper, brass or stainless steel. Copper

or brass nuts and bolts shall be effectively lead coated to prevent corrosion. Stainless steel bolts and nuts can be used without lead coating.

g. Plate assembly: Copper terminal plate (for terminating cables) suited to support equivalent C3 discharge rate shall be provided.

h. Racks/Trays: Mild steel with powder coating with anti-corrosive paint including base channel plated foundation nuts bolts etc.

i. Flame Arrestors: Each cell shall be equipped with a Flame Arrestor to defuse the Hydrogen gas escaped during charge and discharge. Material of the flame arrestor shall not affect the performance of the cell.

j. Fuses: The fuses of suitable sizes to be provided in connection with the battery bank of the said capacity.

k. Any other Items required during the installation and commissioning of the equipment will be in the scope of the vendor.

4. **Operational Requirements**

All the cells shall be designed for full load operation under uncontrolled atmosphere and ambient temperature varying from 0°C to 35°C and maximum humidity of 95%. Only natural air convection shall be employed for cooling of cells and it shall be capable of working without fans/ exhaust fans.

When working as a battery, failure of one or two cells shall not cause the failure of battery and battery should be able to provide uninterrupted rated power to the load.

5. **Expected Battery Life**

Under ideal conditions i.e. moderate ambient temperature (10°C to 35 °C), charging not faster than C/10 rate, minimum expected service life of battery, on true float shall be fifteen (15) years. However, the same battery at an average temperature of 35°C in cyclic discharge application to 80% DOD (depth of discharge) will give 1200 cycles or five (5) years of operational life (whichever is early).

Depth of Discharge (DOD) is defined as the ratio of quantity of electricity (in Ampere-hour) removed from a cell or battery on discharge to its rated capacity.

6. **Chemical Requirements**

Oxygen recombination efficiency of cell/battery shall be higher than 95% for charge current C/10 under normal working conditions. The cell pressure shall be sufficient for 99% gas recombination when working at C/10 rate of charge and ambient temperature of 27° Celsius. Under normal operating conditions grid corrosion shall not be more than 0.05mm/year.

Throughout its life, in the operating condition of C/10 rate of charge and C/8 rate of discharge in average ambient temperature of 35° Celsius, shedding of battery active material shall not lead to short circuit. The growth of positive plate shall be less than 8% of the total plate area throughout the specified life.

While operating in the normal operating conditions, the cell or battery shall not lead to dry out, throughout the life of the battery. Manufacturer shall supply the necessary data to support the requirement. The battery shall not exhibit thermal runaway while working in the average ambient temperature of 35°C, operating range of 0 to 50°C and at a charge rate of C/10 and discharge rate of C/8.

7. **Capacity Requirement:** Minimum 4500 Ah

8. **Warranty:** The batteries should have a Warranty period of 5 years after installation, commissioning and testing of the batteries at the site.

9. **Liquidated Damage:** If the Manufacturer/Supplier fails to deliver the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct half percent of contract price per week of delay subject to a ceiling of 5% of final contract price.

10. **FREE MAINTENANCE AND DEFECT LIABILITY PERIOD DURING WARRANTY:** The Bidders shall ensure the following free maintenance services during the warranty period.

i. Replacement of any defective parts
ii. Any other necessary works for equipment functional operation.

C. Site Survey:

The size of the room where the said battery bank will be installed is 20 feet X 40 feet. Interested Bidders/ Vendors are requested to inspect the battery room at the address

mentioned above and get them acquainted with the nature of work and local conditions. Engineer-in-charge of Hydrogen Facility may be contacted at 0124-285- 3108 for such site visit depending on availability on or before 10th August, 2021.

III. General Conditions of Contract

a) Payment Terms

The following mode of method will be followed by NISE:

i. 60% of work order amount will be paid after receiving and satisfactory acceptance by the purchaser of the goods/ equipment at NISE.
ii. 37% of work order amount will be paid after installation, commissioning and testing of the goods/ equipment supplied against the work order.
iii. 3 % of work order amount will be paid against receipt of a Performance Bank Guarantee by NISE.

The following documents will have to submit for release of the payment:

i. Original invoice duly signed by the authorized signatory.
ii. Warranty/ Guarantee certificate for the items supplied
iii. Installation and Commissioning certificate duly certified by Competent Authority, NISE
iv. Dealership or Manufacturer Authorisation certificate. Item Acceptance Certificate duly signed and sealed from Competent Authority, NISE after delivery of all the items in full quantity as mentioned in Purchase Order.
v. PAN Card number, Bank Account details, Bank address & RTGS details of the Agency are to be forwarded along with the Invoice.

* In case if you are registered under MSME Act, 2006, the copy of the registration certificate to be provided.

a) **Taxes and Duties:** Manufacturer/Supplier shall be entirely responsible for all taxes, GST, license fees, Custom duty (NISE shall provide only Custom duty exemption certificate), all other duties, demurrage charges (if any), road permits, etc., incurred until delivery of the contracted Goods at the Purchaser's site i.e. designated place at Hydrogen Facility of NISE, Gurugram.

b) **Applicable Law:** The Contract shall be interpreted in accordance to the laws of the Union of India and all disputes shall be subject to place of jurisdiction in Gurugram,

Haryana.

c) **Rejection Terms:** Incomplete/ conditional/ fax/ late quotation will be rejected summarily. Director General, National Institute of Solar Energy reserves the right to reject any or all the quotations at his discretion without assigning any reason thereafter.

IV. Evaluation of Tenders: Bidders must fill Technical Bid provided in Annexure-III carefully along with documentary evidence. Any deviation should be clearly mentioned in remarks. Bidders must provide adequate documentary proof in support of experience for successful service provided to customer and consolidated details as per Annexure -V and VI. These annexures will also be used to assess performance and credibility of the bidder. Without proper documentary support with respect to Annexures V and VI or even illegible hand written document in support of any claim, bids will not be considered for evaluation. Mere statement of "complied with" without proper reference shall not be acceptable. Financial bid shall be evaluated of the technically qualified bidders purely based on amount quoted for the job as per scope of work inclusive of all charges.

V. Amendment: NISE reserves the right, without being liable for any damages or obligation to inform the applicant, to amend the scope and requirements to reject any or all of the applications without assigning any reasons.

NOTES

a) NISE, Gurugram will evaluate all the options and activities mentioned above and reserve the right to award the contract for the most feasible, suitable, cost effective option and activities where quality would be key for judgement to protect interest of Government.

b) NISE, Gurugram reserves the right to accept or reject any or all applications without assigning any reasons.

c) Offers with incomplete information are liable to be rejected, which may be noted.

d) Information and supporting documents wherever necessary may be submitted as per Annexures.

-Sd-

Deputy Director General
National Institute of Solar Energy,
Gwal Pahari, Gurugram,
Haryana -122003, India

Annexure-I

Bank Guarantee Format for EMD

Bank Guarantee No.

Bank Guarantee Amount: ₹…….. /-

Bank Guarantee Cover from: …./ …../ 20…. to ……/ …../ 20…..

Last Date of lodgment of Claim: ……/ ……/ 20…..

FINANCIAL BANK GUARANTEE

To
The Director General
National Institute of Solar Energy
Gurugram – Faridabad Road
Gwal Pahari; Gurugram – 122 003
Haryana

Subject: Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana

(NIT No: 05/02/48/2020-21/HEFC/BB /T-6)

Dear Madam / Sir,

Whereas M/s …….. (hereinafter called the "Tenderer") has submitted their offer dated …….. for the Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana (hereinafter called the "Tender") against the Purchaser's Tender enquiry No……., KNOW ALL MEN by these presents that WE …….. of …….. having our registered office at…….. are bound to M/s National Institute of Solar Energy, Gurugram (hereinafter called the "Purchaser") the sum of ₹……/- (Rupees ……..Only) for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this …….. day of ……. 20…….

THE CONDITIONS OF THIS OBLIGATION ARE:

1. If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
2. If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity: -

a. If the tenderer fails to furnish the security/performance guarantee for the due performance of the contract.

b. Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 60 days after the period of tender validity and any demand in respect thereof should reach the bank not later than the above date. Signature of the authorized officer of the bank's name and designation of the officer Seal, name and address of the Bank and address of the Branch.

"Not withstanding anything contained herein;

- Our liability under this Bank Guarantee shall not exceed ₹ ……/- (Rupees……Only).
- This Bank Guarantee shall be valid up to ……/ ……../ 20…….
- We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only if you serve upon us a written claim or demand on a before ……/ …../ 20….. (date of expiry of Guarantee). "

Banker's Authorized Representative(s)

Date:

Place:

Annexure- II

Bank Guarantee Format
for

PERFORMANCE/SECURITY BANK GUARANTEE

National Institute of Solar Energy
Gurugram - Faridabad Road
Gwal Pahari
Gurugram – 122 003, Haryana
India

Bank Guarantee No.

Dated:

This deed of Guarantee is made on ____ the day of _____ (write name of the month), 20____by_____ (Write Bank name which is giving Bank Guarantee), having branch office at _____ (Write Bank Branch Office address), (hereinafter called "the Bank"), which expression shall unless repugnant to the context and meaning thereof includes its legal representatives, successors and assignees and National Institute of Solar Energy, having their office at Gurugram - Faridabad Road, Gwal Pahari, Gurugram – 122 003, Haryana, India (hereinafter called "the NISE") which expression shall unless repugnant to the context and meaning thereof includes its legal representatives, successors and assignees.

Whereas NISE has awarded a supply contract bearing No. _____ (Purchase Order or Work Order No) dated _____ to M/s _____ (Write the Manufacturer/ Supplier Company Name here), having their Registered office at _____ (Write Company Regd office address), (hereinafter referred as "the Manufacturer/ Supplier") for _____ (Write the description of the Purchase Order / Work Order) as per the said order.

AND whereas, the Manufacturer/ Supplier has agreed to submit a security/Performance in the form of a Bank Guarantee for Rs. _____ (Rupees _____ Only) to the NISE as per the Contract valid up to ___/____ /20____ .

The Manufacturer/ Supplier have agreed to perform or fulfill the contract as per terms and conditions of the said order. In case, the Manufacturer/ Supplier fails to perform or fulfill the

contract as per the said order, the NISE is entitled to demand an amount equal to Rs. _____ (Rupees_____ Only) from the Manufacturer/ Supplier.

We, _____ (Bank Name), do hereby undertake and Guarantee to make payment to the NISE a sum of Rs. _____ (Rupees _____ only) in case the Manufacturer/ Supplier fails as per the said order.

Whereas, Bank's liability under this Bank Guarantee is restricted to Rs. _____ (Rupees_____ only) and it will remain valid till ____ /____ / 20_____ . Unless a claim or demand in writing is made against us under this Guarantee before that date, all rights of the NISE under this Bank Guarantee shall be forfeited and the Bank shall be relieved Page 22 of 23 and discharged from all liability there under. This guarantee shall automatically stand cancelled after the date of expiry as stated above notwithstanding the fact that the original guarantee document is returned to us by you or not.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN: -

a) Our liability under this Bank Guarantee shall not exceed to Rs. _____ (Rupees_____ only).
b) This Bank Guarantee shall be valid up to ___ /____/ 20____
c) The Bank is liable to pay the Guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon a written claim or demand on or before ____/___/ 20____ .

Place……. **Signature**

Date……. **Bank Seal**

Bank Code No.

Bank Details for the Purpose of issuing EMD in the form of FDR / BG

Account Holder Name:	**National Institute of Solar Energy (NISE)** Gurugram - Faridabad Highway, Gwal Pahari Gurugram - 122 003, Haryana Tel: +91 124 285 3056; 3060
Bank Name:	**State Bank of India**
Branch:	**State Bank of India – Sector 56, Gurugram**
Address:	45-49 Centum Plaza, Sector 53 Gurugram - 122 002, Haryana
SB Account No.	**33843408697**
IFSC Code:	**SBIN0011443**
MICR Code:	110002460
SWIFT Code:	**SBININBB**
Branch Code:	11443

NISE GST Details:

1. Address: **National Institute of Solar Energy**
   Gurugram – Faridabad Road
   Gwal Pahari; Gurugram – 122 003, Haryana
2. GST No: **06AAAJN0939P1ZR**
3. State Code: **06**

Annexure- III

Technical Bid Format

(on-Company's Letterhead)

(e-submission)

Ref No.: **05/02/48/2020-21/HEFC/BB/T-6** Date:

Technical Bid

To
The Director General
National Institute of Solar Energy
Gurugram – Faridabad Road
Gwal Pahari; Gurugram – 122 003
Haryana

Subject: Request for Quotation for Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana

National Institute of Solar Energy (NISE) intends to procure, install and commission a battery bank under an R&D project supported by the Ministry of New and Renewable Energy, Government of India at its campus located at Gwal Pahari, Gurugram, Haryana, India. The purpose of procuring the battery bank is to provide power backup support to the hydrogen facility operation at this location.

1. Technical details of the battery bank to be supplied:

Description	Specifications	Remarks
System Voltage (V)	240	
Float Voltage (V)	2.23-2.25 V/cell	
Boost Voltage (V)	2.30-2.32 V/cell	
Capacity @C10 at 27°C or Nominal Rating	4500Ah (±5%)	
Cell/ Module Type	2V cells	
Battery Type	SMF VRLA	
Max Allowable ripple	0.5 - 1.5% of float voltage	
Shelf Life	6 months	
Battery rack	required	
Ah efficiency	>95%	

Wh efficiency	>85%	
Self-Discharge / week	<1% of the rated capacity	
Operating Temperature Range	-5 ºC to +50 ºC	
Connection method between Cells	Bolted (lead coted Heavy duty copper strips)	
Test Certificates	IS 15549: 2005	
	IEC 61427	
	IEC 60896-21&22:2004, Part-II	
Casing of Cell	Polypropylene co-polymer (PPCP)	
Separator	AGM	
Plates (+ve/-ve)	Flat pasted	
Battery Rack Material	Mild steel coated with acid resistance paint	

Signature:

Name of the Representative Submitting the Bid:

Designation:

Company Seal:

2. Compliance to be provided:

Sr. No.	DESCRIPTION	Compliance by Tenderer Yes/No	Remarks if any
1.	I have clearly understood the work and would be able to complete the work as per the Tender No. 05/02/48/2020-21/HEFC/BB/T-6		
2.	I have required experience for carry out such work earlier.		
3.	I have provided details as per Annexure -VI of the subject tender document in support of successful service provided to at least Five customers (Example: Govt., Autonomous Body, PSU, CSIR and Defence Laboratories) during last three years (i.e. 1st January, 2018 to 31st December, 2020)		
4.	I understand the fact, that without proper submission of supporting documents in support of Annexure – V and VI, bids will not be considered and NISE cannot be held responsible for the fact.		
5.	If contract is awarded, I would be able to submit the Performance guarantee as per Annexure – II of the RFQ No. 05/02/48/2020-21/HEFC/BB/T-6 as applicable with in time.		
6.	I have provided the certificate as per the Annexure- VII (as applicable)		

Signature:

Name of the Representative Submitting the Bid:

Designation:

Name of the Company:

Company Seal

Annexure-IV

Price Bid Format

(on-Company's Letterhead)

(e-submission)

Ref No. **05/02/48/2020-21/HEFC/BB/T-6** Date:

PRICE BID

To
The Director General
National Institute of Solar Energy
Gurugram – Faridabad Road
Gwal Pahari; Gurugram – 122 003
Haryana

Subject: Request for Quotation for Supply, Installation, Commissioning and Testing (including warranty) of 240V 4500Ah SMF VRLA Battery Bank at National Institute of Solar Energy (NISE), Gurugram, Haryana

RFQ No: 05/02/48/2020-21/HEFC/BB/T-6

S No	Item	All Price Inclusive (in Rs)
1	**240V 4500Ah SMF VRLA Battery Bank along with rack, fuses and connectors, etc.**	
Grand Total		

Amount in words (Rs.) ……..

Signature:

Name of the Representative Submitting the Bid:

Designation:

Company Seal

Annexure-V

FORMAT FOR SUBMISSION OF BIDDERS DETAILS (in Bold Letters)

1.	**Name of supplier/bidder/service provider**	
2.	**Registered Address**	
3.	Phone No /Fax No	
4.	Name of proprietor/CEO/ Chairman	
5.	Phone no/Mobile No	
6.	Internet messenger/skype	
7.	Email ID	
8.	Single Point Contact Person	
	Contact Person (Designation)	
	Phone No /Fax No	
	Email ID	
9.	**Website**	
10.	**Bank related information**	
	Bank name	
	Branch name	
	Bank address	
	Bank phone no.	
	Bank fax no.	
	Bank MICR Code (9 digit)	
	RTGS-IFSC Code	
	Account type	
	Account no	
	SWIFT Code etc. (if applicable)	
11.	PAN NO	
12.	GST number of firm	
13.	PAN/TAN & TIN of the firm	

Fill available details, add copies of documents (like PAN, GST etc) and add more row if required

I certify that the information given herein is correct to the best of my knowledge and belief.

Signature of Proprietor/CEO/Chairman

Seal of the company/concern.

Annexure-VI

Performance Statement Form- (Services Provided by Bidder to Clients during last three years (period will be considered from 1st January, 2018 to 31st December, 2020))

Name of Bidder:

Sl. No.	Order No & Date	Client Name (Ministry/ /Autonomous Body/PSU/CSIR Lab/Defence Labs etc.)	Client Contact Person (Phone/ e-mail)	Brief Description of Job/service offered	Value of Order (in INR)	Date of Completion (DD/MM/YYYY)		Satisfactory completion (Yes/No/if, pending, provide reason)
						As per contract	Actual	
1								
2								
3								
4								
5								

*The details provided above should be written in BOLD letters and in a clear manner to read.

Signature of Proprietor/CEO/Chairman

Seal of the company/concern.

Annexure – VII

Model Certificate for Tenders (for transitional cases as stated in para 3 of Order F. No. 6/18/2019-PPD dated 23rd July, 2020)

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."

Model Certificate for Tenders

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached]"

Model Certificate for Tenders for Works involving possibility of sub-contracting

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificate for GeM:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached]"