

M/s HLL INFRA TECH SERVICES LTD. (HITES)
(Subsidiary of HLL Lifecare Ltd., A Government of India Enterprise)

TENDER
FOR

**SUPPLY INSTALLATION TESTING & COMMISSIONING OF 130kWP GRID
INTERACTIVE SOLAR PV STATION AT INSTITUTE OF ADVANCED
VIROLOGY, THONNAKKAL**

Tender No. HITES/IDS/22/21



Golden Jubilee Block, HLL Bhavan,
Poojappura P.O
Thiruvananthapuram
PH: 0471 - 2775500

VOLUME I
NOTICE INVITING TENDER

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HLL INFRA TECH SERVICES LTD. (HITES)

NOTICE INVITING E-TENDER

Tender No. HITES/IDS/22/21

Dated: 14/12/2022

HLL Infra Tech Services Ltd (HITES) on behalf of Institute of Advanced Virology, Government of Kerala invites bids from eligible contractors/firms for the following work

Name and Description of work	Estimated cost Excluding GST (Rs.)	Completion period of Work	Last date & time to submit the e-tender
Supply Installation Testing & Commissioning of 130kWP Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal	Rs.62,67,378/-	03 months	26.12.2022 at 3.00 pm

For submission & other tender details, please refer detailed NIT on e-tender portal www.etenders.kerala.gov.in, www.hllhites.com and Central Public Procurement Portal

HITES/ Client reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever. Prospective bidders are advised to regularly scan through www.etenders.kerala.gov.in, www.hllhites.com, <https://iav.kerala.gov.in/> and Central Public Procurement Portal as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

Deputy General Manager (ID)

HLL INFRA TECH SERVICES LTD. (HITES)

NOTICE INVITING E-TENDER

HLL Infra Tech Services Ltd (HITES) on behalf of Institute of Advanced Virology, Government of Kerala invites bids from eligible contractors/firms for the following work:

Name and Description of work	Estimated cost Excluding GST (Rs.)	Completion period of Work	Tender document fee / e-tender processing fee	Last date & time to submit the e-tender	Bid Security amount (Rs.)
Supply Installation Testing & Commissioning of 130kW Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal	Rs.62,67,378/-	03 months	Rs.5900/- (inclusive of GST)	26.12.2022 at 3.00 pm	Rs.50,000/-

** For MSME registered bidders, the proof of registration in the line of work and monitory limit shall be attached. The Tender document fee / e-tender processing fee will be free of cost for them and such bidders will be exempted from EMD. MSME bidders shall submit bid security (EMD) declaration in the format as attached.*

For submission & other tender details, please refer detailed NIT on e-tender portal www.etenders.kerala.gov.in, www.hllhites.com, <https://iav.kerala.gov.in/> and Central Public Procurement Portal.

HITES/ Client reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever. Prospective bidders are advised to regularly scan through www.etenders.kerala.gov.in, www.hllhites.com, <https://iav.kerala.gov.in/> and Central Public Procurement Portal as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

1. The intending bidder must read the terms and conditions of Notice Inviting Bids and the Bid documents carefully. They should only submit the bid if they consider themselves eligible and they are in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from e-tender portal www.etenders.kerala.gov.in and www.hllhites.com.
4. Contractor must ensure to quote rate of each item. Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "**0**" (**ZERO**).
 - a. If a tenderer quotes nil rates against each item in item rate tender, the tender shall be

treated as invalid and will not be considered as lowest tenderer.

5. The Technical bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
6. The Client/HITES reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
7. TENDER FEE (NON-REFUNDABLE): The tender document(s), may be downloaded free of cost from the e-Government Procurement (e-GP) website (www.etenders.kerala.gov.in). However the bid submission fee, as mentioned in the NIT, is required to be submitted along with the online bid.
8. EMD: Bidders shall remit the Bid Security using the online payment options of e-Procurement system only. Bidders are advised to visit the "Downloads" section of e-Procurement website.

The Bidder shall pay the Earnest Money Deposit of Rs.50,000/- . A part of earnest money is acceptable in the form of bank guarantee also. In such case, 50% of EMD or Rs.20.00 lakhs whichever is less shall have to be deposited online as prescribed above and balance can be accepted in the form of a bank Guarantee issued by a scheduled bank valid for 6 months from the last date of submission of bid. In such case, the scanned copy of BG shall be scanned and uploaded along with the bid and original to be submitted to the office of Deputy General Manager (ID), HITES, Poojappura PO, Thiruvananthapuram on or before the last date & time of submission of bid.

If the bidder is submitting a part of EMD as Bank Guarantee as above, the bidders has to select the option 'YES' for the query 'if EMD exemption is applicable'. Otherwise, full payment has to be transferred online itself. For further assistance, the e tender portal may be contacted before attempting transaction.

9. The complete set of Tender Documents shall be made available, as per above schedule, on the above mentioned websites.
10. HITES reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever.
11. Prospective bidders are advised to regularly scan through the given websites as corrigenda/amendments etc., if any, will be notified on these portals only and separate advertisement will not be made for this. Bidders are advised to check all these websites regularly as at times, it is not possible to upload data on a particular website due to some technical glitch.

12. General Tender Terms & Conditions for e-Procurement

This tender is an e-Tender and is being published online. The tender is invited in Two cover system from the registered and eligible firms through e-procurement portal of Government of Kerala (etenders.kerala.gov.in). Prospective bidders willing to participate in this tender shall necessarily register themselves with above mentioned e-procurement portal.

The tender timeline is available in the critical date section of this tender published in www.etenders.kerala.gov.in.

Online Bidder registration process:

Bidders should have a Class II or above Digital Signature Certificate (DSC) to be procured from any Registration Authorities (RA) under the Certifying Agency of India. Details of RAs will be available on www.cca.gov.in. Once, the DSC is obtained, bidders have to register on www.etenders.kerala.gov.in website for participating in this tender. Website registration is a one-time process without any registration fees. However, bidders have to procure DSC at their own cost.

Bidders may contact e-Procurement support desk of Kerala State IT Mission over telephone at 0471-2577088/188/388 or 0484-2336006, 2332262 or 0497-2764788, 2764188 or 0483-273294 or through email: etendershelp@kerala.gov.in or helpetender@gmail.com for assistance in this regard.

A). Online Tender Process:

The tender process shall consist of the following stages:

- i. Downloading of tender document: Tender document will be available for free download on www.etenders.kerala.gov.in. However, tender document fees shall be payable at the time of bid submission as stipulated in this tender document.
- ii. **Publishing of Corrigendum: All corrigenda shall be published on www.etenders.kerala.gov.in and shall not be available elsewhere.**
- iii. Bid submission: Bidders have to submit their bids along with supporting documents to support their eligibility, as required in this tender document on www.etenders.kerala.gov.in. **No manual submission of bid is allowed and manual bids shall not be accepted under any circumstances.**
- iv. Opening of Technical Bid and Bidder short-listing: The technical bids will be opened, evaluated and shortlisted as per the eligibility and technical qualifications. All documents in support of technical qualifications shall be submitted (online). Failure to submit the documents online will attract disqualification. Bids shortlisted by this process will be taken up for opening the financial bid.
- v. Opening of Financial Bids: Bids of the qualified bidder's shall only be considered for opening and evaluation of the financial bid, on the date and time mentioned in critical date's section.

B). Documents Comprising Bid:

- i. The First Stage (Pre-Qualification or Technical Cover based on 1cover or 2 cover tender system):

Pre-Qualification or Technical proposal shall contain the scanned copies of the documents which has to be uploaded in the e tender portal:

The department doesn't take any responsibility for any technical snag or failure that has taken place during document upload.

- ii. The Second Stage (Financial Cover or as per tender cover system):

The Bidder shall complete the Price bid as per format given for download along with this tender.

Note: The blank price bid should be downloaded and saved on bidder's computer without changing file-name otherwise price bid will not get uploaded. The bidder should fill in the details in the same file and upload the same back to the website.

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Fixed price: Prices quoted by the Bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable/ variable price quotation will be treated as non - responsive and rejected.

C). Tender Document Fees/e-tender processing fee and Earnest Money Deposit (EMD)

The Bidder shall pay, Tender Document Fees /e-tender processing fee of Rs.5,900/- (inclusive of GST) and Earnest Money Deposit of Rs.50,000/-. The EMD is required to protect the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.

Online Payment modes: The e-tender processing fee and EMD can be paid in the following manner through e-Payment facility provided by the e-Procurement system.

State Bank of India Multi Option Payment System (SBI MOPS Gateway): Bidders are required to avail Internet Banking Facility in any of below banks for making tender remittances in e Procurement System.

A) Internet Banking Options (Retail)			
1	Axis Bank	32	Lakshmi Vilas Bank
2	Andhra Bank	33	Mehsana Urban Co-op Bank
3	Bandan Bank	34	NKGSB Co-operative Bank
4	Bank of Bahrain and Kuwait	35	Oriental Bank of Commerce
5	Bank of Baroda	36	Punjab and Maharashtra Cooperative Bank
6	Bank of India	37	Punjab National Bank
7	Bank of Maharashtra	38	Punjab and Sind Bank
8	Bassein Catholic Co-operative Bank	39	RBL Bank
9	BNP Paribas	40	Saraswat Cooperative Bank
10	Canara Bank	41	ShamraoVithal Cooperative Bank
11	Catholic Syrian Bank	42	South Indian Bank
12	Central Bank of India	43	Standard Chartered Bank
13	City Union Bank	44	State Bank of India
14	Corporation Bank	45	Syndicate Bank
15	Cosmos Bank	46	Tamilnad Mercantile Bank
16	DCB Bank	47	Tamilnadu Cooperative Bank
17	Dena Bank	48	The KalyanJanataSahakari Bank
18	Deutsche Bank	49	TJSB Bank (Erstwhile Thane JanataSahakari Bank)
19	Dhanalaxmi Bank	50	UCO Bank
20	Federal Bank	51	Union Bank of India
21	HDFC Bank	52	United Bank of India
22	ICICI Bank	53	Vijaya Bank
23	IDBI Bank	54	YES Bank
24	Indian Bank		
25	Indian Overseas Bank		
26	IndusInd Bank		
27	Jammu & Kashmir Bank		

28	JanataSahakari Bank		
29	Karnataka Bank		
30	KarurVysya Bank		
31	Kotak Mahindra Bank		
B) Internet Banking Options (Corporate)			
1	Bank of Baroda	21	Laxmi Vilas Bank
2	Bank of India	22	Oriental Bank of Commerce
3	Bank of Maharashtra	23	Punjab & Maharashtra Coop Bank
4	BNP Paribas	24	Punjab & Sind Bank
5	Canara Bank	25	Punjab National Bank
6	Catholic Syrian Bank	26	RBL Bank
7	City Union Bank	27	ShamraoVithal Co-operative Bank
8	Corporation Bank	28	South Indian Bank
9	Cosmos Bank	29	State Bank of India
10	Deutsche Bank	30	Syndicate Bank
11	Development Credit Bank	31	UCO Bank
12	Dhanalaxmi Bank	32	Union Bank of India
13	Federal Bank	33	UPPCL
14	HDFC Bank	34	Vijaya Bank
15	ICICI Bank	35	Axis Bank
16	Indian Overseas Bank		
17	JantaSahakari Bank		
18	Jammu & Kashmir Bank		
19	KarurVysya Bank		
20	Kotak Bank		

During the online bid submission process, bidder shall select SBI MOPS option and submit the page, to view the Terms and Conditions page. On further submitting the same, the e-Procurement system will re-direct the bidder to MOPS Gateway, where two options namely SBI and Other Banks* will be shown. Here, Bidder may proceed as per below:

- a) SBI Account Holders shall click SBI option to with its Net Banking Facility,, where bidder can enter their internet banking credentials and transfer the Tender Fee and EMD amount.
- b) Other Bank Account Holders may click Other Banks option to view the bank selection page. Here, bidders can select from any of the 54 Banks to proceed with its Net Banking Facility, for remitting tender payments.

*Transaction Charges for Other Banks vide SBI Letter No. LHO/TVM/AC/2016-17/47 – 1% of transaction value subject to a minimum of Rs. 50/- and maximum of Rs. 150/-.

* Bidders who are using Other Banks option under SBI MOPS Payment Gateway, are advised by SBI to make online payment 72 hours in advance before tender closing time.

Any transaction charges levied while using any of the above modes of online payment has to be borne by the bidder. The supplier/contractor's bid will be evaluated only if payment status against bidder is showing "Success" during bid opening.

D). SUBMISSION PROCESS:

For submission of bids, all interested bidders have to register online as explained above in this document. After registration, bidders shall submit their Technical bid and Financial bid online on www.etenders.kerala.gov.in along with online payment of tender document fees and EMD.

It is necessary to click on “Freeze bid” link/ icon to complete the process of bid submission otherwise the bid will not get submitted online and the same shall not be available for viewing/ opening during bid opening process.

Deputy General Manager (ID)

DISCLAIMER

This document has been prepared by M/s HLL Infra Tech Services Ltd. (HITES) on behalf of Institute of Advanced Virology, an autonomous Institution under Science & Technology Department, Govt. of Kerala as Project Management Consultant. The project is funded by Institute of Advanced Virology. The information is provided to prospective Bidders, who are interested to Bid for the work of Supply Installation Testing & Commissioning of 130kWP Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal, Trivandrum.

This document is neither an agreement, nor an offer or invitation to perform work of any kind to any party.

The purpose of this document is to provide interested parties with information to assist the preparation of their Bid. While due care has been taken in the preparation of the information contained herein, and is believed to be complete and accurate, neither any of the authorities/agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, expressed or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

Further, HITES does not claim that the information is exhaustive. Respondents to this document are required to make their own inquiry/ survey and will be required to confirm, in writing, that they have done so and they did not rely solely on the information given herein.

HITES reserves the right not to proceed with the Project or to change the configuration of the Project, to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the Project further with any respondent.

No reimbursement of cost of any type or on any account will be made to persons or entities submitting their Bid.

Definitions

1. **"Application"** shall mean the response submitted by interested parties.
2. **"BID/Tender"** shall mean documents downloaded from the website by the prospective Bidder. The word "Tender" is synonymous with **"Bid"**.
3. **"Bid Security/ Earnest Money"** shall mean the amount to be deposited by the Bidder with the Tender.
4. **"Bid Validity"** shall mean the period for which the Bids shall remain valid.
5. **"Bidder"** shall mean the party located in India who is participating in the Tendering process pursuant to and in accordance with the terms of this document. The word **"Tenderer"** is synonymous with **"Bidder"**.
6. **"Client"** means Institute of Advanced Virology, an autonomous Institution under Science & Technology Department, Govt. of Kerala
7. **"Contract Agreement"** shall mean the agreement to be signed between the Successful Tenderer and the Client / HITES.
8. **"Contract Price"** shall mean the financial bid of the Successful Tenderer as accepted by the Client / HITES.
9. **"Date of commencement of work"** shall mean the date of Start as specified in the Schedule "F" i.e. from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later.
10. **"Defects Liability Period"/"Maintenance Period"** means the period after completion of the Project during which the Client or his authorized representative/ Engineer-in-charge of HITES that will notify to the Contractor any defect noticed in the work and the Contractor is liable for rectification of such defects. Proof of dispatch of letter notifying the defect/ intimating the representative of Contractor at site on the last date of Defect liability period will make the Contractor liable for rectify all such defects.
11. **"Engineer in Charge" (EIC)** means the Engineer Officer of HITES as mentioned in the schedule "F" hereunder, as authorized by HITES/ Client.
12. **"Evaluation Committee"** shall mean the committee constituted by M/s HLL Infra Tech Services Ltd. (HITES) for the evaluation of the bids.
13. **"HITES"** shall mean M/s HLL Infra Tech Services Ltd., appointed by the Client as 'Project Management Consultant' for the project.
14. **"Letter of Acceptance"** shall mean the letter issued by the HITES to the Successful Tenderer inviting him to sign the Contract Agreement.
15. **"Performance Guarantee"** shall mean the amount to be paid by the Successful Tenderer as per relevant clause mentioned elsewhere.
16. **"E-tender Processing Fee"** shall mean the amount to be paid by the Tenderers in consideration of cost of bid document.
17. **"Project / Work"** shall mean **Supply Installation Testing & Commissioning of 130kW Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal, Trivandrum.**
18. **"Site"** shall mean the place where the works under the Project are to be carried out and the details of which are provided in this document.

19. **“Successful Tenderer”** shall mean the Tenderer declared technically and financially successful for the Project and with whom, the Contract Agreement shall be signed.
20. **“Similar Works”** as defined in eligibility criteria.
21. **“Scheduled banks”** mean **“Scheduled commercial Banks”**
22. **“NIT”** means **Notice Inviting Tender**. The word **“Notice Inviting Tenders”** is synonymous with **“Notice Inviting Bids”**.
23. **“ITB”** means **Instructions to Bidders**

SECTION I
NOTICE INVITING BIDS

1. HLL Infra Tech Services Ltd (HITES) on behalf of Institute of Advanced Virology, Government of Kerala invites bids from eligible contractors/firms as per eligibility criteria laid down, for the work of **Supply Installation Testing & Commissioning of 130kWP Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal, Trivandrum.**

1.1. The work is estimated to cost as given in Table - I. Any clarification shall be sought from the tender inviting authority on courier / e-mail. The NIT and other details are also available on e-tender portal www.etenders.kerala.gov.in, www.hllhites.com, <https://iav.kerala.gov.in/> and Central Public Procurement Portal.

1.2. TABLE - I

Sl. No.	Description	Details
1	Tender no.	HITES/IDS/22/21 DATED 14/12/2022
2	Name of work	Supply Installation Testing & Commissioning of 130kWP Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal, Trivandrum.
3	Estimated cost	Rs.62,67,378/- (Excl. GST)
4	Earnest Money deposit	Rs.50,000/- The bidder shall remit 100% of EMD as online. Bidders can also remit 50% of EMD or Rs. 20.00 lakhs whichever is lower through online and remaining amount in the form of Bank Guarantee from any nationalized or scheduled bank having a validity period for 6 months from the date of submission of tender as per the prescribed format.
5	E-Tender Processing Fee (Non-refundable) - online	Rs.5,900/- (inclusive of GST)
6	Issue of Tender documents	Documents shall be available online at HITES website http://hllhites.com/tenders and CPP Portal - http://www.eprocure.gov.in , and https://iav.kerala.gov.in/e-tender portal @ www.etenders.kerala.gov.in .
8	Pre bid meeting	- NA - The bidders having queries/clarification regarding the tender can submit their queries at e-tender portal/as email @ tenders@hllhites.com or before 20.12.2022 at 10.00 AM.

		The reply to the queries will be published in e tender portal.
9	Last Date & time of Submission of Bids online (Bid due date)	26.12.2022 at 3.00 pm
10	Date & time of opening of Technical Bids through e-tender portal	27.12.2022 at 3.00 pm
11	Date of start of work	From the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later
12	Completion period	03 months
13	Performance Guarantee	3% of tendered value [Atleast 50% of this guarantee shall be in form of Treasury Fixed Deposit (Govt. of Kerala) and rest in form of BG from any scheduled commercial bank based in India]
14	Security Deposit	3 % of tendered value (will be released only after completion of DLP Period)
15	Defects Liability period	3 years from the date of completion of works as certified by Engineer in charge.
16	Bank account details for the purpose of preparation of Bank Guarantee only:	A/c No.38160968975. IFS Code: SBIN0004350 Bank : SBI, Commercial Branch, Thycaud, Trivandrum Name of A/c: HLL Infra Tech Services Ltd.

1.3. Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:

1.4. Eligibility Criteria

1.4.1 The Tenderer should meet the following minimum eligibility criteria:

Bidder who fulfills the following requirement shall be eligible to apply. Joint ventures / Consortium/ SPV of whatsoever kind are not accepted.

- a. The bidder should be an Indian firm having experience in Supply Installation Testing & Commissioning of Solar Power Plant during the last 7 years.
- b. The bidder should have an office in South India (documentary proof to be submitted)
- c. Experience should be in the name of the bidding company and not in subsidiary/ associate company/ Group Company / JV Company etc.

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- d. Experience of having successfully completed works during the last seven years ending last day of the month previous to the one in which tenders are invited as follows:

Three similar works each costing not less than amount equal to Rs.25.07 lakh of estimated cost put to tender

Or

Two similar works each costing not less than amount equal to Rs.37.60 lakh of estimated cost put to tender

Or

One similar work costing not less than amount equal to Rs.50.14 lakh of estimated cost put to tender

“Similar Works” shall mean one work of Supply Installation Testing & Commissioning of roof top Grid Interactive Solar PV Station / roof top solar power plant.

Own works/ work under the same management/ own certification of the bidder shall not be considered for pre-qualification.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the previous day of last date of submission of tenders.

In case the work experience is of Private sector, completion certificate shall be supported with copies of Corresponding TDS Certificates.

- e. **Turnover:** Average annual financial turnover should be at least 50% of the estimated cost put to tender during the immediate **last three** consecutive financial year ending 31st March, 2022. The turnover should be of the Bidding Company and not for Group Company or subsidiary company etc. ITRs for the last three years to be submitted.
- f. **Profit/loss:** The bidder should not have incurred any loss (profit after tax should be positive) in more than Two years in last Five years ending FY 2021-22. This should be duly certified by the Chartered Accountant.
- g. The performance of the bidder for the completed works shall be rated by the Client as satisfactory or above.
- h. Those who had done work/doing work in HITES/HLL shall produce completion/ progress certificate from the Engineer in charge not below the rank of Project manager. The bidder shall be considered for further evaluation only if the performance of the bidder for the work is rated as ‘**good or above**’. This is mandatory. The bidders who have initiated litigation against HITES shall be considered only after the litigation is completed.
- i. The works completed/being executed by the bidders if required will be inspected by a technical officer /expert authorized by HITES. If it is found after inspection that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified after due verification even though the documents submitted by them will meet the other eligibility criteria as above.
- j. The bidder shall have GST registration. The copy of GST registration shall be submitted.

- k. The bidder shall have ESI/ EPF registration. The copy of valid ESI/EPF registration shall be submitted.
 - l. The bidder should not have been under blacklisting or debarred or penalised from bidding by any government agency or public sector undertaking or judicial authority/arbitration body as on last date of submission of bid. The bidder shall submit the affidavit on a Rs.100/- non judicial stamp paper duly notarized, to this effect, as per prescribed format (Form “F”).
 - m. The bidder shall submit an affidavit that ‘The work if awarded to us, subcontractors will be employed only for specialized works after getting the concurrence of HITES’ as per prescribed format (Form “H”).
 - n. Direct/ indirect Joint Ventures (JV)/ Consortium of any kind are not permitted.
 - o. The bidder shall submit compliance to the Technical Specifications and catalogues / data sheets etc to be submitted.
- 1.4.2. The time allowed for carrying out the work will be **03 (three) months** from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later, in accordance with the phasing/ milestones, indicated in the tender documents.
- 1.5 (i) The site for the work is available.
(ii) The labour camp shall not be allowed to locate inside the proposed site.
(iii) As the proposed site is located adjacent to the running hospital, the contractor shall take special care to avoid disturbance to the functioning of the hospital.
(iv) The Contractor shall settle labour problems if any occurred at site during the construction stage.
- 1.6 The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents is available on line free of cost.
- 1.7 The bid submitted shall become invalid and e-tender processing fee shall not be refunded if:
- (i) The bidder is found ineligible.
 - (ii) The bidder does not upload all the documents (including GST registration) as stipulated in the bid document. In case the firm is not registered at the time of submission of bid, they will submit an undertaking that they will get themselves registered with the concerned authorities in case they are awarded the work.
 - (iii) If any discrepancy is noticed in the documents as uploaded at the time of submission of bid.
- 1.8 The Technical package and Financial Package as detailed in clause 2.3.6 and 2.3.7 of ITB shall be submitted online, each marked as per clause 2.3.11 of ITB as per the stipulated date & time of submission of bid.
- 1.9 The Contractor, whose tender is accepted, will be required to furnish performance guarantee 3% (Three Percent) of the tendered amount within 15 days of issues of LOA. At least 50% of this guarantee shall be in form of Treasury Fixed Deposit (Govt. of Kerala) and rest in form of Bank Guarantee of any scheduled commercial bank based in India, in favour of “HLL Infra Tech Services Limited” as per Form B. Performance Bank Guarantee to be valid up to sixty days beyond the stipulated date of completion or the extended period, thereof.

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- 1.10 In case the contractor fails to deposit the said performance guarantee within the period as indicated in schedule 'F', including the extended period if any, the earnest money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
- 1.11 The contractor whose tender is accepted will also be required to furnish either copy of applicable licenses/ registration or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and programme chart (time and progress) and manpower deployment schedule within 15 days of issues of LOA
- 1.12 **Evaluation of performance :**
 Evaluation of the performance of contractors for eligibility shall be done by the HITES. If required, **the works being executed by the bidders who otherwise qualify will be got inspected by a Technical Officer / Expert authorized by the Client /HITES. If it is found that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified even though the documents submitted by them will meet the eligibility criteria as laid down in clause 1.4.1.**
- 1.13 Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at its own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.
- 1.14 The Competent Authority of the HITES does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- 1.15 Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 1.16 The competent authority of HITES reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.
- 1.17 The contractor shall not be permitted to tender for works in case his near relative is Gazetted officer in Client or in the Managerial cadres of HITES and is directly dealing with the Project. Any breach of this condition by the contractor would disqualify him from participation and consideration in the tender process.
- 1.18 No Engineer of gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from

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Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

- 1.19 The tender for the works shall remain open for acceptance for a period of **120 (ONE HUNDRED AND TWENTY)** days from the LAST date of submission of bid or any extension thereto. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Client / HITES, then the Client / HITES shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-tendering process of the work.
- 1.20 This is a Time Bound Project.
- 1.21 The scope of work shall be as per section III of this document.
- 1.22 The Bidder must associate with the other agencies working at the site.
- 1.23 Registration/ Licence: The bidder should have their registration for GST, PF, ESIC, Building Cess Registration etc. (whichever is applicable), with the appropriate Authorities. In case the firm is not registered at the time of submission of bid, they will submit an undertaking that they will get themselves registered with the concerned authorities in case they are awarded the work.
- 1.24 The contractor/firm will indemnify Client/HITES, as the case may be, against all penal action that may be levied/effected by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority. An undertaking in this regard is required to be submitted by applicants along with prequalification.
- 1.25 This Notice Inviting bid shall form a part of the contract document. The successful Tenderer/ contractor, on acceptance of his tender by the Accepting Authority, shall, **within 15 days** from the date of issue of the Letter of Acceptance, sign the contract consisting of :-

The Notice Inviting Bids, all the documents including General Conditions of the Contract (GCC), Special Conditions of Contract (SCC), Specifications, Bill of Quantities and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto including amendments, corrigendum etc. if any.

1.26 **Bid document consists of :**

- 1.26.1 Volume - I (Notice Inviting Tenders (NIT), Eligibility Criteria & Instructions to Bidders (ITB))
- 1.26.2 Volume - II (General Conditions of Contract)
- 1.26.3 Volume - III (Special Conditions of Contract)
- 1.26.4 Volume - IV (Technical Specifications)
- 1.26.5 Volume - V (Bill of Quantities)
- 1.26.6 Volume - VI (Tender Drawings)

All amendments(s)/ corrigendum/ minutes of pre bid meeting, if any.

- 1.27 HITES reserves the right to accept or reject any or all the tenders without assigning any reason, No Bidder shall have any cause of action or claim against the HITES for rejection of his tender.
- 1.28 Payments to the selected Contractor will be made directly by Institute of Advanced Virology, Thonnakkal, Trivandrum through bank transfer.

Deputy General Manager (ID)

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SECTION-II
INSTRUCTIONS TO BIDDERS (ITB)

2.1 Eligibility Criteria : As per Notice inviting Bids

2.2 Disqualification. Even if a Contractor meets the eligibility criteria as per clause 1.4.1, Client / HITES may, at their discretion and at any stage during the selection process or execution of the Project, order disqualification of the contractor if the Contractor has:

2.2.1 Made misleading or false representations in the forms, statements and attachments submitted; or

2.2.2 The Contractor has been blacklisted by any government agency even after bids have been opened; or

2.2.3 Record of poor performance such as abandoning work, not properly completing the contract, or financial failures/weaknesses etc.

2.2.4 Suppression of actual facts will be sufficient cause for disqualification.

2.3 BID Documents :

2.3.1 Contents of BID Documents

BID Document shall consist of the documents listed in this document along with any schedules, addendum or corrigendum etc. issued by Client for the purpose.

2.3.2 Pre-Bid Conference

The bidders having queries/clarification regarding the tender can submit their queries as mentioned in Notice Inviting Bid. HITES' response (including an explanation on the query but without identifying the source of the inquiry) will be uploaded on e-tender portal www.etenders.kerala.gov.in, website of HITES www.hllhites.com/tenders/, and CPP portal <https://eprocure.gov.in>.

2.3.3 Clarifications

Contractor requiring any clarification with regards to the BID document may utilize the forum of pre-bid to submit queries/clarification regarding the tender can submit their queries at e-tender portal/ as email @ tenders@hllhites.com. HITES will respond to any request for clarification which is received within date specified in the NIT. The response (including an explanation on the query but without identifying the source of the inquiry) will be uploaded in the e-tender portal. Only written communication/ clarification can be considered as valid.

2.3.4 Amendment to BID Document

i. At any time prior to the deadline for the submission of Bids, HITES, may, for any reason, whether at its own initiative or in response to a clarification or query raised by prospective Bidders, modify the BID document by an amendment.

ii. The said amendments in the form of the addendum/corrigendum will be made available on the HITES website www.hllhites.com/tenders/, e-tender portal www.etenders.kerala.gov.in, <https://iav.kerala.gov.in/> and CPP portal <https://eprocure.gov.in> not later than 3 days to the original or extended deadline for the submission of the bids. The uploading of the said amendments shall be binding of the bidders. The Bidders are strongly advised to regularly visit above websites to ensure that they are aware of the

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amendments. The addendum (s) / corrigendum (s) issued will form part of the BID documents.

- iii. In order to afford prospective Bidders reasonable time for preparing their Bids after taking into account such amendments, the HITES may, at its discretion, extend the deadline for the submission of Bids.

2.3.5 Preparation of Bid:

a) Bidder's responsibility:

- i. The Bidder is solely responsible for the details of his Bid and the preparation of Bids.
- ii. The Bidder is expected to examine carefully all the contents of BID document as mentioned in Notice Inviting Bids including instructions, conditions, forms, terms, etc. and take them fully into account before submitting his offer. Bids, which do not satisfy all the requirements, as detailed in these documents, are liable to be rejected as being unresponsive.
- iii. **The Bidder shall be deemed to have inspected the Site and its surroundings and taken into account all relevant factors pertaining to the Site, while preparing and submitting the Bid.**

b) Project Inspection and Site Visit

Any Site information and drawings given in this Bid Document is for guidance only. **The Bidder is advised to visit and examine the Site of works and its surroundings, understand the scope of work at his/their cost and obtain at his/their own responsibility, any information that may consider necessary for preparing the Bid and entering into a Contract with HITES, including availability of electricity, water and drainage.**

The HITES shall not be liable for such costs, regardless the outcome of the selection process.

c) Documents Comprising the Bid

Bidder shall submit their Bids ONLINE. The contents of the Technical and Financial packages are as mentioned hereinafter i.e. Clause 2.3.6 & 2.3.7.

d) Alternative Proposal by bidders:

Bidders shall submit offers that comply with the requirement of the Tender, as indicated in the drawing and specifications. Alternatives will not be considered.

e) **Method of Application:**

- i. If the bidder is an individual, the application shall be signed by him above his/her full type written name and current address.
- ii. If the bidder is a proprietary firm; the application shall be signed by the proprietor above his/her full type written name and the full name of his firm with its current address.
- iii. If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full type written names and current addresses or alternatively by a partner holding power of attorney for the firm. In the latter case, a certified copy of the Power of Attorney should accompany the application. In both the cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.

- iv. If the bidder is a Limited company or a corporation, the bid shall be signed by a duly authorized person holding Power of Attorney for signing the application and certified copy of such power of attorney shall also be furnished. The bidder should also furnish a copy of memorandum of articles of association duly attested by a Public Notary.

f) Bid documentation

- i. All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even, if no information is to be provided in a column, a 'Nil' or 'no such case' entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as 'Not applicable'. **The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms (or) deliberately suppressing the information may result in the bid being summarily disqualified.** Bid made by telegram or telex and those received late will not be entertained.
- ii. The bid should be type written. The bidder should sign & seal each page of application, forms and documents before scanning & uploading.
- iii. Over writing should be avoided. Corrections if any should be made by neatly crossing out, initialling, dating and rewriting. Pages of the eligibility criteria document are numbered. Additional Sheets if any added by the Bidder should also be numbered by him. They should be submitted as a package with signed letter of transmittal.
- iv. References, information and certificate from the respective Clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of **Executive Engineer or equivalent**.
- v. The bidder may furnish any additional information, which he thinks is necessary to establish his capabilities to successfully complete envisaged work. He is, however advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the HITES/ Client.

2.3.6 Contents of Technical Package:

The technical package has to be submitted in two parts.

(A) Technical Package Part –I ; shall comprise the following :

- I. Online submission of e-tender processing fee/ tender document fee. The e- tender fee is non-refundable.

II. Bid Security

- a. The Bidder shall submit EMD for an amount, as mentioned in Notice Inviting e-tender. MSME bidders shall submit the bid security declaration form attached along with this tender
- b. The Bid securities of unsuccessful Bidders shall be discharged/ returned after expiry of the final bid validity and latest on or before the 30th day after the award of contract. However, in case

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of two packet or two stage bidding, bid securities of unsuccessful bidders during first stage , i.e, technical evaluation etc should be returned within 30 days of declaration of result of first stage ie, technical evaluation etc.

- c. The Bid Security shall be forfeited if a bidder withdraws his bid during the period of bid validity or in the case of the successful bidder, if he fails to furnish the necessary performance security or enter into the Contract within the specified time limit.
 - d. The Bid Security Bank Guarantee of the successful bidder shall be returned after receipt of Performance Bank Guarantee as per Clause 1 of General Conditions of Contract (Volume-2).
- III. Form A: **Form of bid** along with Appendix to be typed on the letter head and duly signed and stamped by authorized person.
 - IV. Form D: Format for Power of Attorney for signing of proposal. In case bid is signed by Managing Director/Partner/Proprietor himself, Power of Attorney is not required. It is mandatory to mention on letterhead that the bid is duly signed and stamped by Managing Director / Partner / Proprietor.
 - V. Indemnity/ Undertaking/ Affidavits as per requirements (Form- G,H)
 - VI. Form F: Original Affidavit as per format at Form 'F' (L1 bidder shall submit the original affidavit within 15 days of award of work)
 - VII. Form "T-1"(Financial Information) – Annual Financial Statement for the last five years ending 2021-22
 - VIII. Form "T-2" (List of all works of similar nature successfully completed during the last seven years)
 - IX. Form "T-3" (List of Project under execution or award). Information in Form T-3 should be complete and no work should be left out.
 - X. Form "T-4" (Performance Report of Works)
 - XI. Form "T-5" (Structure and Organization)
 - XII. Copies of GST Registration or undertaking in this regard as per Clause 1.23.
 - XIII. Certificate of Registration for ESI, EPF and acknowledgement of up-to-date file return.
 - XIV. All pages of the entire tender document, Corrigendum/ addendum (if any)/ pre bid clarifications (if any) signed by the authorized person of the bidder(s).

2.3.7 Contents of Financial Package

The financial package (**VOLUME V-FINANCIAL BID/ PRICE BID**) should be submitted **ONLINE** only. Physical submission of financial bid will not be accepted and e-tender shall be rejected. The price quoted shall be excluding GST but include all applicable costs associated with the Project i.e. any out of pocket/ mobilization expenses, taxes& duties, Building and other Construction Workers welfare Cess (as applicable) and any other applicable statutory taxes, levies as applicable till the last stipulated date for the receipt of tender including extensions if any and services during DLP, Performance warranty as per tender. In case Government levies/modifies any tax subsequently, the same will be adjusted plus/minus as the

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case may be. In case Government levies/modifies any tax subsequently the same will be adjusted plus/minus as the case may be. The Bidder must ensure to fill up price against each item of Price bid. If any cell is left blank then value of that cell shall be treated as "0" (ZERO).

However, in respect of GST, where ever legally applicable the same shall be paid by the contractor to the concerned Authorities as per the prevailing rules. The payment for any bills as per this contract shall be made for the total value of the works at the contract rate plus the GST @18% at the time of billing. Any variation in tax rate of GST (increase or decrease) after the last date of tender submission shall be adjusted at the time of settlement of bills. TDS and other deductions shall be made on payments excluding GST.

2.3.8 Language of Bid

The Bid and all related correspondence and documents relating to the Project shall be in English language.

2.3.9 Currency of Bid

Bid prices shall be quoted in Indian Rupees only. The amount mentioned elsewhere in the bid document will also deemed to be in Indian Rupees unless otherwise mentioned.

2.3.10 Extension of Bid Validity

Prior to the expiry of the original Bid Validity Period, HITES may, at its discretion, request Bidders to extend the Bid Validity Period for a specified additional period and also correspondingly extend the period of validity of Bid Security submitted in the form of a Bank Guarantee.

2.3.11 Format and Signing of Bid

- a. Bid documents (technical package/ bid Part II and financial package/ bid) shall be digital signed by a person duly authorized to sign the Bid documents. The Bidder shall also submit a power of attorney authorizing the person signing the documents.
- b. Entries to be filled in by the Bidder shall be typed or written in indelible ink.
- c. The complete Bid shall be without alterations, overwriting, interlineations or erasures except those to accord with instructions issued by Client, or as necessary to correct errors made by the Bidder. All amendments/corrections shall be initialed by the person or persons signing the Bid.
- d. All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be written below their signatures.

2.3.12 Sealing and Marking of Bids

- a. The Bid shall be submitted along with documents and mode of submission mentioned above in this section and also mentioned in the Checklist at Annexure - I of this volume I.

Please note that the price should not be indicated in any of the documents enclosed in Technical package part I, Technical Package part II and III. Non-compliance shall entail rejection of the Bid.

- b. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures shall be accurately filled. In e-tendering, the intending bidder can quote his rates in

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figures only. The rates in words, amount of each item and total is generated automatically. Therefore, the rate quoted by the bidder in figures shall be taken as correct. In event no rate has been quoted for any item (s), it will be presumed that the contractor has included the cost of this/these items(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.

However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

Please note that the price should not be indicated in any of the documents enclosed in Envelope no. 1. Non-compliance shall entail rejection of the Bid.

2.3.13 **Modifications/ Substitution/ Withdrawal of Bids**

- (a) No modification or substitution of the submitted Bid shall be allowed after last date of submission of bids.
- (b) The bidder may read the instructions in 'Vendor guide' in the e-tender portal for submission/ modification/ withdrawal of bids.

2.3.14 **Power of Attorney:**

Bidders shall submit, along with Technical Package, a power of attorney, on a stamp paper of appropriate value, in favour of the person signing the Bid documents authorizing him to sign the Bid documents, make corrections/modifications thereto and interacting with HITES and act as the contact person. The format for the power of attorney shall be as per form D of Bid Document Volume-I. In case bids are signed by Managing Director/Partner/Proprietor himself, Power of Attorney is not required.

In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the vent of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1932.

2.3.15 **Bid Opening and Evaluation:**

Bid Opening

- i. The Bids will be opened in the presence of Bidders or their authorized representatives who may choose to attend on date & time as mentioned in Notice Inviting e-tender. If such nominated date for opening of Bid is subsequently declared as a public holiday, the next official working day shall be deemed as the date of opening of the Bid.
- ii. Bids for which an acceptable notice of withdrawal has been submitted shall not be opened.
- iii. Bids which have not complied with one or more of the foregoing instructions may not be considered.
- iv. On opening of the e-Bid, it will be checked if they contain Technical & Financial Bids and e-Tender Processing Fees and EMD/ Bid Security paid online, as detailed above.
- v. The Bidders name, the presence or absence of the requisite details as required or their authorized representative, may consider appropriate will be announced at the time of Bid opening.

- vi. Technical Package of the Bids will be opened first. These will be checked for completeness and confirmation of submission of the requisite EMD/Bid Security. If the documents do not meet the requirements of the e-Tender, a note will be recorded.
- vii. Technical evaluation shall be as per section IV, Evaluation Process.
- viii. Financial Package of all bidders whose bids are found responsive after Technical evaluation will be opened at a later date.

2.3.16 Determination of Responsiveness

- i. Prior to the detailed evaluation of Bids, Client will determine whether each Bid is responsive to the requirements of the tender.
- ii. For the purpose of this clause, a responsive Bid is one which:
 - a. have digital signature.
 - b. is accompanied by the power(s) of attorney if required
 - c. contains all the information as requested in the Bid Document
 - d. contains information in formats same/similar as those specified in this Bid Document
 - e. mentions the validity period of the offer
 - f. is accompanied by the Bid Security/ EMD,
 - g. conforms to all the terms, conditions and specifications of Tender without material deviation or reservation. "Deviation" may include exceptions and exclusions. A material deviation or reservation is one which affects, in any substantial way, the scope, quality, performance or administration of the works to be undertaken by the Bidder under the Contract, or which limits in any substantial way, HITES's rights or the Bidder's obligations under the Contract as provided for in Bid and/or is of an essential condition, the rectification of which would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids at reasonable price.
- iii. If a Bid is not substantially responsive to the requirements of Bid, it will be rejected by HITES. The decision of the HITES in this regard shall be final and binding. The financial Packages of non-responsive Bidders shall not be opened.

2.3.17 Evaluation of Bids

- i. HITES would examine and evaluate responsive Bids, as per the criteria set out in this document at Section IV Evaluation Process
- ii. HITES reserves the right to reject any Bid if:
 - a. At any time, a material misrepresentation is made or uncovered; **or**
 - b. The Bidder does not respond within the stipulated time to requests for supplemental information/ clarifications required for the evaluation of the Bid; **or**
 - c. It is found that the information provided is not true or incorrect or facts/ material for the evaluation have been suppressed.

2.3.18 Clarification of Bids

- i. Evaluation of technical Bids submitted by Bidders shall be undertaken based on details submitted therein only. Bidder shall not be allowed to submit on their

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own, additional information or material subsequent to the date of submission and such material/ information, if submitted, will be disregarded. It is therefore essential that all details are submitted by the Bidder comprehensively, accurately and specifically in their technical Bid, avoiding vague answers. However, Evaluation Committee, if it so desires, reserves the right to seek any clarification from the Bidders on the information provided in the technical package. The request for clarifications and the response shall be in writing. No change/ addition in the information or substance of the Bid shall be sought, offered or permitted.

- ii. No change in the price or substance of the Bid shall be sought, offered or permitted except as required to confirm correction of arithmetical errors observed by the Evaluation Committee during the evaluation of Bids.

2.3.19 Process to be Confidential

- i. Except the public opening of the Bids, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
- ii. Any effort by a Bidder to influence HITES's Evaluation Committee/ Client in the process of examination, clarification, evaluation and comparison of Bids and in decisions concerning award of Contract, shall result in the rejection of their Bid.

2.3.20 Award of Contract

i. Award Criteria

HITES will declare the Bidder ranked L1 as Successful Bidder and proceed to issue Letter of Acceptance (LOA) as per the procedure mentioned in the Bid Document and terms and conditions set out in this Bid document.

ii. Notification of Award

- a. Prior to the expiry of the period of Bid Validity, HITES will issue the Letter of Acceptance to the Successful Bidder, notifying him of being declared successful and the intent to sign the Contract Agreement with him. This letter (hereinafter and in the Conditions of Contract called 'the Letter of Acceptance') shall mention the sum which HITES, will recommend to pay to the Contractor in consideration of the completion and guarantee of the work to be performed by them, as prescribed therein (hereinafter and in the conditions of Contract called 'the Contract Price'). No correspondence will be entertained by HITES from the unsuccessful Bidders.
- b. The Letter of Acceptance shall constitute a part of the Contract.
- c. Upon submission of Performance Guarantee by the Successful Bidder, HITES will promptly notify the other Bidders and discharge/ return their Bid securities.

iii. Signing of Agreement

- a. HITES shall prepare the Contract Agreement in the Proforma (Form C) included in this document, duly incorporating all the terms of agreement between the two parties. Within **15 days** from the date of issue of the Letter of Acceptance the Successful Bidder will be required to execute the Contract Agreement in stamp paper of value as per the prevailing stamp duty as prescribed in the Kerala Stamp Act 1959. The successful bidder has to bear the cost of stamp paper.

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- b. Prior to the signing of the Contract Agreement, the Successful Bidder shall submit Performance Guarantee.
- c. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board and Programme Chart (Time and Progress) and manpower deployment schedule within 15 days of issues of LOA.
- d. The Contract Agreement shall be duly signed by the HITES and the Contractor through their authorized signatories.
- e. In case the Successful Bidder does not sign the Contract Agreement, *HITES* reserves the right to cancel the selection process, forfeit any Bid Security and/or Performance Guarantee, as the case may be, submitted by the Successful Bidder and either re-Bid or proceed in any manner that it may deem fit.
- f. Contract agreement will be signed by the authorized signatories.

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SECTION-III
SCOPE OF WORK

1. Bids are now invited for following scope of work:

Supply, installation, testing & commissioning, of 130 KWp grid connected rooftop solar photovoltaic power plant, integration with existing electrical system and successful handing over to Virology Institute, Thonnakkal, Trivandrum, Kerala with three years of defects liability period (DLP).

Detailed scope of work has been mentioned in Volume III SCC.

The activities to be carried out for the completion of the Project shall include the following and any additional activities incidental to these:

- i. Scope of work as specified.
- ii. Submission of 3 sets of completion (i.e. 'as-built') drawings and other related documents, both a hard copy and the soft copy in Auto CAD or any other IT application used for the purpose.

2. Approvals Required

The contractor shall obtain all necessary approval from Agencies concerned as the case may be with related to/ required for execution/Completion/Commissioning. All expenditure on this account will be borne by the contractor. Statutory payment on this account will be reimbursed by the Client at actuals on production of payment receipts.

SECTION IV
EVALUATION PROCESS

4.1 Evaluation Process:

The Bids will be evaluated in the following stages:

- i. Stage 1- Preliminary & Technical Evaluation
- ii. Stage 2- Financial Evaluation.

4.2 Stage 1-Preliminary & Technical Evaluation

i. In Preliminary Stage, e-Tender Fee/ Processing Fee and EMD / Bid security declaration form will be checked online. E-Tender Fee / Processing Fee and EMD will be checked for veracity of Amount and Form as required by e-tender terms and conditions. If e-Tender Fee / Processing Fee and/or EMD submitted by any bidder is not as per e-tender terms and conditions, his bid will be rejected and will not be considered for further stages of evaluation.

ii. Technical Evaluation

a. Technical Bid – Eligibility Criteria

Bidders qualifying in Stage 1 will be considered for further evaluation and the Technical Bids shall be evaluated as per eligibility criteria detailed in Clause 1.4.1 and bidder's eligibility for the work shall be determined. If bidder is not meeting with the minimum eligibility criteria as detailed in Clause 1.4.1, his bid will be rejected and will not be considered for further stages of evaluation. The bidder shall also comply with the technical specification as per the tender document.

HITES, however, reserve the rights to restrict the list of such qualified bidders to any number deemed suitable by it.

- i. The financial Bid of only those Bidders who are technically qualified shall be opened.
- ii. The financial Bids of Bidders whose technical Bids are found unacceptable shall not be opened.
- iii. HITES shall notify all the technically qualified Bidders of their technical qualification indicating the date, time and venue for opening of financial Bids.

4.3 Stage II-Financial Evaluation

- i. Evaluation Committee shall open the financial Bid of the technically qualified Bidders in the presence of the Bidders/their authorized representative, who choose to attend, at the scheduled date and time.
- ii. On opening the financial Bids, the Evaluation Committee shall read out the financial Bid to all the Bidders and record the same.
- iii. The Evaluation Committee shall correct arithmetic errors, if any and sign the same. If any discrepancy is found between the amount in figures and the amount in words, the amount in words shall prevail.
- iv. If a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

- v. All the financial Bids shall then be ranked according to the financial Bid in increasing order with the Bidder quoting the least amount ranked L1, Bidder quoting next higher figure as L2 and so on.
- vi. L1 will be declared as Successful Bidder and his offer will be processed further.
- vii. (a) The financial bid of all eligible bidders as decided by HITES shall be opened and the decision of HITES will be final and binding.
 (b) The date and time of opening of financial bids shall be decided by HITES which will be intimated at an appropriate time.

4.4 Letter of Acceptance:

The Successful Bidder would be notified in writing by HITES by issuing the Letter of Acceptance (LOA) in favour of the Bidder.

Addition Deletion..... Correction..... Over Writing.....

FORM OF BID

Name of the Work: Supply Installation Testing & Commissioning of 130kWP Grid Interactive Solar PV Station at Institute of Advanced Virology, Thonnakkal, Trivandrum

Tender no. HITES/IDS/22/21 DATED 14.12.2022

From

..... (Bidder)

To

**Deputy General Manager (ID)
HLL Infra Tech Services Limited
Golden Jubilee Block
Poojappura P.O
Thiruvananthapuram- 695 012**

Sir,

Sub : Submission of Proposal

Having visited the Site, ascertained the Site conditions and examined the General Conditions of Contract as well as Specific Conditions of Contract, Notice Inviting Bids, Instructions to Bidders etc. and addenda for the above project, we the undersigned, are pleased to submit our technical and financial Bid along with relevant documents.

1. We acknowledge that the Appendix forms an integral part of the Bid.
2. While preparing this Bid, we have gathered our own information and conducted our own inquiry/survey to our satisfaction and we did not rely solely on the information provided in the Bid Documents. We shall not hold HITES responsible on any account in this regard.
3. We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
4. We have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
5. I/We authorize Deputy General Manager (ID), HLL Infra Tech Services Limited or his/her representative to approach individuals, employers, firms and corporation to verify our solvency with the banker, competence, work experience, and general reputation.
6. We undertake, if our Bid is accepted, to commence the works within the stipulated time and to complete the whole of the works comprised in the Contract within the stipulated time calculated from the start date.
7. If our Bid is accepted, we will furnish a bank guarantee as Performance Guarantee for the due performance of the Contract. The amount and form of such guarantee or bond will be in accordance with as given in the General Conditions of the Contract.

8. We are aware that in the event of delay in execution of the Project, beyond the agreed timelines due to reasons attributable to us, liquidated damages shall be recovered from us.
9. Our Bid is valid for your acceptance for a period of (120) ONE HUNDRED AND TWENTY DAYS from the last date of submission of the Bid as per the Bid Documents or any extension thereto.
10. We agree to the General Conditions of Contract and Technical Conditions of Contract and the terms and conditions mentioned in the Bid Documents.
11. We declare that we are not having any Litigation pending / in progress with HLL / HITES.
12. We declare that we have not made any suppression of facts for meeting the requirement of eligibility to bid.
13. We declare that the submission of this Bid confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award of this Contract. We further confirm and declare that no agency commission or any payment, which may be construed as an agency, commission has been, or will be, paid and that the Bid price does not include any such amount. We acknowledge the right of HITES, if it finds anything to the contrary, to declare our Bid to be non-compliant and if the Contract has been awarded to declare the Contract null and void.
14. We understand that you are not bound to accept the lowest or any Bid you may receive.
15. If our Bid is accepted, we understand that we are to be held solely responsible for the due performance of the Contract.
16. We enclose;
 - a. All documents as per the checklist

- Note :
- i. The Appendix forms part of the Bid
 - ii. Bidders are required to fill up all the blank spaces in this form of Bid and Appendix.

Dated this.....day of.....**2022**

Signature

Name..... in the capacity of

duly authorized to sign Bids for and on behalf of.....

Address

Witness – Signature

Name

Address

Certificate

It is certified that the information given by us towards meeting the requirement of the eligibility to bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me/us is found to be incorrect.

Date Seal of bidder

Signature of bidder

Addition
Deletion.....
Correction.....
Over Writing.....

APPENDIX TO THE FORM OF BID

i.	(a) Amount of Performance Guarantee to be deposited by financially successful bidder	As per clauses of GCC
	(b) Amount of Security Deposit	As per clauses of GCC
ii	Date for commencement of work	From the first date of handing over of the site or 15th day from the date of issue of issue of Letter of Acceptance (LOA), whichever is later
iii	Time for completion	03 months
iv.	Amount of compensation in case of extension of completion date due to delays by the Contractor	As per clauses of GCC
v.	Defects Liability Period	3 years from the date of completion of works as certified by Engineer in charge.
vi.	(a) Period of validity of Performance Guarantee	As per clauses of GCC
	(b) Period of validity of Security Deposit	As per clauses of GCC

Signature

(Authorized Signatory)

Date

Place

Name

Address

FINANCIAL INFORMATION**Name of bidder:.....**

- 1. Financial Analysis**-Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly as submitted by the applicant to the Income tax Department (Copies to be attached) and duly certified by the Chartered Accountant mentioning the membership number issued by ICAI along with the full address.

- i) Gross Annual Turnover for last three years ending 31.03.2022**

Financial Year	Annual Turn Over in Indian Rupees (or equivalent to Indian Rupees) as per Audited Balance Sheet
2019-20	Rs.
2020-21	Rs.
2021-22	Rs.
Average Annual Turnover over the past three years	Rs.

- ii) Profit / Loss for last Five years ending 31.03.2022**

Financial Information in Rs. Equivalent	For year 2017-18	For year 2018-19	For year 2019-20	For year 2020-21	For year 2021-22
1. Total Assets					
2. Current Assets					
3. Total Liabilities					
4. Current Liabilities					
5. Profit before Tax					
6. Profit after Tax					
7. Net Worth					

Signature of Chartered
Accountant with Seal

Signature of Applicant.

DETAILS OF ALL WORKS OF SIMILAR NATURE COMPLETED
DURING THE LAST SEVEN YEARS ENDING LAST DAY OF THE MONTH PREVIOUS TO THE
ONE IN WHICH TENDERS ARE INVITED

Sl. No	Name of Work/ Project & location	Owner of sponsoring Organization	Cost of Work In Lakh)	Date of Commencement As per contract	Stipulated Date of completion	Actual date of completion	Litigation/ Arbitration Pending/ in Progress with details*	Name & address/ Telephone No. of officer to whom reference may be made	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

* indicate gross amount claimed and amount awarded by the Arbitrator.

Copy of work Orders and Completion Certificates (as per FORM T-4) of the above works should also be submitted with date of start and completion of project and quality of work.

Signature of Applicant

Addition Deletion..... Correction..... Over Writing.....

SIMILAR WORK UNDER EXECUTION OR AWARDED

Sl. No	Name of Work/ Project & location	Owner of sponsoring Organization	Cost of Work	Date of Commencement As per contract	Stipulated Date of completion	Uptodate Percentage Progress of work	Slow Progress, If any, & reasons Thereof	Name & address/ Telephone No. of officer to whom reference may be made	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Certified that above lists of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Applicant

Addition Deletion..... Correction..... Over Writing.....

PERFORMANCE REPORT OF WORKS
REFERRED TO IN FORM "T-2" TO "T-3"

01.	Name of Contractor	
02.	Name of work / Project & Location	
03.	Agreement No.	
	Estimated Cost	
04.	Awarded Value of work	
05.	Cost on completion of work	
06.	Capacity of Solar Plant	
07.	Date of Start	
	Date of completion :	
08.	i) Stipulated date of completion	
	ii) Actual date of completion	
09.	Scope of work	
10.	Whether case of levy of compensation for delay has been decided or not	Yes/ no
11.	If decided, amount of compensation levied for delayed completion, if any	
12.	Performance Report :	
	a) Quality of work	Excellent/Very Good / Good/ Satisfactory/ Poor
	b) Financial soundness	Excellent/Very Good / Good/ Satisfactory/ Poor
	c) Technical Proficiency	Excellent/Very Good / Good/ Satisfactory/ Poor
	d) Resourcefulness	Excellent/Very Good / Good/ Satisfactory/ Poor
	e) General behavior	Excellent/Very Good / Good/ Satisfactory/ Poor

Dated : _____

Executive Engineer or Equivalent

Addition Deletion..... Correction..... Over Writing.....

STRUCTURE & ORGANIZATION

01.	Name & Address of the applicant	
02.	Telephone No. / Email id.	
03.	GST no.	
04.	Legal status of the applicant (attach copies of original document defining the legal status)	
	a) An Individual	
	b) A proprietary firm	
	c) A firm in partnership	
	d) A limited company or Corporation	
05.	Particulars of registration with various Government bodies (<i>attach attested photocopy</i>)	
	<u>Organization / Place of Registration :</u>	
	1.	
	2.	
	3.	
06.	Names and Titles of Directors & Officers with designation to be concerned with this work	
07.	Designation of individuals authorized to act for the organization.	
08.	Was the applicant ever required to suspend construction for a period of more than six months continuously after you commenced the construction? If so, give the name of the project and reasons of suspension of work.	
09.	Has the applicant or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.	
10.	Has the applicant or any constituent partner in case of partnership firm, ever been debarred/black-listed/penalized for Biding in any	

	organization at any time? If so, give details.	
11.	Has the applicant or any constituent partner in case of partnership firm, ever been convicted by a Court of Law? If so, give details.	
12.	In which field of construction Services the applicant has specialization and interest?	
13.	Any other information considered necessary but not included above.	

Signature of Applicant

DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK

Sl. No	Designation	Total Number	Number Available For this Work	Name	Qualification	Professional experience and details of work carried out	How these would be involved in this work	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Signature of Applicant

Addition Deletion..... Correction..... Over Writing.....

FORM OF PERFORMANCE BANK GUARANTEE

(On a stamp paper of appropriate value from any Nationalised Bank or Scheduled Bank)

To,

**DEPUTY GENERAL MANAGER (ID)
HLL INFRA TECH SERVICES LIMITED
GOLDEN JUBILEE BLOCK
POOJAPPURA PO,
THIRUVANANTHAPURAM- 695 012**

Dear Sir,

In consideration of the HLL Infra Tech Services Limited for _____ (name of work) which expression shall include his successor and assignees, (herein after called HITES) having awarded to----- having its Office at -----and Registered Office at ----- (hereinafter referred to as "the said Contractor (s)", which expression shall include his successor and assignees) for the work of _____ Contract No. / LOA No.----- in terms interalia, of the and the General Conditions of Contract and upon the condition of the Contractor's furnishing Security for the performance of the Contractor's obligations and discharge of the Contractor's liability under and in connection with the said Contract up to a sum of Rs.-----Rupees -----) amounting to 50% of 3% percent of the total Contract value.

1. We, _____ (hereinafter called 'The Bank' which expression shall include its successors and assignees) hereby jointly and severally undertake to guarantee the payment to the HITES in rupees forthwith on demand in writing and without protest or demur or any and all moneys payable by the Contractor to the HITES in respect of or in connection with the said Contract inclusive of all the HITES's losses and damages and costs, (inclusive between attorney and HITES) charges and expenses and other moneys payable in respect of the above as specified in any notice of demand made by the HITES to the Bank with reference to this guarantee upto an aggregate limit of Rs. _____ (Rupees _____ only).
2. We _____ Bank Ltd. further agree that the HITES shall be sole judge of and as to whether the said Contractor has committed any breach or breaches of any of the terms and conditions of the said Contract and the extent of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by the HITES on account thereof and the decision of the HITES that the said Contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by the HITES from time to time shall be final and binding on us.
3. The HITES shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other Security in respect of the Contractor's obligations and liabilities hereunder or to vary the Contract or the work to be done there under vis-a-vis the Contractor or to grant time or indulgence to the Contractor or to reduce or to increase or otherwise vary the prices of the total Contract value or to release or to forbear from enforcement of all or any of the Security and/or any other Security(ies)

Addition
Deletion.....
Correction.....
Over Writing.....

now or hereafter held by The HITES and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to the HITES hereunder or prejudice the rights of the Employer against the bank.

4. This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all monies payable to the HITES in terms thereof.
5. The bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the Bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to the HITES in terms hereof.
6. The amount stated in any notice of demand addressed by the HITES to the Bank as liable to be paid to the HITES by the Contractor or as suffered or incurred by the HITES on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to the HITES or suffered or incurred by the HITES as the case may be and shall be payable by the Bank to The Employer in terms hereof.
7. This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of the HITES and liabilities of the Contractor arising upto and until midnight of _____.
8. **This guarantee is valid till _____(date to be mentioned) (Sixty days beyond the stipulated date of completion or the extended period, thereof)**
9. This guarantee shall be in addition to any other guarantee or Security whatsoever that the HITES may now or at any time anywise may have in relation to the Contractor's obligations/or liabilities under and/or in connection with the said Contract, and the HITES shall have full authority to have recourse to or enforce this Security in preference to any other guarantee or Security which the HITES may have or obtain and no forbearance on the part of the HITES in enforcing or requiring enforcement of any other Security shall have the effect of releasing the Bank from its full liability hereunder.
10. It shall not be necessary for the HITES to proceed against the said Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding that any Security which The HITES may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the said bank hereunder be outstanding or unrealised.
11. We, the said Bank undertake not to revoke this guarantee during its currency except with the consent of the HITES in writing and agree that any change in the constitution of the said Contractor or the said bank shall not discharge our liability hereunder.
12. We _____ the said Bank further that we shall pay forthwith the amount stated in the notice of demand notwithstanding any dispute/difference pending between the parties before the arbitrator and/or that any dispute is being referred to arbitration.
13. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs. _____ (Rupees _____) and this guarantee shall remain in force till _____ and unless a claim is made on us within 3 months from that date, that is before _____ all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities there under.

Notwithstanding anything contained herein above:

- (a) Our liability under this Bank Guarantee shall not exceed Rs. -----
(Rupees -----)
- (b) This Bank Guarantee shall be valid up to -----
- (c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before ---
-----at (bank address)otherwise, all your rights under this guarantee shall be forfeited and bank shall be relieved and discharged from all the liabilities there under irrespective of whether or not the original bank guarantee returned to us or not

Dated _____ day of _____ 2022

For and on behalf of Bank.

Issued under seal :

FORMAT FOR EMD/ BID SECURITY BANK GUARANTEE

(On a stamp paper of appropriate value from any Nationalised Bank or Scheduled Bank)

To
 DEPUTY GENERAL MANAGER (IDD)
 HLL INFRA TECH SERVICES LIMITED
 GOLDEN JUBILEE BLOCK
 POOJAPPURA PO, THIRUVANANTHAPURAM- 695 012

WHEREAS, Bidder..... (Name of Bidder) (herein after called "the Bidder") has submitted his bid dated (date) for the _____
 (Name of work) (herein after called "the bidder")

KNOW ALL PEOPLE by these presents that we..... (Name of bank) having our registered office at..... (herein after called "the Bank") are bound unto DEPUTY GENERAL MANAGER (ID), HLL Infra Tech Services Limited (HITES), Thiruvananthapuram-695 012 in the sum of Rs. (Rs. in words) for which payment well and truly to be made to the said DEPUTY GENERAL MANAGER (IDD), the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank thisday of 2022 THE CONDITIONS of this obligation are:

- 1) If after bid opening of bid; the Bidder withdraws, his bid during the period of validity of bid (including extended validity of bid) specified in the Form of Bid;
- 2) If the Bidder having been notified of the acceptance of his bid by HITES.
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidder, if required;
 - or
 - (b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of bid document and Instructions to Bidder,

We undertake to pay to the unto DEPUTY GENERAL MANAGER (ID), HLL Infra Tech Services Limited (HITES), Thiruvananthapuram-695 012 either up to the above amount or part thereof upon receipt of his first written demand, without the DEPUTY GENERAL MANAGER (ID) having to substantiate his demand, provided that in his demand the DEPUTY GENERAL MANAGER (ID) will note that the amount claimed by him is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date (*) after the deadline for submission of bid as such deadline is stated in the Instructions to Bidder or as it may be extended by the DEPUTY GENERAL MANAGER (ID), notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE SIGNATURE OF THE BANK
 WITNESS SEAL
 (SIGNATURE, NAME AND ADDRESS)
 (*) Date to be worked out on the basis of validity period of 6 months from the last date of uploading the bid.

Addition Deletion..... Correction..... Over Writing.....

Proforma for Earnest Money Deposit Declaration for MSME Bidder

Whereas, I/we(name of agency) have submitted bids for (Name of work). I/we hereby submit following declaration in lieu of submitting Earnest Money Deposit.

(1) If after the opening of tender, I/we withdraw or modify my/our bid during the period of validity of tender (including extended validity of tender) specified in the tender documents,

Or

(2) If, after the award of work, I/we fail to sign the contract, or to submit performance guarantee before the deadline defined in the tender documents, I/we shall be suspended for one year and shall not be eligible to bid for tenders invited by HITES from date of issue of suspension order.

Signature of the Bidder

(Note: The declaration shall be submitted by the MSME bidders in Rs.10/- non judicial stamp paper duly signed & sealed by the authorized signatory bidder and notarized)

Addition
Deletion.....
Correction.....
Over Writing.....

FORM OF AGREEMENT

(On a stamp paper of appropriate value as per the prevailing stamp duty as prescribed in Kerala stamp act 1959 amended from time to time. Contractor shall bear the cost of stamp paper)

Agreement No.....

This agreement is made at on the day of 2022 between **M/s HLL Infra Tech Services Ltd (HITES)** which expression shall, unless repugnant to the context or meaning thereof be deemed to mean and include its successors, legal representatives and assigns of the **First Part**.

AND

M/s a Company incorporated under the Companies Act 1956 having Head Office at and Office at, (hereinafter called the "Contractor" which expression unless repugnant to the context shall mean and include its successors-in-interest assigns etc.) of the **Second Part**.

Whereas HITES is desirous that certain works should be executed, for _____ hereinafter called the "The Project" and has accepted a Tender submitted by the contractor for the execution and completion of such works as well as guarantee of such works and the remedying of defects therein.

NOW THIS AGREEMENT WITHNESSTH as follows:

1. In this agreement words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and constructed as part of this agreement Viz.

Volume - I (NIT & Instructions to Bidders)

Volume- II (GCC)

Volume - III (SCC)

Volume - IV (Technical Specifications)

Volume - V (Financial bid and Bill of Quantities)

Volume - VI (Drawings)

All the correspondence till award of contract i.e. addendum, minutes, LOA etc.

Technical and Financial bids submitted by bidder.

3. In consideration of the payment to be made to the Contractor as hereinafter mentioned, the Contractor hereby covenants with HITES to executed and complete the Project by ----- and remedy and defects therein in conformity in all respects with the provisions of the Contract.

Addition
Deletion.....
Correction.....
Over Writing.....

4. Whereas HITES has accepted bid/ negotiated Bid for the above mentioned work for an amount of Rs. _____ (Rupees _____ Only). The above bid/ negotiated bid amount is inclusive of all prevailing taxes including, Building and other Construction Workers welfare Cess and any other applicable statutory taxes, levies and excluding Goods and Services Tax as per terms & conditions of Bid document.
5. The payment to the contractor will be made by Client based on the recommendation of HITES in consideration of the execution and completion of the Project and the remedying of defects therein, the total Contract Price of Rs. ----- only) being the sum stated in the letter of Acceptance(LOA) subject to such additions thereto or deductions there from as may be made under the provisions of the Contract at the times and in the manner prescribed by the Contract.
6. OBLIGATION OF THE CONTRACTOR
- The Contractor shall ensure full compliance with tax laws of India with regard to this Contract and shall be solely responsible for the same.

IN WITNESS OF WHEREOF the parties hereto have caused their respective common seals to be hereunto affixed / (or have hereunto set their respective hands and seals) the day and year first above written.

For and on behalf of the Contractor SIGNED, SEALED AND DELIVERED	For and on behalf of the HITES SIGNED, SEALED AND DELIVERED
Signature of the authorized official	Signature of the authorized official
Name of the Contractor Stamp / Seal of the Contractor	Name of the official Stamp / Seal
in the presence of: Witness _____ Name _____ Address _____	in the presence of: Witness _____ Name _____ Address _____

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL FOR AUTHORIZED SIGNATORY (in stamp paper of appropriate value)

Know all men by these presents, we (Name of the Tenderer and address of their registered office) do hereby constitute, appoint and authorize Mr / Ms.....(name and residential address of Power of Attorney holder) who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for the Project and submission of all documents and providing information / responses to _____, representing us in all matters before _____, and generally dealing with _____ in all matters in connection with our proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For (name of authorised representative of firm)

Witness:.....

Accepted : (signature & details of POA holder)

Addition
Deletion.....
Correction.....
Over Writing.....

AFFIDAVIT

(To be prepared in a 100 rupee non-judicial stamp notarized, duly signed and sealed by the authorized signatory)

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that our firm M/s _____ have neither abandoned any contract awarded to us nor such works have been rescinded, during the last five years prior to the date of this application.
3. The undersigned also hereby confirm that M/s _____ have not been under blacklisting or debarred or penalised from bidding by any government agency or public sector undertaking or judicial authority/arbitration body as on last date of submission of bid
4. The undersigned hereby authorize (s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
5. The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the HITES.
6. The undersigned hereby confirmed that if the work is awarded to us, the work will be executed with utmost quality and in case of any rectification suggested by Client/HITES at any stage of work due to poor quality, the same will be re executed by us at free of cost.
7. The undersigned undertake that 'I/We have not altered/ modified the financial bid attached in the HITES e-tender portal. If it is found during the tender stage or later that the BOQ is modified by us, the HITES shall have the right to reject our bid'.
8. The undersigned hereby confirmed that 'The work if awarded to us will be directly executed by us and subcontractors will be employed only for specialized works after getting the concurrence of HITES'.
9. The Undersigned hereby confirm that we are not having any Litigation pending / in progress with HLL / HITES.
10. The Undersigned hereby confirm that we will provide required services during the Defect Liability Period and will provide warranty to the system as per tender requirement.
11. The Undersigned hereby confirmed that we have not suppressed any fact for being eligible to bid.

Signed by an Authorised Officer of the Firm

UNDERTAKING
(In letter head of bidder)

We do hereby indemnify HITES/Client, against all penal action that may be levied/effected by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority.

Signed by an Authorised Officer of the Firm

Addition
Deletion.....
Correction.....
Over Writing.....

Checklist**CHECK LIST OF DOCUMENTS TO BE SUBMITTED WITH THE BID****TECHNICAL PACKAGE - Part I**

S.No.	Name of Document	Mode of submission	Page No.
1.	Non-refundable fee of Rs. 5,900/-(inclusive of GST) only as e-tender processing fee	Online	
2.	Bid Security/EMD of Rs. 50,000/-		
3.	Form of bid and Appendix (Form A) for the bid		
4.	Power of Attorney (Form D) in favour of the person signing the Bid		
5.	Affidavit by Bidder (Form F) on a Rs.100/- non judicial stamp paper duly notarized, to this effect, as per prescribed format		
6.	Affidavit/ Indemnity / Undertaking (Form G)		
12.	Form "T-1" (Financial Information)		
13.	Form "T-2" (Details of works)		
14.	Form "T-3" (Project under execution of award)		
15.	Form "T-4" (Performance Report of Works)		
16.	Form "T-5" (Structure and Organization)		
17.	Copies of GST Registration as per clause 1.23/ ESI/EPF registration		
18.	Technical compliance sheet, data sheet / catalogues		
19.	All pages of the entire tender document/ Corrigendum/ addendum (if any)/ pre bid clarifications (if any) signed by the authorised person of the bidder/bidder.		
20.	EMD declaration form by MSME bidder		
21.	Any other document as specified in the tender document		

FINANCIAL PACKAGE COMPRISING OF:

S.No	Name of Document	Mode of submission	Page No.
1.	Signed bid / Price Bid (Bill of Quantities – Volume-V)	Online	

Volume -II
General Conditions of Contract (GCC)

Addition
Deletion.....
Correction.....
Over Writing.....

I. CONDITIONS OF CONTRACT

Definition:

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Client / HITES and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge of the Consultant appointed by the Client and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another
2. In the contract the following expressions shall, unless the context otherwise requires, have the meanings, thereby respectively assigned to them:-
 - i) The expressions **works or work** shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional. The **work(s)** shall also mean the work including survey, investigation, design, both permanent and temporary, or services to be carried out, designed, constructed, manufactured, fabricated, delivered to Site, erected, installed, completed, tested, commissioned, (including Integrated Testing and Commissioning) and remedying of any defects, and/ or supplied in accordance with the Contract and include Plant, Goods and Materials and their accessories and other necessary items/activities to complete the project/work.
 - ii) **Accepting Authority** shall mean the authority nominated by HITES
 - iii) The **Contractor** shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
 - iv) **“Client/ Owner”** shall mean Institute of Advanced Virology (IAV), an autonomous Institution under Science & Technology Department, Govt. of Kerala.
 - v) **“HITES”** shall mean HLL Infra Tech Services Ltd. (HITES), (100% Subsidiary of HLL Lifecare Ltd., A Government of India Enterprise) appointed as ‘Project Management Consultant’ by the Client for this project.
 - vi) **“Engineer in Charge”** (EIC) means the Engineer Officer as authorized by HITES / Client.
 - vii) **Expected risk(s) are** risks due to riots (other than those on account of the contractor’s employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any act of Client, damage from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Client of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Client’s faulty design of work.
 - viii) **Specifications** means the specifications followed in the area where the work is to be executed.

- ix) **Market rate** shall be the rate as decided by Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed plus 15% on cost of materials and labour to cover, all overheads and profits, provided that no extra overheads and profits shall be payable on the part(s) of work assigned to other agency(s) by the contractor as per terms of contract.
- x) **Schedule(s)** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the Government, with the amendments thereto issued upto the date of receipt of the tender.
- xi) The **“Site”** shall mean the land/ or place on, into or through which work is to be executed or any adjacent land, path or street which may be located or used for the purpose of carrying out the contract.
- xii) **“Tendered Value”/ “Contract Price”** means the value of the entire work as stipulated in the letter of award.
- xiii) **“GST”** shall mean Goods and Service Tax.
- xiv) **“Date of commencement of work”**: The date of commencement of work shall be the date of start as specified in NIT

Scope and performance

- 3. Where the context so requires, words imparting the singular only also include the plural or vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa
- 4. Heading and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
- 5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

Works to be carried out

- 6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The description given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage of materials, cartage and carriage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the full entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

Sufficiency of tender

- 7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and price quoted in the Schedule of Quantities, which rates and price shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.

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Discrepancies and Adjustment of errors

8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and specific conditions in preference to general conditions.
- i. In the case of discrepancy between the various documents, the following order of preference shall be observed: –
 - a) Description of Schedule of Quantities
 - b) SCC
 - b) GCC, NIT, ITB
 - c) Technical Specification
 - d) Tender Drawings
 - f) Indian Standard Specifications of B.I.S.
 - g) For items not covered by any of the above, the work shall be done, as per sound engineering practices and as directed by the Engineer-in-charge.
 - ii. If there are varying or conflicting provisions made in any one document forming Part of the contract, Accepting Authority shall be deciding authority with regard to the intention of the document and his decision shall be final and binding on the Contractor.

Any error in description, quantity or rate in schedule of quantities or any omission therefrom shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligation under the contract.

Signing of Contract

9. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

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II. CLAUSES OF CONTRACT

1. PERFORMANCE GUARANTEE

- (i) The contractor shall submit an irrevocable Performance Guarantee of 3% (Three percent) of the tendered value in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within 15days from the date of issue of letter of acceptance (LOA). Atleast 50% of this guarantee shall be in form of Treasury Fixed Deposit (Govt. of Kerala) and rest in form of BG from any scheduled commercial bank based in India or the State Bank of India in accordance with the form annexed hereto.

This period of 15 days for submission of Performance Guarantee can be further extended by the Engineer-in- Charge up to a maximum period of 7 days with a late fee @ 0.1% per day of Performance Guarantee amount beyond the period of 15 days, on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the HITES / Engineer-in-Charge.

- (ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus sixty days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. The Bank Guarantee shall be kept alive till the completion or extended period whichever is later and expenses of renewal thereof are the responsibility of the contractor.
- (iii) In the event of the default by contractor, Contract being determined or rescinded under provision of any of the Clause /Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the HITES/ Client

2. SECURITY DEPOSIT

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit HITES/ Client at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 3% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 3 % of the tendered value of the work. Such deductions will be made and held by HITES by way of Security Deposit unless he/ they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the HITES as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the HITES to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the contractor by HITES on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the Engineer-in-Charge, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The

security deposit shall be collected from the running bills of the contractor at the rates mentioned above. The Security Deposit as deducted above can be released against bank guarantee issued by a scheduled bank.

The security Deposit shall be returned to the Contractor only after successful completion of Defect Liability Period.

It is also a condition of contract that Security Deposit of the work shall be refunded if no labour complaint has been received from the Labour Officer till the due date of its payment. If a labour complaint is received during this period, the Engineer-In-Charge shall, after issue of notice in this regard to the Contractor, deduct the amount required to settle the complaint from his security deposit and refund the balance amount.

3. COMPENSATION FOR DELAY

The work must be completed in all respect within the stipulated time as per tender conditions. If the Contractor fails to maintain the required progress in terms of the agreed time and progress chart or to complete the work and clear the site on or before the date of completion of Contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the HITES / Client on account of such breach, pay as compensation, Liquidated damages @ maximum rate @ 1% (one percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of Contractor. Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work.

Such amount payable shall be recovered from the amount payable to the contractor / PBG/ SD available with HITES / Client.

4. MEASUREMENT OF WORKS

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance and will be maintained by the Engineer-in-Charge. The contractor has to maintain measurement book as per the direction of EIC.

5. PAYMENT TERMS

Bills shall be raised in the name of Client (IAV) Institute of Advanced Virology (IAV). The payments will be released to the contractor directly by the Client through bank transfer based on the certification of bills by HITES. Payment terms will be as follows:

- 70% on supply of materials at site on pro rata basis
- 20% after installation, testing & commissioning
- 10% after successful handing over

The amount admissible shall be paid by 35th working day by the IAV after of submission of certified bills by HITES to IAV.

Required documents for direct bank transfer shall be submitted by the Contractor to the Engineer-In-Charge / Client as per requirement.

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The final bill shall be submitted by the contractor, along with all supporting documents and as per SCC in the same manner as specified in interim bills within one months of physical completion of the work. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Final bill shall be paid within 3 months from the date of submission of bills with all supporting documents.

No bills shall be paid for the work till the licenses like registration with EPFO and ESIC and whichever applicable for the scope of work, are submitted by the contractor to the Engineer-in-charge.

All statutory payments in connection with the employment of the Workmen & Employees State Insurance for this work will be borne by the Contractor at the prevailing rates.

The contractor is the employer of all the workers engaged for this work and should therefore take all required registrations and pay premiums correctly to labour welfare funds/Employees State Insurance, PF etc

The Contractor shall also ensure the compliances of all statutory provisions by the sub-contractors, if any, engaged by contractor for above said work.

The contractor shall submit affidavit to indemnify and save harmless the Client / HITES and against all actions, suits, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the HITES by reasons of any act or omission of the Contractor, his agents or employees in connection with complying the provisions of the EPF, ESI, Labour laws etc as amended from time to time. All sums payable by way of compensation/ penalty/ damages/ interest on the outstanding amounts payable by the contractor shall be considered as reasonable and be payable by the contractor to the HITES immediately and if the contractor does not pay the amount immediately the same will be deducted from security deposit or earnest money or any other amount available with the HITES or any money payable to the Contractor by the HITES.

The deduction towards statutory deductions shall be changed if the government revises the rate. Any tax omitted, to be deducted in any part bill shall be deducted in the subsequent bills/final bill.

However, it shall be the responsibility of the contractor to ensure that all the statutory requirements like filing of returns etc. are met with as per the prevailing norms.

6. COMPLETION CERTIFICATE AND COMPLETION PLANS

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in- Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the

contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

7. No advances shall be paid to the contractor under any circumstances.
8. The rates quoted by the contractor are firm and fixed for the entire tenancy of the contract. The quoted rates shall be deemed to have included all components required for the successful installation, completion, commissioning and handing over of work as per the tender Specifications and BOQ.
9. Price escalation is not applicable in this contract.
10. The ESI and EPF contributions on the part of this Contract shall be paid by the Contractor and nothing shall be reimbursed by the Client/ HITES.
11. The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.
12. The Contractor(s) shall make their own arrangements for water and power required for the work and nothing extra will be paid for the same.
13. The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.
14. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract. Required supervisor, technicians, labourers and resources shall be deployed by the Contractor for the timely completion of work. The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.
15. The labour camp shall not be allowed to locate inside the proposed site. The Contractor shall make his own arrangements for the labour accommodation etc.

16. SETTLEMENTS OF DISPUTES

Arbitration shall not be a means of settlement of any dispute or claim out of this contract. All disputes and differences arising out of the contract may be resolved through discussions between the HITES and the Contractor within the purview of the contract agreement. If such discussions are not fruitful, the disputes shall be settled only by the Civil Court in whose jurisdiction the work covered by the contract is situated, or in whose jurisdiction the contract was entered into in case the work extended to the jurisdiction of more than one court.

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17. INSURANCE

Without limiting the Contractor's obligations and responsibilities stated elsewhere in the Contract, the Contractor shall at his own cost arrange, secure and maintain insurance in the joint names of the HITES and the contractor with any insurance company selected by the contractor and acceptable to HITES, in such a manner that the HITES and the contractor are covered for all time during the period of contract, i.e. time allowed for completion of works and extended period.

The insurance shall be affected in accordance with terms approved by the HITES and the contractor shall submit the insurance policies to the Engineer-In-Charge within one week of signing of the agreement along with the receipt of premium. The contractor shall timely pay and submit the receipts of payment of premiums for extensions of policies, if any. The insurance shall cover the following:-

- a) **Contractor's All Risks Insurance** : The contractor shall insure the work for a sum equivalent to the Contract value together with materials and Plant for incorporation therein, to the full replacement cost and it being understood that such insurance shall provide for compensation to be payable to rectify the loss or damage incurred, and, an additional sum of 15 (%) per-cent of such replacement cost to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature, and it being understood that such insurance shall provide for compensation to be payable to rectify the loss or damage incurred or such additional sums as specified and the interests of the HITES against ALL RISKS claims, proceedings, loss or damages, costs, charges and expenses from whatsoever cause arising out of or in consequence of the execution and maintenance of the work for which the contractor is responsible under the contract.
- b) **Workman Compensation & Employers Liability Insurance:** This insurance shall be effected for all the contractor's employees engaged in the performance of the contract. The HITES shall not be liable in respect of any damages or compensation payable at law in respect of or in consequence of any accident or injury to any workman or any other person in the employment of the contractor and the contractor shall indemnify and keep indemnified the HITES against all such damages and compensation and against all claims, demands, proceedings, costs, charges and expenses, whatsoever in respect or in relation thereof.
- c) **Third Party Insurance:** The contractor shall be responsible for making good to the satisfaction of the Engineer- in-Charge any loss or any damage to all structures and properties belonging to the HITES or being executed or procured or being procured by the HITES or of the other agencies within the premises of all work of the HITES if such loss or damage is due to fault and or the negligence or willful acts or omissions and commissions of the contractor, his employees, agents, representatives.

The contractor shall take sufficient care in moving his plants, equipment and materials from one place to another so that they do not cause any damage to any person or to the property of the HITES or any third party including overhead and underground cables and in the event of any damage resulting to the property of the HITES or to a third party during the movement of the aforesaid plant, equipment or materials, the cost of such damages including eventual loss of production, operation or services in any plant or

establishment as estimated by the HITES or ascertained or demanded by the third party, shall be borne by the contractor.

Before commencing the execution of the work, the contractor, shall insure and indemnify and keep the HITES harmless of all claims, against the contractor's liability for any materials or physical damage, loss or injury which may occur to any property, including that of the HITES or to any person including any employee of HITES, or arising out of the execution of the work or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to (a) above. Such insurance shall be effected for an amount sufficient to cover such risks. The terms shall include a provision whereby, in the event of any claim in respect of which the contractor, would be entitled to receive indemnify under the policy being brought or made against the HITES, the insurer willfully indemnify HITES against such claims and any costs, charges and expenses in respect thereof.

- d) The Contractor shall also at times indemnify the HITES against all claims, damages or compensation under the provisions of Payment or Wages Act, 1936, Minimum Wages Act, 1948, Employer's Liability Act, 1938, the Workman's Compensation Act, 1947, Industrial Disputes Act, 1947 and Maternity Benefit Act, 1961, or any modification thereof or any other law relating thereof and rules made there under from time to time.
- e) The Contractor shall also at his own cost carry and maintain any and all other insurance(s) which he may be required for the Contractor's Equipment and other things brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.

The Contractor shall prove to the Engineer-in-charge from time to time he has taken out all the insurance policies referred to above and has paid the necessary premiums for keeping the policies alive till all time during the period of contract i.e. the time period allowed for completion of work and extended period.

The aforesaid insurance policies shall provide that they shall not be cancelled till the Engineer- in-charge has agreed for cancellation.

Remedy on the contractor's failure to insure: If the contractor shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the terms of the contract then and in any such case Engineer-in-charge may without being bound to, effect and keep in force any such insurance and pay such premium or premiums, as may be necessary for that purpose and from time to time deduct the amount so paid by the Engineer-in-charge from any moneys due or which may become due to the contractor or recover the same as a debt due from the contractor.

VOLUME III
SPECIAL CONDITIONS OF CONTRACT

Addition
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1. SCOPE OF WORK

Supply, Installation, Testing & Commissioning, of 130 kW Grid Connected Rooftop Solar Photovoltaic Power Plant, integration with existing electrical system and successful handing over to Virology Institute, Thonnakkal, Trivandrum, Kerala with three years of defects liability period (DLP).

Scope of works includes the following:

- a. PV modules
- b. MPPT Inverters
- c. Communication system
- d. DC distribution system
- e. AC distribution system
- f. Power / Communication /Control cables of armoured and solar grade as applicable
- g. Lighting protection system
- h. Earthing system
- i. Cable tray
- j. Supporting structure suitably designed to withstand wind load & considering the structural stability of existing building
- k. Electrical Scheme Approval from Statutory Authorities
- l. Structural design approval from Engineer In Charge

The bidder / contractor will have to rectify any defects developed during the DLP of three years at their own cost, failing which the Client / HITES will rectify same at the risk and cost of the contractor.

PV modules must have performance warranty for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

2. APPROVALS

The contractor shall prepare and submit all the relevant documents, drawings & test certificates as per the requirement of Kerala State Electrical Inspectorate and Kerala State Electricity Board Ltd to get the installation approved before commissioning system.

3. STANDARDS & CODES

I. PV Module:

- a. MNRE listing
- b. CE / TUV International Certificate
- c. MCS / Clean Energy Council / CEC Listed
- d. ISO 9001:2008 & ISO 14001:2004
- e. OHSAS 18001:2007
- f. IEC 61215 / IEC 61730-1&2 / UL 1730 /UL 61730 / IEC 6170 / IEC 62716

II. MPPT Inverter:

- a. EN 50530
- b. IEC 61683 / IS 61683
- c. IEC 60068-2 (1, 2, 14, 30) /Equivalent BIS Std
- d. IEC 62109-1, IEC 62109-2
- e. VDE 0126- 1-1, IEC 60255.5 / IEC 60255.27 / IEC 62116

III. Surge Protection: IEC 60364-5-53 & 50539-11

IV. Earthing system : IS 3043:2018

V. Cables : IS 7098 part 2

VI. Cable trays: IS 1079;1973 & IS 513: 1994

4. TEST CERTIFICATES AND REPORTS TO BE FURNISHED

- a. Test Certificates / Reports NABL accredited laboratory or MNRE approved test centers for relevant IEC / equivalent BIS standard for PV modules shall be furnished
- b. Type Test Certificates shall be provided for the solar modules and the solar grid inverters to provide evidence of compliance with standards as specified in relevant articles of this Technical Specification. HITES/CLIENT reserves the right to ask for additional test certificates or (random) tests to establish compliance with the specified standards.

5. EXISTING ELECTRICAL SYSTEM

The bidder shall visit the campus and understand the scope of works before submitting his bid.

The main single line diagram of existing electrical power supply is attached for reference.

The bidder shall include all necessary works to connect the proposed solar PV station with the existing electrical system to make the system On grid.

6. STRUCTURAL WORK FOR SOLAR PV STATION

GI roofing is already installed in the terrace of the Institute of virology, Thonnakkal. All necessary drawings and details of the existing structural work is available with client.

The design and installation of structural frame work and ladder system for the proposed 130kW solar PV station shall be done by the contractor. The design of structural frame work for the solar PV station shall be in such a way that the load shall be on the existing RCC column and not on the existing truss work.

Necessary horizontal & vertical ladders and space shall be provided to serve the purpose of routine maintenance and access for cleaning the PV modules.

An indicative design of the system is attached as Annexure for reference purpose only. However bidder shall do required modification based on the actual requirement and site condition.

Work shall be commenced only after approval of design of structural work by the engineer in charge.

7. QUALITY AND WORKMANSHIP

Solar PV modules shall be designed to last for minimum 25 years. It is therefore essential that all system components and parts, including the mounting structures, cables, junction boxes, distribution boxes, clamps nuts & bolts and other parts also have a life cycle of at least 25 years. Therefore all works shall be undertaken with the highest levels of quality and

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workmanship. During inspection special attention will be given to neatness of work execution and conformity with quality and safety norms.

Non-compliant works will have to be redone at the cost of the contractor.

8. SUB-CONTRACTING

The Contractor shall not sub-contract the whole of the contract. The Contractor shall not sub-contract any part of the works without the written consent of the HITES and such consent, if given, shall not relieve the Contractor from any liability or obligation under the contract and the Contractor shall be responsible for the acts, defaults and neglects of the sub-Contractor, his agents, employees or workmen as fully as if they were the acts, defaults or neglects of the Contractor or his agents, servants, or workmen.

9. DOCUMENTATION

One set of operation manuals complete with drawing, parts list (with part codes) circuit diagrams with list ratings of components and list of do's and don'ts for the main equipment as well as the sub-systems

One set of maintenance manuals with full information on drawings, circuit diagrams, list and suppliers address for bought out parts, troubleshooting charts, programs of built-in controllers etc. for the main equipments as well as for the sub-system

These manuals should be in the form of hard (printed) copy in English Language as well as in electronic storage form (disc pen drive etc.)

The contractor shall supply the following documentation also:

- a. System description with working principles
- b. System single line diagram
- c. Solar PV array lay-out
- d. Routing diagram of cables and wires
- e. Data sheets and user manuals of the solar PV panels and the solar grid-tie inverter
- f. A system operation and maintenance manual
- g. Name, address, mobile number and email address of the service centre to be contacted in case of failure or complaint
- h. Warranty cards
- i. Maintenance Register

10. TENDER DRAWINGS

The tender drawings appended to the tender document is only for guidance of the contractor. The contractor shall plan and design all services and prepare shop drawings. The shop drawings shall cover, but not limited to, the extent and general arrangements of the fixtures, devices, wiring etc.

The work shall be executed as indicated in the approved drawings, however any minor changes found essential to co-ordinate the installation of this work with the other trades shall be made in consultation with the Engineer-in-charge.

Any discrepancies noticed shall be reported to the Engineer-in-charge for clarification. In case of failure to do so Contractor shall not be entitled to any cost for omissions or defects in solar PV Station drawings due to any conflict with other services work.

Any information/data shown/not shown in these drawings shall not relieve the contractor of his responsibility to carry out the work as per the specifications. Additional information required by the bidder for successfully completing the work shall be obtained by him.

The contractor shall procure such equipment/ materials as per list of the approved makes with prior approval of Engineer-In-Charge. For all non-specified items, approval of the HITES shall be obtained prior to procurement of the same. HITES shall in no way be liable for rejection of the any material due to poor quality, poor workmanship, poor material etc.

Structural Stability Certificate of the existing building where the Solar System is to be installed is also attached for reference.

11. MATERIALS & EQUIPMENT AND APPROVAL

All the materials and equipment shall be of the approved make and design. Unless otherwise called for any approval by Engineer-in-Charge, only the best quality materials and equipment shall be used.

All materials and equipment shall comply with relevant standards as per technical specifications as applicable, and shall be of the make and design approved by the Engineer-in-charge. Unless otherwise called for, only the best Grade of materials and equipment shall be used. The Contractor shall be responsible for the safe custody of all materials and equipments till these are taken over by CLIENT/HITES and shall insure them against theft, damage by fire, earth quake etc.

A list of items of materials and equipment, together with a sample of each shall be submitted to the Engineer-in-charge for his approval and shall be kept in the sample box.

All materials used on the works shall be new and of the approved quality, conforming to the relevant specifications. Prior approval shall be obtained in writing from the Engineer- in-charge for all materials proposed and when approved, sample shall be duly identified and labelled, it shall be deposited with the by Engineer-in-charge/ and shall be kept in the sample room at Site

12. INSPECTION, TESTING AND INSPECTION CERTIFICATE

The Client / HITES or duly authorized representative shall have at all reasonable times free access to the Contractor/ Manufacturer's premises or works and shall have the power at all reasonable times to inspect and examine the materials and workmanship of the works during its manufacture or erection, if part of the works is being manufactured or assembled at other premises or works, the Contractor shall obtain permission to inspect as if the works were manufactured or assembled on the Contractor's own premises or works. Inspection may be made at any stage of manufacture, dispatch or at site at the option of the HITES and the equipment if found unsatisfactory due to bad workmanship or quality, material is liable to be rejected.

The contractor shall inform HITES within fifteen (15) days from the date of inspection or as defined, inform in writing to the Contractor of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objections and make the necessary modifications accordingly.

For tests whether at the premises or at the works of the Contractor or of any Sub-Contractor, the Contractor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be required by HITES or this authorized representative to carry out effectively such tests of the equipment in accordance with the Specification.

The inspection by HITES and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the Contractor in respect of the agreed quality assurance programme forming a part of the Contract.

The HITES will have the right of having at his own expenses any other tests(s) of reasonable nature carried out at contractor's premises or at site or in any other place in addition of aforesaid type and routine tests to satisfy that the material comply with the specifications. The HITES reserves the right for getting any field tests not specified in respective sections of the technical specification conducted on the completely assembled equipment at site. The testing equipment for these tests shall be provided by the Contractor.

HITES reserves the right to waive off inspection of any equipment, items etc at its sole discretion.

Notwithstanding approval of tests or equipment by the by Engineer-in-charge, the Contractor shall be required to perform site tests and prove the correctness of ratings and performance of equipment / machinery and materials supplied and installed by the Contractor as per the Contract specifications and conditions. The Engineer-in-charge shall also have the power to order the material or work to be tested by an independent agency at the Contractor's expense in order to prove soundness & adequacy.

13. TESTING AND COMMISSIONING

The Contractor shall pay for and arrange without any cost to HITES/Client, all necessary balancing and testing equipment, instruments, materials, accessories, power, water, fuel and the requisite labour for testing. Any defects in materials and/ or in workmanship detected in the course of testing shall be rectified by the Contractor entirely at his own cost, to the satisfaction of the Engineer-in-charge. The installation shall be retested after rectification of defects and shall be commissioned only after approval by the Engineer-in-charge. All tests shall be carried out in the presence of the Engineer-in- charge or his Packaging

All the equipment shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection. While packing all the materials, the limitation from the point of view of availability of Railway wagon/truck/trailer sizes in India should be taken account of the Contractor shall be responsible for any loss or damage during transportation, handling and storage due to improper packing. Any demurrage and other such charges claimed by the transporters, railways etc. shall be to the account of the Contractor. HITES takes no responsibility of the availability of any special packaging/transporting arrangement.

14. TESTS

On completion of erection of the equipment, each item of the equipment shall be thoroughly cleaned and then inspected jointly by the HITES and the Contractor for correctness and completeness of installation and acceptability for leading to initial pre-commissioning tests at Site. The pre-commissioning tests to be performed as per relevant standards and shall be included in the Contractor's quality assurance programme.

15. COMPLETION DRAWINGS (AS BUILT DRAWINGS)

On completion of the work and before issue of certificate of virtual completion, the Contractor shall at his own cost submit to the Engineer-in-charge requisite sets of layout drawings drawn at the approved scale indicating the actual installations.

These drawings shall clearly indicate the complete plant layouts, and piping layouts, location wiring, exact location of all the concealed piping, location of devices/equipment etc. The Contractor shall also submit requisite sets of consolidated control diagrams, technical literature on all automatic controls and complete technical literature on all equipment and materials.

The Contractor shall mount a set of all consolidated control diagrams and all piping diagrams/Single Line diagrams in a frame with glass, and display in the central control room.

16. AS BUILT DRAWINGS

Also, the contractor shall submit soft copy of "As Built" drawings (in AutoCAD & PDF format) of the work including write up (trouble shooting, installation, operation and maintenance manual with instructions) incorporating all such changes and modifications during engineering and execution along with warrantee & guarantee certificates from manufacturers. As-Built Drawings for all buildings/ blocks/ facilities constructed shall be provided as following:

- General arrangement of solar PV modules on roof top
- Structural frame work details and drawings
- Schematic Drawings / Single line diagrams of Solar PV system
- KSEI / KSEB approved electrical single line diagram of Electrical scheme

17. CHECK LIST

The Contractor shall provide to the HITES/ Engineer-in-charge, 4 (four) copies of a comprehensive maintenance checklist. The checklist shall be a list of each piece of equipment in this Contract and shall provide to record the maintenance results and status of various equipments during the maintenance period. This list shall be updated every month at the time of inspection. The Contractor shall certify on this check list that he has examined each piece of equipment and that; it is operating as intended in the contract/ by the manufacturer, and that all necessary tests have been performed.

18. REPAIRS

All equipment that requires repairing shall be immediately serviced and repaired during the maintenance period. All spares/parts and labours shall be furnished by the contractor free of cost.

19. TRAINING OF PERSONNEL

The Contractor shall arrange for training of the HITES/ CLIENT's personnel prior to takeover of the project

20. SAFE CUSTODY AND STORAGE

Safe custody of all machinery and equipment dismantled, shifted & supplied by the Contractor shall be his own responsibility till the final taking over by the CLIENT/HITES.

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The Contractor should, therefore, employ sufficient staff for watch and ward at his own expenses. CLIENT/HITES may, however, allow the Contractor to use the building space for temporary storage of such equipment, if such space is available.

21. HANDLING, STORING AND INSTALLATION

In accordance with the specific installation instructions as shown on manufacturer's drawings or as directed by the HITES or his representative, the contractor shall unload, store, erect, install, wire, test and place into commercial use all the equipment included in the contract. Equipment shall be installed in a neat, workmanlike manner so that it is level, plumb, square and properly aligned and oriented.

Contractor shall follow the unloading and transporting procedure at site, as well as storing, testing and commissioning of the various equipment being procured by him separately. Contractor shall unload, transport, store, erect, test and commission the equipment as per instructions of the manufacturer's Engineer(s) and shall extend full co-operation to them.

In case of any doubt/ misunderstanding as to the correct interpretation of manufacturer's drawings or instructions, necessary clarifications shall be obtained from the HITES. Contractor shall be held responsible for any damage to the equipment consequent for not following manufacturer's drawings/instructions correctly.

Where assemblies are supplied in more than one section, Contractor shall make all necessary connections between sections. All components shall be protected against damage during unloading, transportation, storage, installation, testing and commissioning. Any equipment damaged due to negligence or carelessness or otherwise shall be replaced by the Contractor at his own expense.

The Contractor shall submit to the HITES every week, a report detailing all the receipts during the week. However, the Contractor shall be solely responsible for any shortages or damages in transit, handling and/or in storage and erection of the equipment at Site. Any demurrage, wharf age and other such charges claimed by the transporters, railways etc. shall be to the account of the Contractor.

The Contractor shall be fully responsible for the equipment/material until the same is handed over to the HITES in an operating condition after commissioning. Contractor shall be responsible for the maintenance of the equipment/material while in storage as well as after erection until taken over by HITES, as well as protection of the same against theft, element of nature, corrosion, damages etc.

The Contractor shall be responsible for making suitable indoor storage facilities, to store all equipment, which require indoor storage.

Exposed live parts shall be placed high enough above ground to meet the requirements of electrical and other statutory safety codes.

The minimum phase to earth, phase to phase and section clearance along with other technical parameters for the various voltage levels shall be maintained as per relevant IS codes.

22. PAYMENT TERMS

- 70% on supply of materials at site on pro rata basis
- 20% after installation, testing & commissioning
- 10% after successful handing over

VOLUME IV
TECHNICAL SPECIFICATIONS

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1. SPECIFICATIONS FOR SOLAR PANELS

The PV modules must conform to the latest edition of any of the following IEC /equivalent BIS Standards for PV module design qualification and type approval as per IEC 61215 / IS14286. In addition, the modules must conform to IEC 61730Part 1- requirements for construction & Part 2 – requirements for testing, forsafety qualification.

PV modules must also qualify Salt Mist Corrosion Testing asper IEC 61701 / IS 61701.

Each PV module must use a RF identification tag (RFID), which shall bemandatory placed inside the module laminate and must contain the following information:

- a. Name of the manufacturer of PV Module
- b. Name of the Manufacturer of Solar cells
- c. Month and year of the manufacture (separately for solar cells and module)
- d. Country of origin (separately for solar cells and module)
- e. I-V curve for the module
- f. Peak Wattage, Im, Vm and fill factor (FF) Voc, Isc for the module
- g. Unique Serial No and Model No of the module
- h. Date and year of obtaining IEC PV module qualification certificate
- i. Name of the test lab issuing IEC certificate
- j. Other relevant information on traceability of solar cells and module as per ISO 9000 series

PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. Also they must be warranted for workmanship and material for 10 years

2. FEATURES

- a. Screw-less frame for high mechanical strength
- b. Superior reliability with IP 65 protection in all junction boxes
- c. Greater than 15 micron anodization layer on aluminium frame to protect rusting ofmetal due to moisture and improve the insulation of module
- d. Superior module efficiency as per International Benchmarks
- e. Positive power tolerance
- f. PID tested modules with long-term reliability
- g. Glass with anti-reflective coating to improve light transmission
- h. Salt, Mist, Ammonia, Blowing sand and Hail resistant
- i. IP 67 rated MC4 compatible connectors
- j. Excellent performance in low light
- k. Sand, Salt, Mist, Ammonia, Dust& Storm Resistant.

3. TEST REQUIRED FOR SOLAR PV MODULES

- a. Thermal cycling test.
- b. Damp heat test
- c. Wet leakage current test.
- d. Potential induced degradation test.
- e. Solar cells: Cell tester.
- f. EVA: Gel content test and pressure cooker test.
- g. Glass: Fragmentation test.

- h. Frame: Frame anodizing test.
- i. Junction box: IP 65 test.
- j. Ribbon: Elongation test and camber test.
- k. RTV Silicone sealant: Adhesiveness test.
- l. Electroluminescence test to detect micro cracks.
- m. Ammonia test for anti-corrosion.

4. ACCEPTANCE CRITERIA

Each module is to be tested for electro luminescence test (on site) to detect micro cracks and pass the test as per IEC norms and also record of data

Out of 240 no. modules 10 no modules the test should be carried out in any NABL or MNRE accredited test centers.

For the above (i.e.10 no modules) special packing if required may be done to shift the panels from manufactory site to testing lab

Sufficient competent man power to be deployed at test centre for sufficient days to unpack and repack the modules after the test

Contractor has to coordinate with HITES/CLIENT for all the testing activity

Actual all testing charges will be reimbursed by HITES/CLIENT

1no. module from each batch production will be tested for PID (1000V) & LID test also need to be carried out test results shall be submitted to HITES/CLIENT

5. SURGE PROTECTION

Surge protection shall be provided on the DC side and the AC side of the solar system. The DC surge protection devices (SPDs) shall be installed in the DC distribution box adjacent to the solar grid-tie inverter. The AC SPDs shall be installed in the AC distribution box adjacent to the solar grid-tie inverter. The SPDs earthing terminal shall be connected to earth through dedicated earthing system.

The SPDs shall be of type 2 as per IEC 60364-5-53

6. GENERAL SPECIFICATIONS FOR DC & AC DISTRIBUTION BOXES

These specifications cover the requirement of design, supply, installation, testing and commissioning of the DC& AC distribution boxes.

The item specified herein, unless otherwise stated shall conform to the relevant and latest revisions of Indian standards and Indian Electricity Rules.

The DC & AC distribution boxes shall be designed for operation in high ambient temperature up to 50 degrees centigrade and high humidity of up to 95% and tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, maintenance and servicing.

The DC & AC distribution boxes shall be of metal clad, cubicle, outdoor, weatherproof, free standing type suitable for mounting on MS frame / concrete platform, with adequate size for

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mounting the isolator switches/MCBs etc and ease of cable terminations. Dust and moisture ingress protected, the degree of protection shall be IP- 66 as specified in IS-2147.

The sheet steel cubicle shall have hinged front access door with easy operating fasteners. All the doors and covers shall be heavily gasketed to make the compartment dust and moisture tight. Door hinges shall be of concealed type.

The cubicle shall be of minimum 2 mm thick sheet steel. All sheet steel work forming the exterior shall be smoothly finished, levelled and free from flaws. The corners shall be rounded. The minimum thickness of gland plates shall be 3mm

All insulating materials used in the construction of the equipment shall be non hygroscopic duly treated to withstand the effect of high humidity, high temperature and tropical ambient service conditions.

All doors / covers providing access to live parts shall be provided with tool operated fasteners to prevent unauthorized access. Provisions shall be made for permanently earthing the frames and other metal parts by two independent connections.

All steel works used in the construction of the DC & AC distribution boxes shall have undergone a suitable rigorous metal treatment process so as to remove oxide scales and rust formation and to facilitate a durable coating of the paint on the metal surfaces and also to prevent the spreading of rust, in the event of the paint film being mechanically damaged.

Two coats of anti corrosive primer followed by a finishing coat of epoxy powder coating of the shade 631 of IS: 5 or RAL 7035 (ie Siemens grey) shall be given. The total thickness of paint shall not be less than 25 microns.

The bus bars shall be housed in the cubicle at convenient locations with provision for access to the buses from the front. The bus bar shall be suitably rated for the expected short circuit levels.

The neutral as well as the earth bus shall be capable of withstanding the above fault level.

Large clearance and creeping distance shall be provided on the bus bar system to minimize the possibility of a fault.

High tension bolts, nuts and spring washers shall be provided at all bus bar joints.

The continuous rating of the aluminium bus bar shall be 0.7A/sq.mm. Maximum temperature of the bus and the connections shall not exceed 85 degrees centigrade.

The bus bars shall be of liberal design. The main phase bus bars shall have continuous current rating and the neutral bus bars shall have continuous rating of at 100% of phase bus bars.

All bus bars and tapings shall be provided with colour coded heat shrinkable sleeves for phase / polarity identification.

Installation Testing and commissioning The DB boxes shall be installed over the MS frame fixed / grouted on a PCC platform including necessary bolts and nuts.

Proper earthing shall be done using two independent GI strip of size 25x3 mm.

The MS structure shall be painted with two coats of red oxide primer after cleaning the surfaces thoroughly and two 77 coats of anticorrosive epoxy paint of proper shade

7. SPECIFICATIONS FOR GRID-TIE STRING INVERTERS

The solar grid-tie inverter converts the DC power output of the solar PV modules to grid-compatible AC power and the total output power (AC) of the grid-tie inverters shall match the solar PV plant capacity while achieving optimum system efficiency. Operating ambient temperature range shall be considered at -10 degree C +60 degree C and relative humidity of 0 – 95%.

Power Conditioners / Inverters including MPPT (EN 50530) and Protections shall comply Efficiency Measurements as per IEC 61683 / IS 61683 and Environmental Testing as per IEC 60068-2 (1, 2, 14, 30) /Equivalent BIS Std.

In case if the charge controller is in-built in the inverter, no separate IEC 62093 test is required. Additionally the inverters shall conform to the relevant national / international Electrical Safety Standards wherever applicable as per IEC 62109-1, IEC 62109-2 and anti-islanding protection as per VDE 0126-1-1, IEC 60255.5 / IEC 60255.27 / IEC 62116.

8. COMMUNICATION INTERFACE

The project envisages a communication interface which shall be able to support:

- Real time data logging
- Event logging
- Supervisory control
- Operational modes
- Set point editing

Communication System shall be an integral part of inverter. All current values, previous values up to 40 days and the average values of major parameters shall be available on the digital bus.

The following parameters shall be measured, displayed and recorded/logged. Daily plotting of graphs for various parameters shall also be available on demand.

- a. 15 minute, Daily, monthly & Annual energy generated by the solar system(kWh)
- b. Solar system temperature
- c. Ambient temperature
- d. AC and DC side voltage and currents
- e. Power factor on AC side
- f. DC injection into the grid
- g. Total Current Harmonics distortion in the AC side
- h. Total Voltage Harmonic distortion in AC side
- i. Efficiency of the inverter
- j. Solar system efficiency
- k. Display of I-V curve of the solar system
- l. Any other parameter considered necessary by supplier of the solar PV system based on prudent practice.

9. SURGE PROTECTION

Surge protection shall be provided on the DC side and the AC side of the solar system. The DC surge protection devices (SPDs) shall be installed in the DC distribution box adjacent to the solar grid-tie inverter. The AC SPDs shall be installed in the AC distribution box adjacent to the solar grid-tie inverter. The SPDs earthing terminal shall be connected to earth through dedicated earthing system. The SPDs shall be of type 2 as per IEC 60364-5-53 & 50539-11

10. EARTHING

The PV module structure components shall be electrically interconnected and shall be grounded. Earthing shall be done in accordance with IS 3043-2018

A minimum of two separate dedicated and interconnected earth electrodes must be used for the earthing of the solar PV system support structure and distribution boxes with a combined total earth resistance not exceeding five ohms. The earth electrodes shall have a precast concrete enclosure with a removable lid for inspection and maintenance. The entire earthing system shall comprise noncorrosive components.

The system shall be provided with adequate earthing points. This includes earthing for lightning, system grounding, separately for DC and AC active points. The frame of the PV module array should be earthed at multiple points.

To prevent the damage due to lightning, one terminal of the lightning protection arrangement by way of proper earthing is to be provided. The provision for lightning & surge protection of the SPV power source is separately earthed.

In case the SPV Array installed in the field separate earth has to be provided for SPV array and system at closer points of the array and the equipment respectively. It shall be ensured that all the earthing are bonded together to prevent the development of potential difference between any two earthing.

Earth resistance shall not be more than five ohms. It shall be ensured that all the earthing are bonded together to make them at the same potential.

The array structure of the PV module shall be grounded properly using adequate number of earthing pits. All metal casing / shielding of the plant shall be thoroughly grounded to ensure safety of the personal and power plant.

The SPV Power Plant shall be provided with lightning and over voltage protection. The principal aim in this protection is to reduce the over voltage to a tolerable value before it reaches the PV or other sub-systems components. The source of over voltage can be lightning or any other atmospheric disturbance.

The Lighting protection system shall be installed as per IEC 62305 guidelines.

The system shall consist of horizontal runs of lightning conductors (either Aluminium or GI), down conductors (either Aluminium or GI), special accessories to connect to structural steel work as well as solar PV module, air terminal, strike pad, test plug, counter and earth pits. All earth pits shall be interconnected with appropriate size of earthing conductor below ground.

Necessary foundation for holding the lightning arrestor is to be arranged keeping in view the wind speed of the site and flexibility in maintenance in future. Latest grounding equipment should be used for this purpose.

Each lightning arrestor shall have to be earthed through suitable size earth bus with earth pits.. Electrode shall be made of GI pipe having a clean surface and not covered with paint, enamel or poorly conducting material. Galvanized pipe shall not be smaller than 38 mm ID. Electrodes shall be embedded below permanent moisture level. The length of pipe electrodes shall not be less than 2.5m.

If rock is encountered, pipes shall be driven to a length of not less than 2.5m with suitable inclination. Pipe shall be in one piece and deeply driven.

To reduce the depth of burial of an electrode without increasing the resistance, a number of rods or pipes may have to be connected together in parallel. The distance between two electrodes in such a case shall not be less than twice the length of the electrode. The earthing lead shall be connected by means of a through bolt, nuts and washers and cable socket.

The earth resistance of each electrode shall be measured by using a reliable and calibrated earth Megger and recorded. The values shall be as per IS/IE rules

11. SOLAR PV MODULES MOUNTING STRUCTURE

The PV modules shall be mounted on fixed metallic structures having adequate strength and appropriate design, which can withstand the load of the modules and high wind velocities. The support structure shall be hot dip galvanized steel or aluminium alloy.

Detailed specifications for the mounting structure are given below:

- a. Wind velocity withstanding capacity: As per site conditions
- b. Structure material : Class-B hot dip galvanized steel with a minimum galvanization thickness of 120 microns or aluminium alloy.
- c. Bolts, nuts, fasteners, and panel mounting clamps shall be of galvanized steel and quality certified by CE and manufactured in ISO 9001 company
- d. The water proofing layer shall be repaired / rebuilt to the original composition and texture wherever broken / disturbed during the installation process of the solar panels and their mounting structures.
- e. The ballast / pedestal holding the anchor bolts and the joint between it and the water proofing layer has to be covered with a suitable water proofing layer.
- f. The structures shall be designed for simple mechanical on-site installation. There shall be no requirement of welding or complex machinery at the installation site. Minimum distance between roof edge and mounting structure shall be 0.6m.
- g. Access for panel cleaning and maintenance shall be provided. All solar panels must be accessible from the top for cleaning and from the bottom for access to the module junction box.
- h. Panels shall be installed in North - south orientation with a fixed tilt angle depending on the location co-ordinates of, Nano Center (Lat: 17.3045 & Long: 78.5065) and Sol-Gel (Lat: 17.3034 & Long: 78.5073) buildings.
- i. The prospective Installer shall specify installation details of the solar PV modules and the support structures with lay-out drawings, other technical details and array connection diagrams.
- j. Installation & Commissioning and Safety: the installation of the PV arrays, Inverters and other components should be as per the IEC 61173, IEC 62548, IEC61140 and IEC 62109 - 1 & 2 standards.

- k. All materials used for connecting the earth lead with electrode shall be of GI in case of GI pipe and GI plate electrodes, and of tinned brass in case of copperplate electrode. The earthing lead shall be securely connected at the other end to the main board.
- l. The earthing lead from electrode onwards shall be suitably protected against mechanical injury by routing the earth wire / strip through a suitable size of GI pipe wherever necessary.
- m. All medium voltage equipment shall be earthed by two separate and distinct connections with the earth. All materials, fittings etc. used in earthing shall conform to Indian standard specifications wherever they exist. In the case of materials for which Indian standard specifications do not exist, such material shall be approved by the HITES.
- n. The earth electrode shall be kept free from paint, enamel and grease. It shall be ensured that similar materials are used for respective earth electrodes and earth conductors. Earth electrode shall not be installed in proximity to a metal fence.
- o. Copper/GI strip shall be connected to the respective earth electrodes, either by brazing or welding respectively. The Copper/GI strip shall be jointed only either by brazing or by riveting at the end of over lapping portions. The overlap shall not be less than 50 mm.
- p. Earthing clamps used for supporting earth strips shall be made of such materials so as to avoid bimetallic action between strip and clamps. The installation, commissioning & trials to demonstrate proper functioning of the all the systems will be the responsibility of the supplier. The bidders have to supply the calibration reports for all sensors from the authorized calibration laboratory.

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12. TECHNICAL DATA SHEET

TECHNICAL SPECIFICATION – SOLAR STRING INVERTER			
SI No	Parameter	100kW inverter	30kW inverter
	Input		
1	Absolute maximum DC input voltage , V _{max,abs}	1000V	1100V
2	Start-up DC input voltage , V _{start}	420 V (400...500 V)	250...500V (default 430V)
3	Operating DC input voltage range (V _{dc min} ...V _{dc max})	360...1000 V	200-1000 V
4	Rated DC input voltage, V _{dcr}	620 V	620V
5	Rated DC input power (P _{dcr})	102000 W (Typical)	30600 W
6	Number of independent MPPT	6 or More	4
7	MPPT input DC voltage range at P _{acr} (V _{MPPTmin} ...V _{MPPTmax})	480V to850 V (symmetrical load)	460V to 850V
8	Maximum DC input power for each MPPT, P _{MPPT,max}	21000 W [585 V≤V _{MPPT} ≤850 V] Typical	2x12000W + 2x10000W
9	Maximum DC input current for each MPPT, I _{dcmax}	36 A	2x26A + 2x22A
10	Maximum input short circuit current for each MPPT, I _{scmax}	50 A	40A
11	Number of DC input pairs for each MPPT	4	2
12	DC connection type	PV quick fit connector	PV quick fit connector
	Input protection		
13	Reverse polarity protection	Yes, from limited current source	Yes, from limited current source
14	Input over voltage protection for each MPPT-surge arrester with monitoring	SPD Type II	SPD Type II
15	Photovoltaic array isolation control	Yes, acc. to IEC 62109-2	Yes, acc. to IEC 62109-2
16	Residual Current Monitoring Unit (leakage current protection)	Yes, acc. to IEC 62109-2	Yes, acc. to IEC 62109-2
17	Input current monitoring	Single string level (24ch.): / MPPT level	Single string level (24ch.): / MPPT level

	Output side		
18	AC Grid connection type	Three phase 3W+PE or 4W+PE	Three phase 3W+PE or 4W+PE
19	Rated AC power (P_{acr} @ $\cos\phi=1$)	100000 W	30000 W
20	Maximum AC output power (P_{acmax} @ $\cos\phi=1$)	100000 W	33000 W
21	Maximum apparent power (S_{max})	100000 VA	33000 VA
22	Rated AC grid voltage ($V_{ac,r}$)	400 V	380 V to 400 V
23	Maximum AC output current ($I_{ac,max}$)	145 A	50.1 A
24	Rated output frequency (fr)	50 Hz / 60 Hz	50 Hz / 60 Hz
25	Output frequency range (fmin...fmax)	45...55 Hz / 55...65 Hz	47.. 53 Hz
26	Nominal power factor and adjustable range	> 0.995 inductive/capacitive with maximum S_{max}	> 0.995 inductive/capacitive with maximum S_{max}
27	Total current harmonic distortion	< 3%	< 3%
28	AC connection type	Provided bar for lug connections M10, single core cable glands 4xM40 and M25, multi core cable gland M63 as option	Detachable terminal block
	Output protection		
29	Anti-islanding protection	According to local standard	According to local standard
30	Maximum external AC overcurrent protection	225 A	80A
31	Output overvoltage protection - replaceable surge protection device	SPD Type 2 with monitoring	SPD Type 2 with monitoring
	Operating performance		
32	Maximum efficiency (η_{max})	$\geq 98.4\%$	$\geq 98.4\%$
33	Weighted efficiency (EURO)	$\geq 98.2\%$	$\geq 98.2\%$
	Communication		
34	Embedded communication interfaces	1x RS485, 2x Ethernet (RJ45), WLAN (IEEE802.11 b/g/n @ 2,4 GHz)	1x RS485, 2x Ethernet (RJ45)

35	User interface	LEDs, Web User Interface	LEDs, Web User Interface
36	Communication protocol	Modbus RTU/TCP	Modbus RTU/TCP
37	Commissioning tool	Web User Interface, Mobile APP/APP for plant level	Web User Interface, Mobile APP/APP for plant level
	Environmental		
38	Operating ambient temperature range	-25...+60°C /-13...140°F with derating above 40°C / 104°F	-25...+60°C /-13...140°F with derating above 40°C / 104°F
39	Relative humidity	4%...100% condensing	4%...100% condensing
40	Sound pressure level, typical	68dB(A)@ 1m	68dB(A)@ 1m
41	Maximum operating altitude without derating	2000 m / 6560 ft	2000 m / 6560 ft
	Physical		
42	Environmental protection rating	IP 66	IP 66
43	Cooling		
44	Mounting system	Mounting bracket vertical & horizontal support	Single mounting bracket(vertical & Horizontal)
45	Safety and EMC standard	IEC/EN 62109-1,IEC/EN 62109-2, EN 61000-6-2, EN 61000-6-4	IEC/EN 62109-1, IEC/EN 62109-2, EN 61000-6-2, EN 61000-6-4

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SOLAR PV MODULE		
Sl No	Parameter	Value
1	Rated power at STC	535 to 40 watts
2	Solar Cell Type	Mono PERC (Passivated Emitter and Rear Cell)
3	Performance	STC Irradiance 1000W/m ² , Module Temperature 25°C and AM 1.5
4	Power tolerance	+ 5 watts
5	Module Efficiency at STC	Minimum 21 %
6	Open Circuit Voltage, VOC, +/- 10%	Minimum 49.3 volts
7	Short circuit current, ISC, +/- 10%	Minimum 13.59 amp
8	Maximum power voltage, VPM,	41.3 volts
9	Maximum power current, IPM	12.9 Amp
10	Efficiency at low radiance measured at STC	Min 95%
11	Dimensions (L x W x H)	As per manufacturer's data
12	Weight	As per manufacturer's data
13	Front glass	3.2 mm high transmission, anti reflective coating tempered glass
14	Material for Encapsulation	Ethylene Vinyl Acetate
15	Back sheet	Composite film, white
16	Junction box	IP68 rated, 3 split box
17	Cables	4 sq mm solar cables
18	Connectors	MC4 compatible
19	Operating temperature range	-40 Deg C to 60 Deg C
20	Protection class against electrical shock	II
21	Maximum reverse current	25 A
22	Mechanical load test	5400 Pa (Snow load), 2400 Pa (Wind load)
23	Frame	Anodized Aluminium Alloy, silver in colour
24	Warranty	10 years product warranty
		25 years product output warranty


13. APPROVED LIST OF MAKES

1	Solar PV module	Emmvee / Vikram / Renewsys / Waaree / Premium Energy
2	Grid Tie String Solar Inverter	ABB / EMERSON / SMA / Fronius / Solis / Delta
3	LT switch gear	Schneider / L & T / ABB / Siemens
4	Lightning protection system	Cape / OBO / Erico / Dehn
5	Cables	Polycab / Finolex / RR cable / Universal /
6	Structural steel	JSW / Tata / SAIL / VISAG
7	Net meter	L & T / Schneider / AE / Secure / Rishabh / Meco

Note:

The tenderer shall quote his rates on the basis of the price of the brand/make stipulated in the approved makes. The Client / HITES reserves the right to select any of the brands indicated in the "List of Approved Makes", in case of delay in delivery of ordered "make of item". The contractor cannot claim anything extra for the same.

14. STRUCTURAL STABILITY CERTIFICATE



**THE URALUNGAL LABOUR CONTRACT
CO-OPERATIVE SOCIETY LTD. NO. 10957**

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ULLCS/ENGG/SD/7159/2018-19 **Date:02/12/2022**

Structural Stability Certificate

With respect to the building work of "The Institute of Advance Virology at the Life Science Park ,Trivandrum",having G+1 floors storied building, I certify that the Design and Construction of Precast SuperStructure have been agreed to the following considerations:

1. Number of floors considered for the structural design of the Pre-fabricated building is G+1 Floors, and additional floors cannot be proposed.
2. Solar Panels with a load not greater than 40 Kg/Sq.M shall be stable.

The information given here is factually correct to the best of my knowledge and understanding.

Sincerely,
For Uralungal Labour Contract Co-operative Society Ltd.
HOD Structural Design Wing

