



अनुरक्षण एवं अभियांत्रिकी इकाई
MAINTENANCE & ENGINEERING UNIT
भाकृअनुप-भारतीय कृषि अनुसंधान संस्थान
ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE
नई दिल्ली-१२
NEW DELHI-12.



No. 31-35/22-23/ME Unit

Dated: 16.01.2024

e-TENDER NOTICE

Online quotation are hereby invited on behalf of the Director, IARI from the Contractors Registered with CPWD, MES, Railways, MCD, PWD or other Central/State Govt./Semi Govt or **Specialized Agencies**. The contractor must have valid PAN and GST registration number and having experience of two similar nature of works in last three years for the work mentioned below:

Name of work & location	Estimated cost (₹)	Earnest Money (₹)	Last date & time of bid submission	Date & time of bid opening
Renovation work of the old greenhouse by upgrading the retrofitting for an IOT-based automatically operated structure, Div. of CPCT, IARI	₹ 30,41,000.00	₹ 90,000.00	Upto 14:30 hours 11.03.2024	12.03.2024 at 15:00 hours

₹ 6,500/- (Rupees Six Thousand Five Hundred Only) should be in the form of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of **Director, IARI** payable at New Delhi. The original EMD shall be submitted to the Tender Inviting Authority on or before the last date and time of online bid submission. The details of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee physically sent, should tally with the details available in the scan copy and the data entered during the online bid submission time otherwise the uploaded bid will be rejected.

The Online Tender Documents are available on IARI Website www.iari.res.in & Central Portal www.eprocure.gov.in . Bids are to be submitted on central portal i.e. www.eprocure.gov.in .

Admn. Officer (Works)

Renovation work of the old greenhouse by upgrading the retrofitting for an IOT-based automatically operated structure.

Size of Polyhouse-28mx38m (1064sqm)

S.No.	Item specification	Qty	Unit	Rate	Amount
1	Supply & installation of 3 phase electrical panel with 125 amp incomer, single phase preventer, MPCBs, contractors, overload relay, RYB indicators, pump DOL feeder, auto and manual switched for manual and automatic operations HUB-controller with sensor calibration and IoT gateway (Central hub with controller to automate up to electrical devices.)	1	each	228000	228000
2	Supply and installation of IOT automation controller-8 pin output wireless intelligent control system with machine learning models for complete automation of electrical equipment, retractable shade net motors, irrigation pumps, fertigation pumps with cloud connectivity and wireless networking.	5	each	21300	106500
3	Supply & Installation of automatic roof screen/shading system having opening & Closing arrangement rolling shade-net/thermal screen & rollable poly film arrangement.	1000	sqm	460	460000
4	Supply & Installation of side roll up UV stabilized 200-micron transparent plastic film as curtains need to be provide up to 3.0m height for side ventilatio on all sides having automatic type motor operated crank mechanism opening and closing of curtains need also be provide 40mesh nylon insect proof nets (UV stabilized) of equivalent size need to be fixed inside the curtains. Anti flapping strips are suggested to ensure the smooth functioning of the curtain. a) 5 warp strength 80+ KGF (+/-5%) b) ELongation 22 (+/-2) c) Weft strength 80+ KGF(+/-5%) d) Elongation 22 (+/-2)	192	sqm	2300	441600
5	Supply & Installation of motor: Roto motive motor of 2 KW with box 72 gearbox alongwith the electric panel for control system of overhead shading arrangements with retractable automated rolling thermo-reflective screens protect against frost & Radiation providing uniform shade and reduced day temperature.	1	each	74000	74000
6	Supply and installation of anti corrosive, humidity resistant GI galvanized pipe of thickness 2mm, 50 mmx50 mm, 50mmx25mm, 25 mm x25mm 76 m length for OSG bearing block with 4 mm stainless steel wire rope for fabric movement and 6 mm to 8 mm GI wire rope for supports as per engineer in-charge.	950	kg	188	178600
7	Supply and installation soil moisture wireless sensors-sensing unit for measuring soil moisture in the growing region with 1 min response time, measuring range of 1-100%, accuracy + -5% operating temperature 0- 50°C.	6		11600	69600
8	Supply and installation of solenoid valves as per the engineer-in- charge.	8		7200	57600

9	Supply and installation of Hydroponic indoor grow lights is the ideal choice for growing indoor vegetables. They are typically available in a 3:1 or 4:1 red and blue ratio and offer the best 400-700 nm spectrum to the plant. Photosynthesis activity is highest in this range and plant energy is best utilized, supplied Hydroponic indoor grow light comes in strip form and they are high power, high PPF. Following are a few important features:				
a)	Lights are fitted with a very bright 5050 chipset				
b)	They are available in 3:1 and 4:1 option				
c)	They have a high PPF (Photosynthetic photo flux density) rating of 356-inch/m ² /s at a 6-inch distance. The higher the PPF, the higher the plant growth				
d)	power rating is 12w/meter				
e)	Hydroponic indoor grow light strip of sizes 3 or 5 meter standard size				
	They are typically used with NFT (nutrient film technique)	36	each	4000	144000
10	Supply and installation of an air circulation to maintain humidity/air circulation inside the poly house air circulation fan will be provided specification : S steel body, Impellor Dia.-550 mm, RPM: 1370 at 50 Hz, cfm=2970, Air capacity: 5046 m ³ /h, power: 0.33 hp, minium (Imported) fan with a contactor for controlling the action of the air circulation fan remotely as per the engineer in charge	6	each	12000	72000
11	Supply and installation of 12" exhaust fan with thermostat.	4	each	6300	25200
12	Supply and installation of CNC-Bot aluminum extrusions for the laying of tracks, gantry and z-axis with 5mm anodized aluminum plates to operate V with stainless steel rubber-sealed ball bearings. Injection molded UV-stabilized ABS plastic components stainless steel screws, tee nuts, spacers, and other hardware four NEMA 17 stepper motors with rotary encoders and cables GT2 timing belts and aluminum pulleys durable plastic cable carriers 8 mm stainless steel leadscrew and delrin block IP67 rainproof power supply with 110 and 220 V AC input raspberry Pi 4 and micros SD card farm-duino microcontroller with integrated trin-amic TMC 2130 stepper drivers and peripheral load detection circuitry having custom rainproof electronics enclosure universal tool mount and cable speed injector tool with a vaccum pump, tubing, seed bin, seed tray, seed troughs, seed trough holder and customizable lucer lock needles watering nozzle tool with solenoid valve, tubing and adapters for a standard US garden hose soil sensor tool weeding tool with customizable implements NEW: Rotary tool IP67 rainproof USB camera and mount two 3-slot tools-bays all tools needed for assembly.	1	each	648000	648000
13	Supply and installation of climate wireless sensing unit for measuring temp, and humidity inside the green house 1 min response time, temp accuracy of 0.2 degree celsius relative humidity accuracy of 1.5 % and device heat tolerance of 55 degree celcius	4	each	10600	42400

14	Supply and installation of light wireless sensors sensing unit for measuring lux inside greenhouse 1 min response time, lux range (1-65535 lx), small lux measurement variation (+/-20%)	4	each	11500	46000
15	Supply and installation of PVC 40 mm, 50 mm pipeline with PVC fittings & Accessories : heavy duty-including the PVC, elbow tee bend solvent cement, filter flanged, GI wires, etc. as per engineer in-charge.	50	m	230	11500
16	Supply and installation of water monitoring unit-wireless water monitoring unit for measuring EC, pH, water temperature, DO with pH measuring range of 0-14 and resolution of 0.01 conductivity range of 0-200K, and resolution of 1 micro siemens-The pH and conductivity readings are automatically temperature compensated auto temperature compensation for pH and conductivity.	2	each	182000	346000
17	Supply and installation Co2 wireless sensors-sensing unit for measuring Co2 inside green house 1 min response time, measuring range (0-5000ppm), operating temperature 0-50° C., operating humidity 0-95% preheat time 6 min.	4	each	18000	72000
				Total	3041000

Subject to be following terms & conditions:-

1. Income Tax, work Tax & work cess as per norms shall be recovered from the bill.
2. 1% water and electrical charges will be recovered from the bill if supplied by the Department.
3. The work shall start within 7 days from the date of award and complete within 1 months failing which a penalty @ 1% per day delay will be imposed on the bill amount maximum upto 10%.
4. All the materials, laboures, T&P etc. required will be arranged by the firms itself.
5. The Director, IARI has the right to reject any or all the quotation/tenders without assigning any reason.

The following documents (scan copy) must be furnished upload with the technical bid failing which tender will not be accepted at all.

1. GST registration/PAN card copy.
2. Specialized agencies, registration certificate of CPWD, MES, Railways, MCD, PWD or other central/state govt./semi govt.
3. Firm/companies should have ISO 9001:2015, 14001:2015.
4. Certificate declaring that the firm has not been debarred/black listed by the govt. deptt./ court of law for doing any business in india.
5. Bid security declaration document.
6. The tender documents duly signed by the concerned firm accepting the same should be attached with technical bid.
7. The firm should have experience of two similar nature of works in the last three years. Firm should submit experience certificate/orders in support.

Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Procurement Portal

1. Bidder should do Online Enrolment in this Portal using the option Click Here to Enroll available in the Home Page. Then the Digital Signature enrolment has to be done with the e-token, after logging into the portal. The e-token may be obtained from one of the authorized Certifying Authorities such as eMudhraCA/GNFC/IDRBT/MtnlTrustline/SafeScript/TCS.
2. Bidder then logs into the portal giving user id / password chosen during enrolment.
3. The e-token that is registered should be used by the bidder and should not be misused by others.
4. DSC once mapped to an account cannot be remapped to any other account. It can only be Inactivated.
5. The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under My Documents option and these can be selected as per tender requirements and then attached along with bid documents during bid submission. This will ensure lesser upload of bid documents.
6. After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as per the tender document, otherwise, the bid will be rejected.
7. The BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for that tender. Bidders are allowed to enter the Bidder Name and Values only.
8. If there are any clarifications, this may be obtained online through the e-Procurement Portal, or through the contact details given in the tender document. Bidder should take into account of the corrigendum published before submitting the bids online.
9. Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender schedule and they should be in PDF/XLS/RAR/DWF formats. If there is more than one document, they can be clubbed together
10. Bidder should arrange for the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission date and time for the tender
11. The bidder reads the terms and conditions and accepts the same to proceed further to submit the bids.
12. The bidder has to submit the tender document(s) online well in advance before the prescribed time to avoid any delay or problem during the bid submission process.
13. There is no limit on the size of the file uploaded at the server end. However, the upload is decided on the Memory available at the Client System as well as the Network bandwidth available at the client side at that point of time. In order to reduce the file size, bidders are suggested to scan the documents in 75-100 DPI so that the clarity is maintained and also the size of file also gets reduced. This will help in quick uploading even at very low bandwidth speeds.
14. It is important to note that, the bidder has to Click on the Freeze Bid Button, to ensure that he/she completes the Bid Submission Process. Bids Which are not Frozen are considered as Incomplete/Invalid bids and are not considered for evaluation purposes.
15. In case of Offline payments, the details of the Earnest Money Deposit(EMD) document submitted physically to the Department and the scanned copies furnished at the time of bid submission online should be the same otherwise the Tender will be summarily rejected.
16. The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.
17. The bidder may submit the bid documents online mode only, through this portal. Offline documents will not be handled through this system.
18. At the time of freezing the bid, the e-Procurement system will give a successful bid updation message after uploading all the bid documents submitted and then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the e-token of the bidder and then submitted.
19. After the bid submission, the bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening event.
20. Successful bid submission from the system means, the bids as uploaded by the bidder is received and stored in the system. System does not certify for its correctness.
21. The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected.
22. The time that is displayed from the server clock at the top of the tender Portal, will be valid for all actions of requesting bid submission, bid opening etc., in the e-Procurement portal. The Time followed in this portal is as per Indian Standard Time (IST) which is GMT+5:30. The bidders should adhere to this time during bid submission.
23. All the data being entered by the bidders would be encrypted at the client end, and the software uses PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission and not viewable by any one until the time of bid opening. Overall, the submitted bid documents become readable only after the tender opening by the authorized individual.
24. During transmission of bid document, the confidentiality of the bids is maintained since the data is transferred over secured Socket Layer(SSL) with 256 bit encryption technology. Data encryption of sensitive fields is also done.
25. The bidders are requested to submit the bids through online eProcurement system to the TIA well before the bid submission end date and time (as per Server System Clock).

The following documents (Scan copy) must be furnished upload with the technical bid failing which tender will not be accepted at all.

1. GST/ PAN card copy
2. Registration certificate of CPWD, MES, Railways, MCD, PWD or other Central/State Govt./Semi Govt or **Specializes Agencies.**
3. Certificate declaring that the firm has not been debarred/Black listed by the Govt. Deptt./Court of law for doing any business in India.
4. Bid Security Declaration Document
5. The tender documents duly signed by the concerned firm accepting the same should be attached with technical bid.
6. The firm should have experience of two similar nature of works in last three years. Firm should submit experience certificate/ orders in support.
7. Specialized agencies, registration certificate of CPWD, MES, Railways, MCD, PWD or other central/state govt./semi govt.
8. Firm/companies should have ISO 9001:2015, 14001:2015.
9. Certificate declaring that the firm has not been debarred/black listed by the govt. deptt./ court of law for doing any business in india.
- 10 Bid security declaration document.

FORMAT OF BID SECURITY DECLARATION FROM BIDDERS IN LIEU OF EMD
(On Bidders Letter head)

I / We, the authorized signatory of M/s.....,
participating in the subject tender No.for the item / job of
....., do hereby declare :

- That I / we have availed the benefit of waiver of EMD while submitting our offer against the subject Tender and no EMD being deposited for the said tender.

- That in the event we withdraw/modify our bid during the period of validity Or I/we fail to execute formal contract agreement within the given timeline OR I/we fail to submit a Performance Security within the given timeline Or I/we commit any breach of Tender Conditions/ Contract which attracts penal action of forfeiture of EMD and I/we will be suspended from being eligible for bidding / award of all future contract(s) of ME Unit, Directorate, IARI, New Delhi-11012 for a period of one year from the date of committing such breach.

Signature and Seal of Authorised Signatory of bidder

Name of Authorized Signatory.....

Company Name.....

CERTIFICATE TO BE SIGNED BY THE TENDERER

It is certified that I have read and understood and will comply with all instructions contained in Terms & conditions of this tender documents. All pages submitted with this tender document from page ____ to ____ have been filled properly and signed with seal of the firm/company.

Signature of tenderer:

Name in block letters:

Name of firm:

Full address:

.....

- i) Telephone No. :
- ii) Mobile No. :
- iii) Fax No. :
- iv) Email ID :

Signature of Tenderer with office seal