



Telephone: +91-40-20203009	Date: 06.02.2023
Website : www.tifrh.res.in	Email: krishnaae@tifrh.res.in

PUBLIC TENDER

(TWO PART TENDER) for the following Works:

Annual Maintenance Contract (AMC) for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

PUBLIC TENDER

(TWO PART TENDER) for the following Works:

Annual Maintenance Contract (AMC) for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

Tender No.	TIFR/PD/CF22-181/221812
Type of Tender	Two Part Tender (Part-I: Technical Bid and Part- II: Price Bid)
Estimated Cost	Rs. 1,05,74,380/-
Cost of EMD	Rs. 2,11,500/- Demand Draft to be drawn in favor of “TIFR Center for Interdisciplinary Sciences”, Payable at Hyderabad (To be enclosed with the Technical Bid Part – I). However, contractors who have a valid MSME/NSIC certificate are exempted from EMD.
Pre bidding meeting & Time	13.02.2023 at 11:00 Hrs.
Last Date for Submission of Tender	20.02.2023 by 13:00 Hrs.
Date of Opening Bids(Only Part-I: Technical Bid)	20.02.2023 at 15:00 Hrs.
Tender Fee	Rs. 500/- (Demand Draft to be drawn in favor of “TIFR Centre for Interdisciplinary Sciences “Payable at Hyderabad (To be enclosed with the Technical Bid Part –I)). However, contractors who have a valid MSME/NSIC certificate are exempted from the tender fee.

- In case the Part "I" and Part "II" bids are not sealed in separate envelopes the tender will be rejected.
- The technical bid should not contain any indication of the price.
- The Technical Bid received without payment of tender fees and EMD shall be summarily rejected.
 - Contacts: Mr. Krishna. Tel: 040-20203009 / 3003 for any technical or commercial terms clarifications mentioned in the tender.

Sealed tenders are invited for AMC for the aforesaid works from contractors having similar work experience in reputed Research Institutions, Universities, Central Government/Public Sector Undertaking, Private Laboratories, Multinational Companies, etc. Interested contractors who are satisfying prequalification criteria stipulated by TIFR-Hyderabad shall only submit their bids. For further details and any clarification on the tender you may please contact Head-Technical Services, Survey No.36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District, Hyderabad-500046

Last date for submission of the tender is 20.02.2023 by 13:00 Hrs.

A handwritten signature in black ink, appearing to read 'Rajasekhar. R', is written over a faint circular stamp.

(Rajasekhar. R)
Head-Technical Services



TENDER DOCUMENT

Annual Maintenance Contract (AMC) for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

NAME OF THE TENDERER: -----

ADDRESS: -----

Last date of submission of the tender: On or before 20.02.2023 by 13:00 Hrs.



TECHNICAL BID

VOLUME-I

Annual Maintenance Contract (AMC) for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

INDEX

SECTION	Contents	Page No
SECTION I	Notice Inviting Tender	6-7
SECTION II	Forwarding Letter	8
SECTION III	Application Form	9-12
SECTION IV	Eligibility Criteria	13-14
SECTION V	Scope of work	15-32
SECTION VI	General Terms & Conditions	33-36
SECTION VII	Special Conditions of contract	37-38
SECTION VIII	Appendix to form of tender	39
SECTION IX	Price Bid	40-43

SECTION-I

NOTICE INVITING TENDER

Notice Inviting Tender

Applications are invited in the prescribed format for Annual Maintenance Contract (AMC) for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

The Contractors who are having their office at Hyderabad and registered/empanelled with Premier Research Institutes, Universities, IITs, Research Laboratories, Central/State Govt./ Govt. Undertakings Institutes, etc. having experience in executing similar nature of works may apply in the prescribed form as given. The Eligibility Criteria, Scope of Work, General Terms & Conditions and special conditions of contract are given in tender.

Bidders may download the document from TIFR-Hyderabad website (www.tifrh.res.in). Completed applications duly filled and **Earnest Money Deposit (EMD) of Rs.2,11,500/- and receipt of tender cost of Rs. 500./-** shall be enclosed in a Sealed cover- 1 and the same shall contain the following document duly signed by tenderer:

- i) Forwarding letter on letterhead of the firm/contractor.
- ii) Application Form.
- iii) Copy of eligibility criteria.
- iv) Copy of scope of work.
- v) Copy of general terms and conditions.
- vi) Copy of special conditions of contract
- vii) Copies of certificates from clients regarding satisfactory performance and duration of services rendered. Original certificates are required to be produced for verification as and when needed.
- viii) Copies of Balance Sheet and Profit & Loss Account statement for last 3 years ending March 31, 2022.
- ix) Copy of registration certificate(s).
 - i. Registrar of firms
 - ii. Central/State Labour license
 - iii. EPF
 - iv. ESI
 - v. GST
 - vi. PAN

The total AMOUNT as per the format given duly signed shall be enclosed in a sealed envelope marked as cover -2 (Price Bid).

Both the covers 1 & 2 should be enclosed in cover – 3 super scribing “Annual Maintenance Contract for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally (Village),



TATA INSTITUTE OF FUNDAMENTAL RESEARCH

(Autonomous Institution of the Department of Atomic Energy, Government of India)
Survey No.36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District,
Hyderabad-500046, Telangana

Serilingampally (Mandal), RR Dist, Hyderabad-500046 and shall be addressed to the Head-Technical Services, TIFR-Hyderabad, Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), RR Dist, Hyderabad-500046 on or before 13.00 Hrs on 20.02.2023.

Bidders shall note that Cover-1[containing Technical Bid Volume-I (ie Pre-qualification Bid)] shall be opened at 15.00 Hrs on the same day. The date and time of opening the Cover-2 [Price Bid-Volume II] of the pre-qualified vendors would be intimated separately. The price bids (Cover-2) of the prequalified vendors will only be considered for the opening and further processing.

Tender not accompanied by EMD and Tender Fee Receipt shall be summarily rejected. EMD shall not bear any interest and this amount shall be forfeited in the event of refusal or delay on the part of the tenderer to sign and execute the contract, in case his tender is accepted. The EMD of unsuccessful bidders shall be returned after finalization of tender. The cost of tender is non-refundable. The EMD of the successful bidder shall be adjusted in security deposit.

The rates quoted shall be valid for 75 days from the date of submission of tender. The rate for providing the maintenance services shall be quoted as per the enclosed format given in price bid & shall be inclusive of all taxes, duties, works contract tax etc. However, GST will be payable extra at actual.

If any information furnished by the applicant is found to be incorrect at a later date, the bidder shall be liable to be debarred from tendering / taking up the work in TIFR- Hyderabad. The TIFR- Hyderabad reserves the right to verify the particulars furnished by the applicant independently.

The TIFR-Hyderabad reserves the right to reject any application without assigning any reason and to restrict the list to any number deemed suitable by it, if too many applications are received satisfying the basic pre-qualification criteria.

Sd/-
Head-Technical Services



SECTION-II

FORWARDING LETTER

(To be submitted on firm/contractor's letterhead)

No.....

Date:.....

To
HEAD-TECHNICAL SERVICES,
TIFR-Hyderabad,
Survey No. Survey No. 36/P, Gopanpally Village,
Serilingampally Mandal,
Ranga Reddy District, Hyderabad 500046.

Dear Sir,

Annual Maintenance Contract for "Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis" on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046

With reference to your Notice for AMC for 24X7 basis operation and maintenance of Electrical, Fire Safety and HVAC installations, I am / we are pleased to offer myself / ourselves for undertaking above work in your esteemed organization. In submission of this offer, we confirm that

- i) We have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
- ii) We do not have records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
- iii) Business has never been banned by the Central / State Government Department/ Public Sector Undertaking or Enterprise of Central / State Government.
- iv) We have submitted all the supporting documents and furnished the relevant details as per prescribed format.
- v) The information and documents submitted with the tender by us are correct and we are fully responsible for the correctness of the information and documents submitted by us.

Yours faithfully,
(Signature of the authorized person of the firm/contractor with office seal)

SECTION-III

APPLICATION FORM

PART-1 (BASIC INFORMATION)

Annual Maintenance Contract for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

1	Name of the Contractor / Firm / Organization / Company.	
2	Official Address for Correspondence with Telephone & Mobile Nos.	
3	Correspondence address at Hyderabad with contact person’s name, telephone number, mobile number etc. (The company should have office and service facilities at Hyderabad)	
4	Type of Firm / Organization, whether proprietorship, partnership or private limited company etc.	
5	Year of establishment	
6	Name of the Proprietor / Partners /Directors in Organization	a) b) c) d)
7	a) Details of Registration (Firm, Company etc) i. Registering Authority ii. Date iii. Number b) Details of Labour license i. Registering Authority ii. Reg No. iii. Date of issue iv. Date of expiry.	To be filled by the vendors

	c) Details of Electrical license i. Registering Authority ii. Reg No. iii. Date of issue. iv. Date of expiry. (Copies to be enclosed).	
8	a) Details of Income Tax Permanent Account Number (PAN No.) . b) Details of TIN No. c) Details of EPF No. d) Details of ESI No. e) Details of GST No. (enclose a copy of the certificate competent Authority)	To be filled by the vendors
9	Annual turnover of the firm for last three years (in Rs. Lakhs) (Furnish copies of Balance Sheet and Profit & Loss Account)	a) For F.Y. 2021-22: b) For F.Y. 2020-21: c) For F.Y. 2019-20:
10	Whether registered / empaneled with any of the Govt., Semi Govt., MES, IIT, NIT, IISc, Govt. Undertaking, Public Sectors etc. as approved contractors and if so, furnish details.	
11	Whether any technical personnel are employed with the Firm / Organization and if so, give details of their experience, qualification	
12	If involved in any litigation earlier with any organization. If so, please submit the details.	
13	Any civil suits pending in any of the works executed. If so, furnish details.	

Signature of the Contractor / Authorized person on behalf of the Firm / Organization



PART-II

EXPERIENCE

Annual Maintenance Contract for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046.

A) List of similar works / contracts executed by the contractor / Firm / Organization During the last 7 years prior to last month ending to the date of application issued.

Sr.No.	Name of the work	Name & Address of the Company for whom the work was executed	Nature / Type of the work	Name, Address & mobile/phone No. of Officer / Person under whom the work was carried out	Value of the work executed (Rs)	Duration of the Contract with commencement and completion date
1						
2						
3						
4						
5						

Note: Copies of the work orders and performance certificate should be enclosed



B) List of similar works / contracts being executed presently by the contractor / Firm / Organization

Sr.No.	Name of the work	Name & Address of the Company for whom the work was executed	Nature / Type of the work	Name, Address & mobile/phone No. of Officer / Person under whom the work was carried out	Estimated value of the work (Rs)	Duration of the Contract with commencement and expected date of completion
1						
2						
3						
4						
5						

Note: Copies of the work orders should be enclosed

Signature of the contractor / Authorized person on behalf of the Firm / Organization

SECTION-IV

ELIGIBILITY CRITERIA FOR TENDER QUALIFICATION

● **Eligibility criteria:**

1. The contractor should have a valid 33KV 'A' Grade Electrical Contractor's License issued by Competent authority.
2. The contractor should have at least 5 years of experience in providing Operation & Maintenance of respective areas as mentioned in 'Scope of Work'
3. The contractor should have carried out qualifying works stipulated in large premises of Research Institutions, Laboratories, Universities, IIT/IISc, Govt. Organizations, Institutions, multinational companies etc..
4. Annual average turnover of the contractor during the last 3 years ending March 31, 2022 should be at least Rs. 42.30akhs..
5. IT Returns for the last three consecutive financial years ended on March 31, 2022.
6. The contractor should have an office in Hyderabad.
7. The contractor should have valid registration with all Statutory Authorities such as Registrar of firms, Central/State Labour Dept(with valid license), ESI, PF, GST, PAN etc.
8. The contractor should submit a solvency certificate for not less than Rs.53 lakhs issued by any nationalized banks on or after 01.04.2022.
9. Only AMC/Maintenance contracts (entire one year period) will be considered for evaluation (**Installation/execution of Electrical, Fire Safety and HVAC work shall not be considered**). The contractor should have successfully completed similar works (ie. Operation and Maintenance of HT & LT Electrical, Fire Safety and HVAC systems) during last 7 years (ie. till the last date of month previous to the date of application issued) as under:
 - 9.1. One similar work costing Rs.84.6 Lakhs or
 - 9.2. Two similar works costing Rs.63.45 Lakhs or
 - 9.3. Three similar works costing Rs.42.3 Lakhs during the last 7 financial years ended on the end date of receiving tender for Research Institutes, Universities, Private Laboratories, R & D institutes, etc. in any Government /PSU/Private organizations of repute.
(The contractor should submit documentary evidence in support of fulfilling eligibility criteria mentioned above.)

Note:

- The details furnished shall be for the maintenance jobs & not for the installation works. The contractor must have experience in operation & maintenance of Electrical, Fire Safety and HVAC Plants. The vendors submitting the credential of installation works shall not be eligible for prequalification.
- The track record of the contractor should be clean and he should not have any involvement in any illegal activities or frauds.

I. Credentials:

The tenderer should also furnish the following information in Cover-1 (Prequalification Bid):

1. Information desired regarding eligibility criteria as per given format in Section -IV.
2. Company profile & Bank's NEFT details of the company/contractor/firm etc.
3. Name & address of the clients for whom the jobs were executed as per given format given in (Part-2).
4. Copies of the Certificates from the clients for satisfactory performance.
5. Desirous tenderers may either download the applications from our website (<https://www.tifrh.res.in/index.php/commercial-tenders/> & **Tender reference No. TIFR/PD/CF22-181/221812**) or collect the tender document from TIFR-Hyderabad, HEAD-Technical Services at Survey No. 36/P, Gopanpally(Village), Serilingampally (Mandal), RR Dist, Hyderabad-500046 and submit completed applications along with the required documents.

II. Earnest Money Deposit:

Earnest Money Deposit (EMD) of Rs.2,11,500/- (Rupees Seventy One thousand Five Hundred Only) shall be submitted in form of Demand Draft from Scheduled Bank drawn in favour of "TIFR Centre for Interdisciplinary Sciences", Hyderabad. The EMD so obtained shall be submitted in Cover-1 of the tender.

III. Instruction for Filling & Submission of Tender:

1. The tender amount is to be inserted in words as well as in figure in the space provided, in case of any discrepancies in the prices written in words and figures, the prices written in the words shall be considered to be correct.
2. The quoted rates should be with consideration of latest Minimum Wages payable as per Central Labour Wages Acts, 1948.
3. The tender shall be submitted in two cover system. Cover-1 shall contain the letter inviting tender, instructions for tendering, tender conditions, the scope of work, EMD of Rs.2,11,500/- Cover-2 shall contain only the Bill of Quantities (Price Bid) i.e. the rate quoted for the contract. Each page of tender shall be signed by an authorized person of the firm and duly stamped. Both the covers shall be super scribed with the name of work.

Cover-1 & Cover-2 shall be put in a third sealed cover super scribing with "Annual Maintenance Contract for Operation & Maintenance of Electrical, Fire Safety and HVAC installations at TIFR-Hyderabad, and shall be addressed to the HEAD-Technical Services, TIFR-Hyderabad, Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), RR Dist, Hyderabad-500046 on or before 13:00 Hrs on 20.02.2023.

"Price BID": Signed copy of the Price Bid quoting amount in the stipulated format.

4. **Earnest Money Deposit (EMD):** EMD shall be submitted in the form of **Demand Draft to be drawn in favour of "TIFR Centre for Interdisciplinary Sciences", Payable at Hyderabad (To be enclosed with the Technical Bid Part-I)**

Note: The bidder/contract should submit a valid NSIC / MSME certificate for exemption of tender fees/EMD.

SECTION-V**SCOPE OF WORK**

The Contractor shall attend to all the works 24X7 basis and post the manpower as given below

S.No.	Manpower	Shifts (Timings)	Working Days in a week
1	Head Supervisor	in General Shift (ie. from 9:00 am to 5:30 pm)	6 days in a week
2	Supervisor	in all the 3 Shifts (ie. from 6:00 am to 2:00 pm, 2:00 pm to 10:00 pm and 10:00 pm to 6:00 am)	All days in a week
3	Supervisor (Fire Safety)	in General Shift (ie. from 9:00 am to 5:30 pm)	6 days in a week
4	Helper	in all the 3 Shifts (ie. from 6:00 am to 2:00 pm, 2:00 pm to 10:00 pm and 10:00 pm to 6:00 am)	All days in a week

The contractor shall provide minimum one-day duty off once in a week for the employees working in shifts and shall provide relievers for the employees on off duty / sick / leave. However, in case of exigencies, the contractor shall provide services beyond above mentioned hours.

The contractor should deploy experienced manpower to carry out maintaining and operation of Electrical, Fire Safety and HVAC system services as under:

- Head Supervisor should be a “Minimum Diploma in Electrical/Mechanical Engineering having minimum 5 years of experience in maintaining and operation of Electrical / Fire Safety/HVAC system ” OR “ITI Electrical Trade Holder having minimum 10 years of experience in maintaining and operation of Electrical / Fire Safety/HVAC system”
- Supervisor should be a “Minimum Diploma in Electrical / Fire Safety/Mechanical Engineering having minimum 3 years of experience in maintaining and operation of Electrical / Fire Safety/HVAC system ” OR “ITI Electrical / Fire Safety/Mechanical Trade Holder having minimum 6 years of experience in maintaining and operation of Electrical / Fire Safety /HVAC system”.
- Helper should be an ITI Electrical/Mechanical Trade Holder having minimum 3 years of experience in maintaining and operation of Electrical /HVAC systems.

The TIFR- Hyderabad shall not permit double shift for any staff employed by the contractor.

Contractor should provide Uniforms, Shoes, safety & protection gear, Identity Cards, working tools etc. to the staff deployed, at no extra cost.

Log book and complaint books, all stationery like registers, sheets, markers, pens and pencils etc. will be supplied by the contractor and no extra payment for these shall be made. Log book format must be approved by TIFR Engineer- in- charge.

No work shall be partially or fully stopped for want of personnel or tools or instruments. If such an event occurs, the fine will be levied.

Contractor will ensure consistency of work and work force, correct troubleshooting, good workmanship, follow all safety procedures and will make all necessary efforts to maintain a healthy environment and reliable services.

If any of the staff members appointed by Contractor is found to be 'not competent', he has to be replaced by a right person within a stipulated time as given by Engineer In charge, TIFR-Hyderabad.

All the relevant documents pertaining to staff deployed, like copies of job appointment order with the contractor, address proof, photocopy of ID card etc. and any other details as sought shall be provided to TIFR-Hyderabad, by the contractor under his responsibility for the correctness.

Wages of the staff deployed should not be less than as that mentioned in Minimum Wage Act applicable to the respective category/experience, as on date. The ESI, PF, gratuity, bonus etc., labour law, other rules & norms requirements as found required for contracts of this nature should be met. The same details shall be submitted along with a tender bid.

In no case, the contractor or his/her employees shall claim job / employment with TIFR-Hyderabad. No transport facility shall be provided for the contractors employees by TIFR-Hyderabad.

In case of delay, repetition of work, noncompliance, and inadequate staff etc. fine will be imposed as per the fine clause mentioned.

Safety aspects in work places have to be followed as per relevant standards & codes. Any accident or damage to death will be treated as negligence & it is purely the responsibility of contractor. TIFR- Hyderabad is not responsible for any accidents or damages to death. Safety of all the staff under this contract is the sole responsibility of the contractor.

Contractor is responsible for the behavior & conduct of his workmen and hence they should be properly educated and controlled.

'FINE' CLAUSE :

The Availability & functioning of Electrical, HVAC & Fire safety is very essential and critical. Non-availability may result in many tangible & intangible losses in research work, equipment, animals, tissues etc.

Hence all the work routine, servicing, breakdown maintenance has to be carried out in accordance with all standards and statutory norms with minimum time and maximum accuracy to ensure maximum availability. Failure in meeting the above requirements will attract the 'fine' clause as below.

Contractor should depute experienced personnel to carry out maintenance work both low & high side in such a way that the repetition of the problem should be avoided.

- iv. **Absenteeism:** No absenteeism shall be allowed. In case of absence of any staff in the agreed staff pattern, fine will be imposed at one and half times the rate for the day the staff remains absent.
- v. **Non-Compliance of work:** In the event of failure of compliance of awarded work in stipulated time a fine will be imposed as per double of actual expenditure incurred in attending the same by another agency.

TIFR-Hyderabad / concerned engineers will be authorized to deduct the amount from the contractor bill or security deposit or initiate any other action as found suitable.

Contractor must visit the site, understand the site condition, type of work involved, quantum of work etc., for carrying out works, before quoting.

General

- 1. All the removed materials for routine maintenance works should be brought to the office for accountability and a separate register needs to be maintained showing all received/used electrical consumables supplied by the TIFR- Hyderabad. No materials should be left anywhere in the campus.
- 2. All tools and machinery required for routine works, preventive maintenance etc., shall be provided by the contractor.
- 3. All breakdown calls/complaints received during normal working hours should be attended to as early as possible. No complaints should be left unattended and not be postponed to next day.
- 4. Any damage is caused to any equipment or items available at the office premises due to negligence of the contractor's work force shall be entirely on contractor, the amount so involved on this account shall be deducted from the payment due to contractor.
- 5. Documents to be maintained by the contractor :-
 - i. log book of daily events
 - ii. Complaints registers
 - iii. Planning and scheduling of preventive maintenance
 - iv. Reports of preventive maintenance done
 - v. Daily breakdown maintenance/status reports
 - vi. Reports of testing/checking done
 - vii. Reports of modification done
 - viii. Attendance sheet.
 - ix. Details of plant record book

ELECTRICAL

DETAILS OF WORK:

The detailed schedule of operation, routine, special and preventive maintenance along with daily, fortnightly, monthly activities for all the works and execute as per the direction of Engineer In Charge. However tentative minimum routine and preventive schedule shall be as under

Electrical installations Operation & Preventive Maintenance

1. Routine maintenance of all electrical installations such as substation equipment including Metering & RMU, Transformers with OLTC, HT & LT Cables, HT< panels including CT/PT, Capacitor Panel and capacitor banks, Battery charger panel & Batteries, Bus Bar Trunking, HVAC Plant panels, DG Sets with AMF panels, Main & Emergency Distribution boards, Power Distribution panels, Pump-motors, UPS, Sewage pump, general lighting, earthing etc. in TIFR- Gopanpally(V), Serilingampally(Mandal), Gachibowli, Hyderabad.
2. Attending to day-to-day fault/complaints of any kind of light/fan fittings, water heaters, heaters, water pumps, motor starters, Bus Bar Trunkings, UPS panel, LT Panel, HT Panel, HVAC & VRF plant panels, Transformers and all other Electrical Panels for Fire Pump, STP, Rain water Harvesting, etc. in FReTB.
3. Attending HT/LT cable faults, cable fault location, joint & termination of cable, re-termination, if required. The contractor shall arrange to give temporary connection if the cable fault could not be rectified within a day.
4. During breakdowns, the electrical staff should immediately rectify the problem or contact the respective equipment maintenance contractor, if any, for attending the breakdown. In case of major breakdown, the contractor should assist the in charge/department staff till the rectification of the defects.
5. Maintaining a separate register with all the details for the DG operations and maintenance carried out. However, **cost of diesel consumption on actuals and Transportation will be borne by TIFR- Hyderabad.**
6. To check the Power Factor (PF) and operate the capacitor bank for maintain PF above 0.98. A proportionate amount shall be deducted from the monthly submitted by the contractor, in case power factor falls below the minimum stipulated level due to any negligence in maintenance by the contractor.
7. Checking of all earth electrodes including watering them at regular intervals, continuity of earth, measurement of earth resistance and maintaining E-N voltage less than 2 Volts.
8. Preventive maintenance of all electrical installations to be carried out in a well-planned manner with periodicity as detailed in general or as directed by E.I.C.
9. Operation and maintenance of all major electrical installations in accordance with Manufacturer's specifications, instruction Manuals, IE rules and other rules as specified by CEIG/CEA and TSSPDCL.
10. Any other item/work not included above but required for ensuring uninterrupted and smooth electrical maintenance at the TIFR-FReTB campus.
11. Attending power failures of LT power supply (Plot-B) from TSSPDCL.

Periodical Operation & Maintenance activities

Daily

- Inspection of RMU yard in Plot-A & LT 3 phase supply at Plot-B
- Visual inspection of all electrical panels in the campus, check for any tripping & if found reset the same after checking the proper cause and record the load details (V,I, KW, KVA, P.F. etc) of individual panels.
- Visual inspection of metering unit and record all energy meter parameters.
- Visual inspection of transformers, checking of oil level in the conservator tank, any oil leakages from transformer tank, record the OTI, WTI readings and observe any abnormal noise.
- Visual inspection of battery charger panel and record the parameters of panel.
- Visual inspection of capacitor panel and to check & record P.F.
- Visual inspection and daily cleaning & operation of DG sets, AMF panel, maintain the diesel in the diesel tank.
- Frequent rounds to site to check the operation & healthiness of equipment
- Check the on/Off status of all lights, if any found in non-working condition, get it illuminate by replacing/repair the light.
- Attending the all complaints in the complaint register book.
- Cleaning of all electrical rooms, battery room.
- Checking of Goods and passenger lifts
- Checking of Fire Alarm Panel
- Checking of Fire Fighting system
- Checking of UPSs and Stabilizers
- Maintain log books, check sheets, various registers etc. properly.
- Submission of daily shift reports to E.I.C.

Monthly checks

- Cleaning of all electrical panels and metering unit premises.
- Coordinate with TSSPDCL person to record the HT meter reading and receiving of energy bill.
- Constantly coordinate with the related equipment monthly maintenance checks for DG Set, HVACs, UPS, Fire Fighting, STP, Rain water Harvesting, Passenger and goods lifts, Water purifiers, etc. and get the servicing done by them.
- Checking of power and lighting DBs.

Quarterly checks

- Check the silica gel condition in the transformer, if found in pale yellow colour, reactivate the silica gel.
- Checking of earth connections of every electrical equipment/panels.
- Maintenance of earth electrodes.
- Cleaning and checking of all electrical appliances such as light fittings, ceiling/ exhaust fans, switchboard, cable boxes, panels etc.

Half yearly checks

- Measure the insulation resistance of transformers windings & oil, tightening of terminal connections at the transformer HT & LT terminals and testing of protection systems of transformer.
- Measure the insulation resistance of Bus ducts, HT & LT cables and Bus bar trunking (BBT).
- Servicing, tightening the terminal connections, checking heaters, illumination, interlocking and protection systems of HT Breakers in RMU yard, HT Panel, Main LT Panel, Main Emergency panel, Battery charger panel, Capacitor bank panel & capacitor banks, HVAC Panels & Main distribution Boards.
- Servicing, testing, operation of Vacuum Circuit Breakers (VCB), Transformer's OLTC & RTCC panel.
- Measure the individual earth electrode resistance.
- Perform the mock drills for electrical safety & electrical shock first aid treatment.

Yearly checks

- Conduct a complete energy audit in the campus and submit the recommendations for saving energy.

Contractor shall deploy one Electrical Engineer (Details of the persons to be furnished before issuing work order) with minimum 15 years of experience in the relevant field shall be deployed once in a month to inspect the Electrical installations at our campus. It is his responsibility to attend all power failures/breakdowns from TSSPDCL and resolve the issue in minimum possible time to restore the power. And he shall meet the TSSPDCL divisional Engineers regularly to discuss & inspect the TIFR power supply system and other related matters and also ensure to check & give proper checklists for all regular preventive maintenance and certify that they are carried out accordingly. He should also train the personnel employed for the purpose on regular basis to ensure quality work is done at site.

Monthly bill without site visit, certification of attendance of personnel and verification of checklist and experts report will not be processed for payment. The expert is also required to visit TIFR site as and when required in addition to monthly visit at no extra cost to attend emergency duties and to manage the crisis/ to troubleshoot the problems and advise TIFR technically.

Annual Maintenance Contract for RMU yard comprises of Air Break Switches, Metering, CT&PTs, 33KV VCB, Earthing, etc. Contractor shall have liaisoning with TSSPDCL officials to ensure the continuous power supply at our campus. During power failures, the contractor shall inform the TIFR engineer and at same time shall attend the problem immediately in coordination with TSSPDCL officials to restore the power at our campus in minimum possible time. Contractor shall arrange necessary arrangements for TSSPDCL officials in restoration of power supply.

Note: Bidders are advised to visit the site for verification of the complete system.

The major electrical items / equipment to be maintained by the contractor are as under:

S. No.	Description	Quantity
1.	HT Switch yard including ring- main units (RMU) including 36KV VCB, Metering Unit, CTs & PTs, Earthing, Etc	Unit
2.	HT panel consisting of 33 KV VCBs (5No.s)	1 No.
3.	Transformer with OLTC & RTCC – 2500 KVA	2 Nos.
4.	DG Sets – 810 KVA (operation only)& 380KVA	2 Nos.+1No
5.	Main LT panel	1 No.
6.	Main Emergency panel	1 No.
7.	Capacitor Panel & Banks	2 sets
8.	MV Panel (Raw & Emergency power)	8 No.s
9.	Main Distribution Boards	14 No.s
10.	Emergency Main Distribution Boards	13 No.s
11.	HVAC AHU & Heater panels	28 No.s
12.	VRV Panel	2 No.s
13.	LTF Main & Emergency Panel	2 No.s
14.	AMF Panels	2 No.s
15.	Battery charger panel	1 No.
16.	RTCC Panel	2 No.s
17.	STP panel (Raw & Emergency)	2 No.s
18.	Firefighting Panel(Raw)	1 No.
19.	Rain Water Harvesting Panel	1 No.
20.	Power & Light Distribution Boards	As at Campus
21.	Water pumps including panel	1 Set
22.	Street light panel & Electrical fixtures like lighting, street lights, fans, exhaust fans, garden lights etc.	As at Campus
23.	UPS systems	As at Campus
24.	3 Phase, LT power supply, Metering Unit, etc	Unit (Plot-B)
25.	Other miscellaneous electrical panel & electrical works	As at FReTB

General

- Whenever there is a power failure /breakdown from TSSPDCL, contractor shall required to coordinate with TSSPDCL officials and ensured power restores within shortest possible time. **Contractor should be well versed in liaison work with Operations, Lines, MRT and other divisions of TSSPDCL.**
- The contractor shall arrange for the periodical inspection by competent authority such as Central/State Electrical Inspectorate, Central Electricity Authority (CEA), TSSPDCL etc. **Senior Person engaging in the contract should coordinate with CEA inspection and ensure clearance is obtained for renewal without any comments for the entire Electrical Installations.**

3. All the removed materials for routine maintenance works should be brought to the office for accountability and a separate register needs to be maintained showing all received/used electrical consumables supplied by the TIFR- Hyderabad. No materials should be left anywhere in the campus.
 4. All tools and machinery required for routine works, preventive maintenance etc., such as pliers, cutter, screw drivers, spanner set, blower, drill machine, crimping tool, clamp meter, Insulation Tester, Earth electrode resistance tester, pipe wrench, tripod, safety equipment etc. shall be provided by the contractor.
 5. All breakdown calls/complaints received during normal working hours should be attended to as early as possible. No complaints should be left unattended and not be postponed to next day.
 6. Any damage is caused to any equipment or items available at the office premises due to negligence of the contractor's work force shall be entirely on contractor, the amount so involved on this account shall be deducted from the payment due to contractor.
 7. The Annual Maintenance contract will include conducting training program / mock drills for TIFR, Hyderabad's personnel regarding the operation of the fire safety system during the routine monthly visit at no extra cost.
 8. **The Annual Maintenance contract will include conducting training program / mock drills from any Government Fire Department Officials for Fire Supervisor and TIFR, Hyderabad's personnel regarding the operation of the fire safety system for once in Six months at our site at no extra cost.**
 9. All the Fire Fighting System and Fire Alarm systems/ installations have to be kept in good healthy working conditions and any repair/ replacement required for any equipment shall be done immediately. Mock drill should be arranged monthly or as required with the prior approval of Engineer-in-Charge.
 10. All the required record for break-downs/repairs and maintenance etc. shall be maintained in the form of history books and logbooks etc. as per directions.
 11. All the maintenance works shall be carried out in accordance with the manufacturer's specifications/ Fire and emergency department of Hyderabad.
 12. The agency will liaise with Hyderabad Fire Services and other statutory authorities required from time to time in connection with Fire Fighting installations and would be responsible for obtaining of Renewal of Fire License from the Fire Authority of Hyderabad.
 13. Documents to be maintained by the contractor :-
 - i. log book of daily events
 - ii. Complaints registers
 - iii. Planning and scheduling of preventive maintenance
 - iv. Reports of preventive maintenance done
-

- v. Daily breakdown maintenance/status reports
- vi. Work permit issue/released
- vii. Reports of testing/checking done
- viii. Reports of modification done
- ix. Attendance sheet.
- x. Details of plant record book
- xi. Fuel consumption record

TOOLS & PLANTS

All the general & special tools for daily operation, tackles, chain pulley blocks etc., required for proper maintenance and repairs/break down etc., shall be arranged by the contractor at his own cost and issued to the staff deployed by him for this work.

Following calibrated, well maintained instruments should always be available at site;

1. Clamp meter - 2 No
2. Insulation Tester - 1 No
3. Earth Electrode Tester -1No.

Following tools should always be available at site;

1. Two sets of all sizes double end open spanner & Ring Spanners
2. Two nos. adjustable wrenches each.
3. Three set of Allen keys (2 set metric & 1 set inch)
4. Screw driver set (normal & star) - 3 set
5. Hack saw cutting sets with spare blades - 2 sets
6. Pliers -2No.s
7. Air Blowers - 2 No
8. Electrician Tools Kit-2 Sets

Following maintenance materials should always be available at site;

HT & LT insulation tapes, Waste cotton, Lugs (up to 16 sq.mm), Cable Ties, Screws, Distilled water (50 Ltrs) for batteries etc. to be provided at no extra cost.

Contractor should provide Uniforms, Shoes, Gloves, safety & protection gear, Identity Cards, working tools etc. to the staff deployed, at no extra cost.

Log book and complaint books, all stationery like registers, sheets, markers, pens and pencils etc. will be supplied by the contractor and no extra payment for these shall be made. Log book format must be approved by TIFR Engineer- in- charge.

No work shall be partially or fully stopped for want of personnel or tools or instruments. If such an event occurs, the fine will be levied.

Contractor will ensure consistency of work and work force, correct trouble shooting, good workmanship, follow all safety procedures and will make all necessary efforts to maintain healthy environment and reliable services.

Any electrical work / exigency of TIFR-Hyderabad, even if it is not specifically mentioned in this document shall be carried out by the deployed staff at no extra cost.

Safety aspects in work places have to be followed as per relevant standards & codes. Any accident or damage to death will be treated as negligence & it is purely the responsibility of contractor. TIFR- Hyderabad is not responsible for any accidents or damages to death. Safety of all the staff under this contract is the sole responsibility of the contractor.

Contractor is responsible for the behavior & conduct of his workmen and hence they should be properly educated and controlled.

All manpower deployed at site shall undergo power medicine & first aid course once in a year.

FIRE FIGHTING

DETAILS OF WORK:

The detailed schedule of operation, routine, special and preventive maintenance along with daily, fortnightly, monthly activities for all the works and execute as per the direction of Engineer In Charge. However tentative minimum routine and preventive schedule shall be as under

Fire Fighting & Fire Alarm installations Operation & Preventive Maintenance

Daily:

- Check water level in the fire UG tank
- Check water pressure in sprinkler and yard hydrant ring mains
- Check the electrical parameters in Fire panel
- Check operation of Jockey pump i.e. water pressure in the system (minimum 4 kg / sq cm.)
- Check level of fuel & lubricant oil in the DG set fuel tank
- Check the DG set battery voltage
- Check the healthiness of fire detection system
- Check running of the fire hydrant pumps.
- Check leakage etc. in the system.
- Check any fault if indicated on any of the panels and rectify the same immediately.

Weekly

1. Check water leakages in yard hydrants if any
 2. Check and operate yard hydrants
-

3. Check and operate first aid hose reel
4. Check automatic operation of DG set
5. Checking the operation of valves to ensure their operation
6. Checking the pipe lines leakages if any
7. Operation of booster pumps

Monthly

- i. Check all electrical connections in panels, pumps, etc.
- ii. Cleaning of air filter of DG set
- iii. Checking DG set protections
- iv. Checking setting of controllers
- v. Check the condition of fire extinguishers
- vi. Check the Fire alarm circuit of each zone from the panels whether signals of fire and fault gets transmitted from zonal panel to main panel.
- vii. Checking of all fire hoses, fire hose box, Hose reels, pressure gauge and pressure switch.
- viii. Replacing of gasket & Washer (if leakage/faulty are noticed)
- ix. Cleaning of all pumps and accessories
- x. Check of bell and siren for its proper working.
- xi. Checking of batteries, fan belt, temperature gauge, Fuel gauge etc. of diesel generator fire pump.

Quarterly

- i. Polishing of all gun metals items like hydrant outlet, branch pipe, etc.
- ii. Pressure testing of delivery hoses
- iii. Performance of the hooters & manual call points.
- iv. Checking, Oiling and servicing of all fire hydrant outlets, butterfly valves, air release valve and alarm valves
- v. Fault circuit of each zone by actually disconnecting the wire
- vi. Checking and operating of all fire pumps. Check noise, vibration and temperature of pumps
- vii. Pressure testing and checking of fire pumps and hose reels
- viii. Testing of Fire Alarm system, Smoke Detectors, Manual Call Points, Hooters, etc.

Half Yearly

- i Grease all bearings of pump and motors
- ii Replace suction water strainers of UG tank
- iii Checking the operations of sprinklers & sprinkler pumps by breaking few sprinklers.
- iv Manual cleaning of manual call points, panels , hooters, hydrant box etc
- v Full running discharge test of fire hydrant & sprinkler system (At least 10 minute)
- vi Overall greasing of all fire pumps
- vii Testing of sprinkler bulb

Yearly

- i. Check entire pipe lines, valves and descaling
- ii. Drain water of UG tank and clean
- iii. Replacement of oil filter, air filter and engine oil of Diesel engine fire pump
- iv. Cleaning of NRVs, foot valves, strainers etc.
- v. Recalibration of all measuring instrument like pressure switch, pressure gauge etc.

The major Firefighting and Fire Alarm system items / equipment to be maintained by the contractor are as under:

Sr. No.	Description	Quantity
I	Fire Fighting System	
1.	Main Fire Fighting Pump(Electrical) - 2280 LPM @ 80m head	1 Set
2.	Main Fire Fighting Pump (Diesel) - 2280 LPM @ 80m head	1 Set
3.	Jockey pump 180 LPM @ 80m head	1 Set
4.	Submersible dewatering pump 50 LPM @ 9.5m head	1 Set
5.	Terrace Pump	
5.1	450 LPM @ 35m head	3 Sets
5.2	900 LPM @ 35m head	1 Set
6	Domestic water pumps 100 LPM @ 45m head	2 Sets
7.	Courtyard Hydrant Valves	28 No.s
8.	Siamese connections	6No.s
9	Fire Extinguishers	As at FReTB
II	Fire Fighting System	As at Hanger-2
III	Fire Alarm System	As at FReTB & Hanger Buildings

TOOLS & PLANTS

All the general & special tools for daily operation, tackles, chain pulley blocks etc., required for proper maintenance and repairs/break down etc., shall be arranged by the contractor at his own cost and issued to the staff deployed by him for this work.

Following calibrated, well maintained instruments should always be available at site;

1. Clamp meter - 1 No

Following tools should always be available at site;

1. One sets of all sizes double end open spanner & Ring Spanners
2. One nos. adjustable wrenches each.
3. One set of Allen keys (2 set metric & 1 set inch)
4. Screw driver set (normal & star) - 1 set
5. Hack saw cutting sets with spare blades - 1 sets
6. Pliers -1No.s
7. Air Blowers - 1 No
8. Fire Fighting man Tools Kit-1 Sets

**Following maintenance materials should always be available at site;
LT insulation tapes, Waste cotton, Lugs (up to 16 sq.mm), Cable Ties, Screws, incense sticks, etc. to be provided at no extra cost.**

Contractor should provide Uniforms, Shoes, Gloves, safety & protection gear, Identity Cards, working tools etc. to the staff deployed, at no extra cost.

Log book and complaint books, all stationery like registers, sheets, markers, pens and pencils etc. will be supplied by the contractor and no extra payment for these shall be made. Log book format must be approved by TIFR Engineer- in- charge.

HVAC

Contractor shall deploy a HVAC engineer with minimum 15 years of experience in the relevant field shall be deployed once in a month to inspect the HVAC installations at our campus at no extra cost. It is his responsibility to ensure to check and give proper checklists for all regular preventive maintenance and certify that they are carried out accordingly. He should also train the personnel employed for the purpose on regular basis to ensure quality work is done at site. **Monthly bill without site visit, certification of attendance of personnel and verification of checklist and experts report will not be processed for payment. The expert is also required to visit TIFR site as and when required in addition to monthly visit at no extra cost to attend emergency duties and to manage the crisis/ to troubleshoot the problems and advise TIFR technically.**

Contractor shall supply 3KW strip heaters, AHU Belts of suitable size or any other item that may be required for functioning of the HVAC system on item rate contract basis as per the requirement at site with intimation/prior approval of TIFR officials. However, **TIFR will pay for the supplied items as per work order rates for standard items and Nonstandard items (ie. not mentioned in the tender/work order) based on rate analysis submitted and accepted by TIFR.**

Note: Bidders are advised to visit the site for verification of the complete system.

The major HVAC Central Plant & VRV/VRF system items / equipment to be maintained by the contractor are as under:

Sr. No.	Description	Quantity
1.	Air cooled Package Chillers -250TR	3 Sets
2.	Centralized Programmable Logic control system(BMS)	1 Set
3.	Primary chilled water pumps (750GPM)	3 Sets
4.	Following Secondary chilled water pumps	
4.1	800GPM	4 Sets
4.2	150 GPM	4 Sets
5	Following Double skin air handling units	
5.1	45TR 15000 CFM at 75mm static	4 Sets
5.2	40TR 15000 CFM at 75mm static	4 Sets
5.3	40TR 14000 CFM at 75mm static	4 Sets
5.4	10TR 4000 CFM at 35mm static	1 Set
5.5	7.5TR 3000 CFM at 35mm static	1 Set
6	Ductable Fan Coil Units(4TR 1200 CFM at 20mm static)	4 Sets
7.	Chilled water cassette type Fan coil unit	8 Sets
8.	Decorative type single skin chilled water fan coil units 3TR	8 Sets
9.	Chilled water piping	As at FReTB
10	GI sheet metal ducting	As at FReTB
11.	54Hp VRV/VRF system (R410A)	4 No.s
12.	Following VRV/VRF false ceiling mounted DX ductable AC units	
12.1	6.5TR (2000 CFM)	4 No.s
12.2	4.1TR (1050 CFM)	4 No.s
12.3	3.3 TR (910 CFM)	10 No.s
12.4	3.3 TR (2000 CFM)	2 No.s
13.	Following VRV/VRF Hi wall decorative type indoor AC units	
13.1	2.1 TR	10 No.s
13.2	1.65 TR	40 No.s
14.	Refrigerant Piping, Thermal insulation, valves, fittings, blowers, expansion tank, grills, diffusers, dampers, gauges, strip heaters, filters etc	As at FReTB
15.	Other miscellaneous HVAC systems equipment & HVAC works	As at FReTB
16	Split ACs	As at FReTB
17	Ductable Type Packaged Air Conditioner (11+8.5TR)	1 Set
18	AHUs & EAHU for animal facility	As at FReTB

19	AHUs & EAHU for Animal facility & BSL Lab	As at Hanger-2
----	---	----------------

DETAILS OF WORK:

Daily operation / monitoring, scheduled annual preventive / routine & predictive maintenance, breakdown maintenance including repair of entire existing HVAC Central Plant system in the campus working on chilled water and VRV/VRF system. The Central plant system has air cooled screw chillers, Centralized programmable logic control system, Primary chilled water pumps, secondary chilled water pumps, Double skin air handling units, Ductable fan coil units, chilled water supply & return lines, AHU / FCU, air supply & return ducts, grills, diffusers, dampers, control & protection system. Work shall be carried out by continuous deployment of competent, experienced & trained staff members at site. This is a continuous mode operation & maintenance. All emergencies at all times to be attended without fail.

All fabrication works, minor repairs, servicing of machines / equipments / parts therein (or arrangement for the same) within the purview (entire AC system) of this contract, shall have to be carried out by the contractor within specified time.

If the contractor fails to carry out the assigned or entrusted work, the department shall get the work done by engaging any other agency and twice the cost incurred shall be recovered from the AMC contractor.

The entire existing AC system (working on chilled water) is covered under the scope of this AMC. Any additions and alterations made in the system (whether by the contractor or by any other agency or by TIFR-Hyderabad), up to an extent of 10% of existing installed AHU & FCU capacities are covered under the scope of this contract for operation & maintenance.

All the equipment/installations shall always be kept in good and trouble free operating conditions. All the required record for break-downs/repairs and maintenance etc. shall be maintained in the form of history books and logbooks etc. as per directions. All the maintenance works shall be carried out in accordance with the manufacturer's specifications and instructions of the engineer in charge.

DAILY:

- Daily operation of chillers, Primary & Secondary Pumps, AHUs, VRV systems, Split ACs, etc.
- Parameters of chillers, Pumps, etc shall be checked and recorded AHUs as recommended by respective manufactures in the LOG BOOK (provided by the firm/agency /contractor) on shift basis. Necessary action is to be taken if the reading is not normal.
- To check all electrical motors and their bearing for abnormal noise/heating and to take necessary action if found abnormal
- To check water level in the makeup water tank on terrace and check functioning of float valve.
- To drain out water and clean the AC plat room/ /AHU's etc as and when required/scheduled

- The temperature of each room shall be measured for any corrective action and these are to be recorded in LOG BOOK
- To keep machine rooms equipments such as chilling plant area. AHU's exhausts neat and clean including their room floor, wall, ceiling etc in an orderly manner.
- Check for any complaints that are reported and trouble shoot them immediately.
- AC system of the important & critical facilities are to be continuously monitored and corrective actions are to be taken immediately so as not to affect the facility concerned

If any important activities like seminars / lectures / meetings / interviews are planned in the campus, concerned AC system has to be inspected and normal functioning of AC system is to be ensured.

- Adjustments in the system to achieve required temperature & RH level as required by the user. Release of air locks / blocks in the system.
- Reporting of day's work and progress to concerned Engineer-in-charge.
- Inspection of HVAC electrical panels.
- Monitoring of BMS system
- Monitoring of Freezers & Refrigerators on hourly basis.
- Any other work required for the equipment for proper functioning
- Coordinating with OEM for attending and rectifying the problems

WEEKLY:

- To check the alignment/looseness of all the belt driven equipment and rectify if required
- To check water inside the makeup tank for hardness/dirty and fill with soften water if required
- Clean of grills and diffusers.
- Entire AHU room to be thoroughly cleaned with vacuum cleaner & to be made clean & dust free.
- Check alignment of pumps, motors and rectify if required
- Check heater bank condition and rectify if any problem exists.
- Check the fan belts for proper tension, and replace if necessary, and examine the fans for correct alignment, lubricate the bearing as required.
-

MONTHLY:

- To check the gland /seal, coupling of pumps.
- To check the solenoid valve, safety controls mechanical, Electrical/ Electronics and inter-locking of the various equipment.
- To check all AHU ducts/insulation/proper positioning/damage and rectifying the same where ever required.
- Checking the performance of AHUs.

QUARTERLY:

- To check and lubricant (if required) the bearing of the pumps/motors and keep the proper record.
 - The check the foundation bolts of the pumps / motors and to take the necessary action if required.
 - Check the quantity of Air flow from various out lets in each room/ Area as per drawings and do adjustment of dampers etc as and when required
 - Check the performance of each equipment of HVAC plant for proper functioning
- Inspect connection for any water leaks in the coil and connection. Check the tightness of hose, fittings & tighten if necessary. There should not be any flooding of water from the AHU.
- Check and clean drain pan, condensate drain pipe and floor drains to ensure no choking and flooding.
 - Cleaning of strainers, cooling coils, fins and filters, etc.
 - Inspect the conditions of the thermometers and pressure gauges for proper function.
 - Check and re-tighten any loose bolts and nuts in proper sequence.
 - Inspect the condition of insulation materials and rectify if necessary.
 - Coordinating with OEM for preventive maintenance activities.

YEARLY:

- Perform quarterly services
- Overall servicing of the unit, cleaning, reduction of noise level, checking of mechanical assemblies, foam insulators over the pipes.
- De-scaling of copper tubes of the cooling coil (the water circuit) by suitable means as per manufacturer's recommendation and general standards. Procedural details for this work are enclosed.
- Parameter checking before & after servicing
- Air flow checking & adjustment / balancing, if required
- Checking of IR value for motor and heater banks.
- Checking and calibration of temperature and pressure gauges on supply & return chilled water lines and replacement of the same if required.
- Checking of unit efficiency, total capacity delivery of the unit & bringing it to optimum performance level, air flow and water temperature measurements on supply & return ends, maintaining the lab temperature and temperature & RH adjustments.
- Cleaning of ducting system having diffusers, grills, dampers etc.
- Necessary documentation of parameters (before & after servicing work) and submission of checklist.

TOOLS & PLANTS

All the general & special tools for daily operation, tackles , chain pully blocks etc., required for proper maintenance and repairs/break down etc, shall be arranged by the contractor at his own cost and issued to the staff deployed by him for this work.

Following calibrated, well maintained instruments should always be available at site;

Clamp multimeter - 2 No

Anemometer - 2 No

Digital thermo & RH meter (Hand Held) - 3 No.s

Mercury thermometer – 2 No.s

Pressure Gauges

Following tools should always be available at site;

1. Complete Set Tools for Testing /Repair of Splat ACs
2. Two sets of all sizes double end open spanner
3. Two nos. adjustable wrenches each.
4. Three set of allen keys (2 set metric & 1 set inch)
5. Screw driver set (normal & star) - 3 set
6. Hack saw cutting sets with spare blades - 2 sets
7. Suitable bearing puller - 2 No
8. Vacuum & blow air cleaner - 2 No
9. Water pump, 1 ph. 1HP
10. High Pressure Jet Washer -1No

Following maintenance materials should always be available at site:

Grease, Gum, Waste cotton, Chemicals to clean fins & Filters, Insulation Tape, etc to be provided at no extra cost.

Date:

**(Name & signature of the contractor
with office seal**

SECTION-VI

GENERAL TERMS & CONDITIONS

1. The AMC shall be initially for a period of one year and shall be extendable up to two more years on observation of satisfactory performance on mutually agreeable financial terms.
2. The contractor shall provide the maintenance services as given in 'Scope of Work' to the satisfaction of the TIFR-Hyderabad. The performance of the contractor shall be reviewed on monthly basis and in case the services are not found to be satisfactory, the contract shall be terminated even before the expiry of contract period by giving one month's notice. However, the contract is liable for immediate termination on violation of any of 36th provisions by the contractor. The TIFR- Hyderabad may also terminate the contract in the instance of insolvency or bankruptcy of the contractor or change of ownership of the business of the contractor. The TIFR- Hyderabad shall not pay any compensation for early termination.
3. If the contractor fails to execute the maintenance works as detailed in 'Scope of Work' within stipulated time, the TIFR- Hyderabad will be at liberty to execute the works through an alternate source and the charges so incurred shall be recovered from the contractor.
4. The contractor shall permit the TIFR- Hyderabad to hold or deduct the amount from bill for non-performance or part performance or failure to discharge obligations under this contract.
5. The contractor, whose tender is accepted, shall deposit an amount equal to 10 % of the contract value towards Security Deposit for the due performance of the contract, which shall be refundable after expiry/termination of the contract. The deposit shall not bear any interest.
6. The contractor shall obtain at his own cost, any license or permission of any sort whatsoever (viz., labour license from Assistant Labour Commissioner (Central), Hyderabad and register with Employees' State Insurance
7. Corporation and Office of the Regional Provident Fund Commissioner, Hyderabad, GST, Income Tax etc.) that may be required under various Acts from the Central/State Government Authorities for carrying out the said activity in the premises of the TIFR-Hyderabad and such Registrations and License for engagement of contract workers for such purpose within one month from the date of issue of work order.
8. The contractor shall comply with the provisions of all Labour Laws, which are applicable to 'the Contractor' or his employees and shall be solely responsible for liabilities arising out of such compliance, non-compliance or implementation or non-implementation. The

- contractor will furnish proof of compliance of all Labour Laws requirements including obtaining licenses, filing of monthly/quarterly/annual returns and any other statutory requirement and furnish calculations and proof of payments made to all Government/Statutory Authorities under EPF, ESIC, Labour Welfare Fund Act, Payment of Bonus Act, etc. within time limit allowed under the respective Acts and all other statutory rules as amended from time to time.
9. The contractor shall indemnify the TIFR- Hyderabad from all liabilities arising out of any payment/ in respect of any claims made by the contractor's employees against the TIFR-Hyderabad under any statute/notification of the Government (Central/State) or statutory authority in respect of his employees.
 10. The contractor shall be responsible for maintenance of proper records as required under the provisions of various Labour Laws / Statutory Acts applicable to the contractor and contract employees such as attendance register, overtime register, advance register, register of deductions for damage & loss, register of fines, accident register etc. and produce them for inspection as and when demanded by TIFR- Hyderabad or any appropriate Labour authorities. The contractor shall also issue Form-XIV (employment card) to their personnel.
 11. The contractor shall make the payment to personnel engaged by him as per minimum wages notified by the Office of the Regional Labour Commissioner (Central), Hyderabad from time to time. The contractor shall satisfy the TIFR- Hyderabad showing adequate recorded proof that the minimum wages, ESI, contribution to provident fund as applicable are being paid to his personnel as required under various Statutory Acts notified by the Government from time to time. **The contractor shall disburse wages payable to his personnel only in the presence of an authorized officer of the TIFR-Hyderabad.**
 12. The contractor shall provide weekly off / holidays to his personnel as per applicable laws/ labour laws but it will be his responsibility to ensure uninterrupted services on all days.
 13. The contractor shall ensure that the character and antecedents of the personnel engaged by him are duly verified before such engagement.
 14. The contractor shall submit the list of his personnel to be deployed at the TIFR-Hyderabad along with their personal details like name, age, date of birth, permanent address etc. for approval. The TIFR- Hyderabad has the right to advise the contractor to replace any of the personnel engaged by him who are found unsuitable; the contractor shall immediately replace such personnel. The contractor shall provide identity cards to his personnel.
 15. The contractor shall not employ any person who is prohibited by law from being employed. The personnel deployed by the contractor should not suffer from any infectious disease and should be able-bodied persons.
 16. The contractor shall ensure that none of his personnel report for duty in drunken state or consume drugs, prohibited substances, smoke, etc., while on duty.
-

17. The contractor shall take necessary safety measures and he/she is solely responsible for the safety of personnel engaged by him. **The contractor shall provide appropriate uniform, shoes, gloves, accessories & tools that would ensure safety against insects & snakes, dogs and electrocution to all personnel and ensure their cleanliness and upkeep.**
18. The TIFR- Hyderabad shall not be responsible for any accident/injury or loss of life of any of the persons engaged by the contractor that may take place while executing the contract. Any compensation or expenditure towards the treatment of such injury or loss of life shall be sole responsibility of the contractor. At his cost, the contractor shall obtain appropriate/adequate insurance policy to his personnel towards meeting the liability of compensation arising out of death, injury, disablement, etc. at work.
19. The contractor shall abide by all the rules and regulations laid down by the TIFR-Hyderabad authorities from time to time.
20. The contractor or his personnel shall not any time do, cause or permit any nuisance at the site / do anything which shall cause unnecessary disturbances or inconvenience to the occupants/visitors at site or near the site of work.
21. The contractor shall be responsible for all acts done by the personnel engaged by him and for maintenance of proper discipline by his personnel at the premises of the TIFR-Hyderabad. Any act of indiscipline/misconduct/theft/pilferage on the part of any personnel engaged by the contractor resulting any loss to the TIFR- Hyderabad in kind or cash will be viewed seriously and the TIFR- Hyderabad shall have the right to levy damages or fine from the contractor and even terminate the contract forthwith.
22. Care must be taken to ensure while carrying out the work so that no laboratory equipment, fittings, fixtures, furnishings are damaged. Any damages done to the same or any other property will have to be repaired / replaced by the contractor, failing which the TIFR- Hyderabad will get them repaired/replaced at risk and cost of the contractor.
23. In the event, any damage is caused to the movable or immovable property of the TIFR-Hyderabad or to the property of employees of the TIFR- Hyderabad, the TIFR-Hyderabad reserves the right to compute the damage in terms of money and to deduct the money from the bill of the contractor or from the amount payable to the contractor by the TIFR- Hyderabad and the remaining amount, if any, by the way of civil damages.
24. The contract is for providing maintenance services and not for supply of Contract Labour. The workers employed by the contractor for providing the services shall be of his/their employees and not of the TIFR- Hyderabad.
25. The personnel engaged by the contractor shall not have any employee-employer or master-servant relationship with the TIFR- Hyderabad and they shall not have any claim whatsoever for employment in the TIFR- Hyderabad now or at a future date.



TATA INSTITUTE OF FUNDAMENTAL RESEARCH

(Autonomous Institution of the Department of Atomic Energy, Government of India)
Survey No.36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District,
Hyderabad-500046, Telangana

26. The contractor shall remove his personnel peacefully on expiry of contract or on termination of the contract.
27. The contractor shall not sub-contract the works unless permitted specifically by the TIFR- Hyderabad in writing.
28. The contractor shall submit the bills in the first week of every month along with monthly report for the works carried out in the previous month. The TIFR- Hyderabad shall pay AMC charges on monthly basis upon submission of bills by the contractor and certified by the concerned employee/official to the effect that the maintenance works have been carried out as per the contract. Applicable TDS will be deducted while making the payment.
29. GST, if any, shall be reimbursed by the TIFR- Hyderabad on submission of proof of payment along with monthly bill.
30. The contractor should provide mobile telephone on site for communicating 24 x 7 basis duty personnel.
31. The contractor shall execute the agreement related to this contract on stamp paper as per proforma prescribed by the TIFR- Hyderabad.

Date:

(Name & signature of the contractor with office seal)

SECTION-VII

SPECIAL CONDITIONS OF CONTRACT

1. Engagement terms of labour:

- i. The agreement between TIFR-Hyderabad and the contractor shall be purely on the basis of service agreement. The Contractor shall make his own arrangements for the engagement of the labour.
- ii. In respect of the engagement, employment, wages, transport, paying, feeding, housing and working conditions of labour and of all matters connected therewith, the contractor shall be solely responsible and liable.
- iii. During the continuance of the Contract, the contractor shall at all times be liable to obligations imposed on him by the provisions and requirements of any Central or State Statute ordinance or other law or any Regulation or Bye-law of any local or other duly constituted authority which may be applicable including any such law regulation or order passed or made or coming into force during the period of the Contract.
- iv. The Contractor shall comply with the provision of all labour legislation including the requirements of:
 - a) The payment of Wages Act
 - b) Owner's Liability Act
 - c) Workmen's Compensation Act
 - d) Contractor Labour (Regulation & Abolition) Act 1970 and Central Rules 1971
 - e) Apprentices Act 1961
 - f) Any other Act or enactment relating thereto and rules framed there under from time to time.
- v. The successful tenderer shall keep all mandatory records like PF, ESI, Bonus etc. of his employees deployed at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally Mandal, RR Dist, Hyderabad-500046 as per requirement of the labour enforcement inspector from time to time.
- vi. The successful tenderer shall take necessary license from the Asst. Labour Commissioner and comply with the central Labour Act of 1970.
- vii. The successful tenderer shall have to take necessary insurance coverage for his workmen and keep TIFR- Hyderabad indemnified against risk. Copy of such insurance premium receipt shall be submitted to TIFR-Hyderabad before the release of first payment.

2. Accidents:

The Contractor shall report within 24 hours of the occurrence of any accident or mishap at or about the Site or in connection with the execution of the work shall report such incident to



TIFR- Hyderabad. The Contractor shall also report such accident to the competent authority whenever such report is required by law.

3. **Insurance:**

Workman insurance policy in the joint name of TIFR- Hyderabad and the Bidder should be submitted to TIFR- Hyderabad before commencing the work. Contractors shall cover all the men and labourers, deployed by him on this work under an adequate comprehensive contractor's all risk policy, to insure Workmen and third party insurance etc.

4. The work is to be carried out in occupied office and laboratory premises and hence the contract shall be governed by the rules of TIFR- Hyderabad regarding the working hours, supply & removal of materials etc. The contractor and their personnel shall not cause disturbance to the staff and research activities of TIFR- Hyderabad.

5. The contractor should make proper safety arrangements like safety belts and helmets, etc. for the persons working on site. Contractor shall provide individual identity card to each of his staff /worker as per the approval format. The identity card shall be carried and displayed by the person during his entire presence or working in the premises.

Date:

(Name & signature of the contractor with office seal)

SECTION-VIII

APPENDIX TO FORM OF TENDER

a)	Minimum amount to third party insurance	<p>The successful tenderer shall take “all risk policy” for the contract value and workmen compensation policy for the workers engaged in the work. The contractor shall indemnify the TIFR-TCIS for any loss or damage that occurs to persons or building or third party while executing the work. Third party liability in contractors all risk policy shall be minimum Rs. 2 lakh per person for any one accident or occurrence and 5.00 lakh in respect of damage to property for any one accident or occurrence.</p> <p>Note: These policies shall be valid till the completion of the work. If the contractor does not provide these policies, TIFR-TCIS reserves the right to take the above insurance policies themselves and recover the cost thereof from the bill of the contractor.</p>
b)	Period of commencement	7 (Seven) days from the date of issue of letter of intent/work order or date of handing over of site, whichever is later.
c)	Period of Contract	12 months
d)	EMD to be deposited	Rs.2,11,500/-
e)	Security Deposit	Demand Draft @ 3% of the work order value or Bank Guarantee of same value. EMD of successful tenderer will be adjusted against this money.



SECTION-IX

PRICE BID

PRICE BID

VOLUME-II

Annual Maintenance Contract for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046

NAME OF THE TENDERER:

ADDRESS:

.....

.....

.....

Last date of submission of the tender: On or before 20.02.2023 by 13:00 Hrs.



Annual Maintenance Contract for “Operation and Maintenance of Electrical, Fire Safety and HVAC installations on 24 x 7 basis” on all days at TIFR, Survey No. 36/P, Gopanpally(Village), Serilingampally(Mandal), RR Dist, Hyderabad-500046

PRICE BID

I. Sub Head –A (Charges for deploying Manpower)

Sl.No.	Description	Head Supervisor	Supervisor	Helper
1	Basic Wages (Rs.693/- & Rs.637/- per day)	18018.00	18018.00	16562.00
2	Variable Dearness Allowance (Rs.247/- & Rs.229/- per day)	6422.00	6422.00	5954.00
3	Sub Total	24440.00	24440.00	22516.00
4	Leave wages @ 4.81% on Sr.No.3	1175.56	1175.56	1083.02
5	PF @ 13% on Rs.15000/-	1950.00	1950.00	1950.00
6	ESI @ 3.25% on Rs.21000/-	682.50	682.50	682.50
7	Bonus @ 8.33% on Sr.no.03	2035.85	2035.85	1875.58
8	Other Allowance (Fixed)	10000.00	0.00	0.00
9	Total from Sr. No.03 to 08	40283.92	30283.92	28107.10
10	No. of Employees deployed	2	8	11
11	Total minimum charges for proposed deployment in Rs. i.e. (Sr.No.9 x Sr. No.10)	80567.83	242271.33	309178.13
12	Service Charges @% of Sr no. 11			
13	Total Amount Per Month (i.e. Sr No. 11 + Sr No.12)			
14	Total Amount Per Year (12 months x Sr. No. 13)			
15	GST @18% On Sr No. 14			
16	Total Amount including GST per year (i.e. Sr No. 14+Sr. No. 15)			
17	Total Amount Per Year of Sub Head-A			

II. Sub Head –B (Maintenance of RMU Yard & Supply of Material)

S.No.	Item Description	Unit	Qty	Rate	Amount
-------	------------------	------	-----	------	--------



18	Annual Maintenance Contract for HT 33KV RMU yard (comprises of Air Break Switches, Metering, CT&PTs, 33KV VCB, Earthing, etc.) & LT power supply including attending all power failures. Contractor shall ensure that power should be restored within an hour at campus in coordination with TSSPDCL officials as mentioned in the scope of works. However, any replacement of material/parts will be paid by TIFR at actual	Months	12		
19	Supply of V-Belts for AHU, Size B61	No.s	60		
20	Supply of V-Belts for AHU, Size A30	No.s	10		
21	Supply of 3KW Strip Heaters	No.s	100		
22		Sub Total			
23		GST@18%			
	Total Amount i.e. (Sr. No.22 + Sr. No.23) (Sub Head-B)				

III	<u>Grand Total of (Sub Head A + B) in Rs.</u>	
Grand Total in Words: _____		
Only		

NOTE:

- a. The contractor shall provide minimum one-day duty off once in a week for the employees working in shifts and shall provide relievers for the employees on off duty / sick / leave. However, in case of exigencies, the contractor shall provide services beyond above mentioned hours.
- b. The TIFR- Hyderabad shall not permit double shift for any staff employed by the contractor.
- c. The quoted rates shall be inclusive of **Minimum Wages payable as per Central Labour commission for the classification of skill set of manpower engaged**, all taxes, duties, insurance, works contract tax, sales tax, VAT etc. all inclusive.
- d. The contractor shall make the payment to personnel engaged by him as per minimum wages notified by Office of the Regional Labour Commissioner (Central) and any revision in the wages during the period of contract.
- e. The quoted rates shall be inclusive of all applicable statutory payments viz. Minimum Wages(**including revisions**), PF, ESI, Gratuity, Bonus and necessary risk policy for covering the comprehensive risk of all employees etc.



- f. The contractor shall provide minimum one-day duty off once in a week for the employees working in shifts and shall provide relievers for the employees on off duty / sick / leave.
- g. Conditional tenders shall be summarily rejected.
- h. Please note that the final **bid amount** will be considered for evaluation of tenders.
- i. **Contractor shall take care of any probable revision in minimum wages during the contract period and no additional payments will be made in this regard.**
- j. The contractors are advised to visit the site and thoroughly understand the nature and scope of work and be familiar with the site conditions before quoting.

I/We have examined the scope of work and terms & conditions of the tender for the said works. If this tender is accepted by TIFR- Hyderabad, I/We hereby agree to execute the works in accordance with terms and conditions of the tender.

Date:

(Signature and Name of the authorized person
of the firm/contractor with office seal)