

**GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
SEISMIC ARRAY STATION, HOSSUR P.O.
GAURIBIDANUR TALUK, CHIKKABALLAPUR DISTRICT
KARNATAKA-561 210**



**LIMITED TENDER NOTIFICATION FOR AWARDING OF
ANNUAL MAINTENANCE CONTRACT (AMC) FOR
ELECTRICAL INSTALLATIONS**

TENDER NO: BARC/ SAS/ ELEC/ 3258

Dated :27th June 2022

- Tender Issued from** : 01st July 2022
(Download from BARC website barc.gov.in
from tender page)
- Pre-bid Meeting** : 07th July 2022 11:00Hrs at SAS Gauribidanur
- Last date for submission** : 18th July 2022 before 17:00 Hrs

Contents

| S.No | Details | Page No. |
|-------------|---|---|
| 1 | Limited Tender (Notification) | 3 |
| 2 | Terms & Conditions | 4 |
| 3 | Scope of Work with Maintenance Schedule Annual maintenance of a. DG-set b. Electrical Panels c. Transformers d. AVR e. Water Pumps f. Electrical Lighting and Earthing System g. Technical Terms and conditions | 7 10 11 12 13 14 17 |
| 4 | Submission of Tender Document Submission of Tender forms Proforma for Particulars of Bidder Proforma for Price-bid Proforma for Rate contracted items | 19 20 21 22 |



Government of India
Bhabha Atomic Research Centre
Seismic Array Station

LIMITED TENDER

BARC/ SAS/ ELEC/

Dated :27th June 2022

Sealed tenders are invited on the behalf of President of India by Officer in-Charge, SAS/BARC from the authorized agents/service providers for the award of **Annual Maintenance Contract(AMC) of following electrical installations at SAS Gauribidanur.**

1. Details of Electrical Installations

1. D.G Sets of 100KVA & 160 KVA having Cummins Engines & Stamford Alternator along with AMF Panel (Powerica).
2. Transformers (100 KVA & 200KVA) and AVR (100KVA & 200KVA)
3. Mono block water pump (3 H.P) 2 Nos. and Submersible Pump (10 H.P) 2 Nos and (5 HP) 1 No.
4. Electrical Lighting System includes Industrial type light fittings and LED street lamps, fans etc.
5. Maintenance of all Earthing Systems installed at SAS campus.

Tender Issued from : 01st July 2022
(Download from BARC website barc.gov.in
from tender page)

Pre-bid Meeting : 07th July 2022 11:00Hrs at SAS Gauribidanur

Last date for submission : 18th July 2022 before 17:00 Hrs

2. Eligibility Criteria

The tendering Service Provider Company/contractor should fulfill the following Criteria:

1. The Registered Office or one of the Branch Offices of the Service Provider Company/contractor should be located either in Gauribidanur / Chikkaballapur/ Doddaballapur/ Bangalore.
2. The Service Provider Company/contractor should be registered/Incorporated under the Indian Companies Act. Preference would be given to authorized service agents of OEM.
3. Service Provider Company/contractor should have prior experience in work of similar* nature in private/ public sector Company/Banks and Government Departments etc.,
4. Service Provider Company/contractor should have its own Bank Account.
5. Service Provider Company/contractor should be registered with Income Tax and Service Tax departments.

6. Service Provider Company/contractor should be registered with appropriate authorities under Employees Provident Fund and Employees State Insurance Acts etc.
 7. The Service Provider Company/contractor shall submit affidavit stating that the Company is not / has not been black listed by Central/State Government / any PSU. The bidder shall furnish the copy of above document along with the declaration as per proforma.
 8. The bidder shall submit his commercial offer on his letter head in the format mentioned in Annexure-VIII.
 9. Sales-tax/VAT, service tax, purchase tax, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and the department will not entertain any claim whatsoever in respect of the same. The bidder shall give the total composite price inclusive of all Central & State's levies and taxes i.e. Excise Duty, Service Tax, Sales Tax, Purchase Tax, Turnover Tax, Works Contract Tax etc.
 10. No advance payment would be made against AMC charges. The payment will be made on **half yearly basis** after satisfactory service provided by the firm during that period of AMC.
 11. Interested bidders shall visit the site for inspection before submitting the tender with prior appointment from this office.
 12. Canvassing in any form is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.
- *Similar type of work means the work of Operation & Maintenance/Maintenance/Non-Comprehensive AMC/Comprehensive AMC of DG set not below 100 KVA to any central/stateGovt.offices/PSU under a single order /contract.**

3. TERMS AND CONDITIONS:

PERIOD OF CONTRACT

1. The contract is likely to commence from **01 September 2022** and shall continue for a period of **TWO year**, unless it is curtailed or terminated by this office owing to deficiency of service.
2. The contract shall automatically expire after **TWO year** from commencement of the contract unless extended further by the mutual consent of contracting service provider Company/contractor (hereinafter referred to as the Company) and this office.

EXTENSION CLAUSE:

3. The contract may be extended, on mutually acceptable terms and conditions for a further period of **one year**.
4. The Company shall not be allowed to transfer, assign, pledge or sub-contract its rights and liabilities under this contract to any other Company without the prior written consent of this Office.

5. The Company shall provide identity cards to the personnel deployed carrying the photograph of the personnel and personal information as to name, date of birth, designation and Identification mark etc.
7. The Company shall ensure proper conduct of its personnel in office premises, and enforce prohibition of consumption of alcoholic drinks, *paan*, smoking, loitering without work etc.
8. The Company shall ensure that any details of office, operational process, technical know-how, security arrangements, and administrative/ organizational matters are not divulged or disclosed to any person by its personnel deployed in this office.
9. All security norms of the department shall be strictly followed. All staff deputed to for service work at this station should produce PVC (Police verification certificate) and photo identity card such as AAdhar,/Voter ID/Driving license.

TOLERANCE CLAUSE:

10. The bidder shall ensure that the works envisaged in the scope of work are carried out as per the work order. In the event of failure to meet the above obligation, payment shall be withheld proportionately for the period of default. However, bidder shall ensure that he adheres to all labour laws of all government and statutory bodies.

TERMINATION AND EXIT CLAUSE:

- 11.If the company does not provide satisfactory services during the period of contract, this department reserves the right to terminate the services of the company

However, both the company and the department, has the right to exit from this contract with advance notice as follows.

The company shall provide 3 months advance notice to Department to exit from this contract. Department shall provide 1 months notice to the company before exiting from the contract.

PERFORMANCE BANK GUARANTEE:

12. The Company will have to deposit a Performance bank guarantee (**PBG**) for a sum equivalent to 5% of the contract value within 15 days from the issue of letter of Intent as Bank Guarantee drawn in favour of PAY & ACCOUNTS OFFICER, BARC, Mumbai or Fixed Deposit Receipt (FDR) from a Commercial Bank made in the name of Service Provider Company but hypothecated to the Pay & Accounts Officer, BARC, Mumbai 400085. The performance Bank Guarantee should remain valid for a period of 60 days beyond the date of completion of all the contractual obligations of the supplier.

Apart from this, 5% of the monthly bill amount will be withheld as PBG. The amount withheld as performance bank guarantee from monthly bill will be returned to the contractor after the completion of contract period against certification by competent authority for fulfillment of all the contractual obligations.

LEGAL:

- 1) The Company shall be responsible for compliance of all statutory provisions relating to Minimum wages, Provident Fund, and Employees State Insurance etc. in respect of the persons deployed by it in this office.
- 2) The Company shall also be liable for depositing all taxes, levies, cess etc. on account of service rendered by it to this office to concerned tax collection authorities from time to time as per extant rules and regulations on the matter.

- 3) The Company shall maintain all statutory registers under the applicable laws. The Company shall produce the same, on demand, to the concerned authority of this Department or any other authority under law.
- 4) The Tax Deduction at Source (T.D.S.) shall be deducted as per the provisions of Income Tax law, as amended from time to time and a certificate to this effect shall be provided to the Company by this Department.
- 5) The persons deployed by the Company shall not have claims of any Employer and Employee relationship nor have any principal and agent relationship with or against Department of Atomic Energy (DAE).
- 6) The Company shall be solely responsible for the redressal of grievances/ resolution of disputes relating to persons deployed. This department shall, in no way, be responsible for settlement of such issues whatsoever.

RISK AND EXPENSES:

- 7) In case, the Company fails to comply with any statutory/ taxation liability under appropriate law and as a result thereof the department is put to any loss, obligation, monetary or otherwise, the department will be entitled to get itself reimbursed out of the outstanding bills or the Performance bank guarantee of the contractor, to the extent of the loss or obligation in monetary terms.
- 8) DAE shall not be responsible for any damages, losses, claims, financial or other injury to any person deployed by Company in the course of their performing the functions/ duties, or for payment towards any compensation.
- 9) The persons deployed by the Company shall not claim nor shall be entitled to pay, perks or other facilities admissible to casual, ad hoc, regular/ confirmed employees of DAE during the currency or after expiry of the contract.
- 10) In case of termination of this contract on its expiry or otherwise, the persons deployed by the contractor shall not be entitled to and will have no claim, for any absorption nor for any relaxation for absorption in the regular/ other capacity against DAE.

SECURITY: The Company shall not disclose any information furnished to them by BARC and the other Information prepared by company for this work without prior written approval of BARC, whether within and beyond the period of this contract. Company shall take all necessary measures to ensure that the knowledge/data obtained under this contract is not passed or disclosed.



Officer-in-charge

For and on behalf of president of India

SCOPE OF WORK

The contractor has to deploy on all working days a Licensed Electrician (ITI electrical trade) with adequate experience to this station to carry out the scope of work as mentioned below. The person deployed should also be willing to report to duty whenever called for in case of Emergency.

Annual Maintenance of D.G Sets of 100KVA & 160 KVA:

Annual maintenance contract of DG set which is inclusive of preventive and breakdown maintenance of all electrical equipment, replacement of defective parts and attending of complaints, overhauling and functional checking of electrical equipment are as per this schedule and the following specification.

1. Company's service engineer shall visit the site for attending the generator set not less than twelve times during the contract period (minimum once in a month) and shall inspect the generator set thoroughly along with checking of electrical side viz., Alternator, AMF control panel. Each visit shall take place during 1st week of each month.
2. The company shall be responsible to arrange genuine spares of the Diesel Engine, Alternator and AMF panel as and when required (i.e, during regular maintenance, servicing and in breakdown condition).
3. The company shall Supply and use only parts/ consumables i.e., lube oil/ coolant/filters etc as per the make and model recommended by OEM only. The rate quoted includes the cost of consumables. No extra payment would be made for items required for routine maintenance.
4. Checking of excitation circuit of alternator and take necessary action
5. Checking, fault finding and rectification in the electrical system associated with the engine.
6. Any minor/major job such as dismantling, assembling, re-installations and services of miscellaneous items shall be executed at the cost of contractor. Minor masonry work, loading /unloading of materials, handling of existing materials as directed by OIC related to the maintenance activity shall borne by the contractor.
7. OEM/ Authorized dealers shall be deputed for carrying out half yearly and annual maintenance works for DG sets including Engine Tuning. For periodical monthly maintenance, skilled workers of the bidders are acceptable.
8. The maintenance work must be carried out as per the schedule as mentioned in annexure-I on monthly, quarterly, half yearly and yearly to maintain the systems efficiently.
9. Delivery challan shall be submitted to the department for supply of materials.

Note: All the maintenance works to be done as per the manufacturer's guidelines. Any maintenance work not specifically mentioned above but required for the healthy operation of DG set will be considered part of the scope of work.

SCOPE OF WORK EXCLUDED

Major overhauling, Rewinding and bearing replacement of alternator, heavy labour for removing engine or alternator, crane transportation, supply of Diesel for DG set.

Annexure-I

Schedule for Maintenance of D.G Set Engine

Make Cummins:

Quantity: 2 Nos

Model 6BTA5.9G-5&6BTA5.9G1.1

Alternator Make: Stamford.

| S.No. | Check Description | Maintenance Schedule | | | | Remarks |
|-------|--|----------------------|---------|-------------|--------|--|
| | | Fortnightly | Monthly | Half Yearly | Yearly | |
| 1 | External surface cleaning | | X | | | |
| 2 | Fuel Level | | | | | |
| 3 | Lube oil Level | | | | | |
| 4 | Battery Terminal Tightness | | X | | | |
| 5 | Apply Petroleum jelly on Battery terminals | | X | | | |
| 7 | Sp. gravity of Batt. Electrolyte | | X | | | |
| 8 | Battery Voltage | | X | | | |
| 9 | Coolant Level | | X | | | |
| 10 | Topping up coolant | As required | | | | |
| 11 | Replace coolant | | | | X | |
| 12 | Fuel top up | | | | | |
| 13 | Change engine oil | | | X | | completion of 6 months /250 Hrs (Whichever is earlier) |
| 14 | Change oil filter | | | X | | completion of 6 months /250 Hrs (Whichever is earlier) |
| 15 | Change fuel filter and water separator | | | X | | completion of 6 months /250 Hrs (Whichever is earlier) |
| 16 | Check radiator fan belt | | X | | | |
| 17 | Check air filter | | | X | | |
| 18 | Check tightness of wires | | | X | | |
| 19 | Check indication lamps | | X | | | |
| 20 | Check starter | | X | | | |
| 21 | Check battery charging alternator | | X | | | |
| 22 | Check and clean fuel injector nozzles | | | | X | |
| 23 | Fuel tank cleaning | | | | X | |
| 24 | Check Fuel Pump | | | | X | |

| S.No. | Check Description | Maintenance Schedule | | | | Remarks |
|-------|---|----------------------|---------|-------------|--------|---------|
| | | Fortnightly | Monthly | Half Yearly | Yearly | |
| 25 | Check hoses and replace if necessary | | | | X | |
| 26 | Check radiator sealing | | | | X | |
| 27 | Check air cleaner sealing | | | | X | |
| 28 | Check unusual engine sound and vibrations | | X | | | |
| 29 | Replace clamps & hoses | | | | X | |
| 30 | Vacuum indicator | | | | X | |
| 32 | Check all safety controls | | X | | | |
| 33 | Check all instruments | | X | | | |
| 34 | Operation of DG set for 10 min. at no load | | X | | | |
| 35 | Operation of DG set for 10 min. at available load | | X | | | |

Note: Apart from the above checks if any other check as desired by OEM schedule and same is also to be carried out by the contractor.

Schedule for Maintenance of Electrical Panels (Including AMF Panel):

| S No | Check Description | Maintenance Schedule | | | Remarks |
|------|---|----------------------|-----------|-------------|---------|
| | | Monthly | Quarterly | Half Yearly | |
| 01 | Visual Inspection | X | | | |
| 02 | Functioning of Indication Lamps, Meters etc. | X | | | |
| 03 | External Surface Cleaning | X | | | |
| 04 | Operations Checks on Limit Switches & Aux. Contacts, contactors, circuit breakers etc | X | | | |
| 05 | Checks on Operating Mechanism | X | | | |
| 06 | Checks on Mechanical Interlocks | | X | | |
| 07 | Checks on Electrical Interlocks | | X | | |
| 08 | IR Values | | X | | |
| 09 | Connections / Tightness | | X | | |
| 10 | Operations of CB | | X | | |
| 11 | Visual Inspection of Bus bars / Support Insulators | | | X | |

1. Visual checking of Electrical panels, DBs/MCCB boxes DG set, and noting down the various electrical & other parameters. Any abnormalities to be recorded in the corresponding log books and should be reported to EIC/OIC.
2. All component of the Electrical/AMF including GCU/Relay/contacts/MCCB/RCCB/ELCBetc are included in the maintenance contract and should be replaced in case of failures at no additional cost (inclusive of cost of component).

Annexure-II**Schedule for Maintenance of Transformers****Quantity: 2 Nos****Make: Kirloskar****100 KVA/11KV/433V/4.9-5.7 A/133.3 A****Quantity: 1****Make: Universal Power****200 KVA/11/KV/433V/10.5 A/266.7 A****Quantity: 1**

| S.No | Description | Monthly | Half yearly | Yearly | Remarks |
|------|---|---------|-------------|--------|---|
| 01 | Visual Checks | X | | | |
| 02 | Record Voltage & Current Readings | X | | | |
| 03 | Check for any abnormal noise | X | | | |
| 04 | Check Oil Level in Conservator | X | | | |
| 05 | Check Condition of Silica Gel in the Breather | X | | | |
| 06 | Check for any Oil Leakage | X | | | |
| 07 | Insulation Checks on Windings | | | X | |
| 08 | Check Radiators / Fins / Gaps | X | | | |
| 09 | Breakdown voltage/acidity tests/Moisture Content Tests of Transformer Oil etc | | X | | |
| 10 | Oil Filtration | | | X | Once a year or depending upon test report |
| 11 | Functioning of Tap position Indications at local & Remote panels. | | | X | |
| 12 | Inspection of Rain Hoods* | | | X | *Prior to commencement of Monsoon |
| 13 | Inspect Connections in HT & LT Terminal Boxes&Marshalling Panel | | | X | |
| 14 | Check the Integrity of REF Protection, wherever provided | | | | |
| 15 | Check Neutral Earthing Connection | | | | |
| 16 | Check Tank Earthing Connections | X | | | |
| 17 | Check growth of wild vegetation | X | | | |

Cost of oil and filtration/testing charges are covered in the contract amount

During the contract period if there is failure of lightning arrestor, HT-Pot head or other insulation failures etc., the cost of material and labour for replacement should be borne by the contractor.

Annexure-III

Schedule for Maintenance of AVR:

Quantity: 2 Nos

Make :Automatic Electric Ltd

Capacity: 100 and 160 KVA (1 Each)

| S.No | Description | Mont | Half yearly | Yearly | Remarks |
|------|--|------|-------------|--------|---|
| 01 | Visual Checks | X | | | |
| 02 | Record Voltage & Current Readings | X | | | |
| 03 | Check for any abnormal noise | X | | | |
| 04 | Check Oil Level in Conservator | X | | | |
| 05 | Check Condition of Silica Gel in the Breather | X | | | |
| 06 | Check for any Oil Leakage | X | | | |
| 07 | Insulation Checks on Windings | | | X | |
| 08 | Check Radiators / Fins / Gaps | X | | | |
| 09 | BDV / acidity test/ Moisture Content Tests on Oil | | X | X | |
| 10 | Oil Filtration | | | X | Once yearly or depending upon test report |
| 11 | Inspect Connections in Terminal Boxes&Marshalling Panel | | | X | |
| 12 | Check the Integrity of REF Protection, wherever provided | | | | |
| 13 | Check Neutral Earthing Connection | | | | |
| 14 | Check Tank Earthing Connections | X | | | |
| 15 | Check for voltage regulation | X | | | |

1. The AVR control boards and control motors, limit switches and other accessories are within the scope of contract and should be replaced/repaired/serviced in case of failures at no additional cost (inclusive of cost of component).
2. Cost of oil and filtration/testing charges are covered in the contract amount.

Maintenance of Water pump :

| Item | Make | Capacity | Nos |
|------------------------|--------------------------------|-----------------|------------|
| Mono-block pump set | Ellen 3-Ph 415 V | 3 HP | 2 |
| Submersible Water Pump | Saber Star-Delta 3-Ph 415 V | 10 HP | 2 |
| Submersible Water Pump | Texmo | 5 HP | 1 |

Annual maintenance of Mono-block and submersible water pump includes the following activities:

1. Periodical Preventive maintenance and Breakdown maintenance shall be carried out to keep up the machines working efficiently continuously.
2. Based on the requirement or instructions from the EIC/OIC, overhauling of the pump rewinding of the motor and repair/replacement of the motor starter/starter circuit shall be done.
3. Repair/replacement of the faulty circuit breakers/switches, indicators and power supply cables to the motors has to be borne by the contractor. No separate payment shall be made for the labor involved in removal/de-energizing or installation/energizing of the mono-block/submersible pumps.
4. Prior approval shall be obtained in de-energizing and energizing of the pumps and this task should be given top priority in case of any breakdown.
5. In case of replacement of any device/breakers or any items related to motor and pump, the best quality items as per Indian Standards should be supplied by obtaining the approval from EIC/OIC.
6. During the period of contract charges for any fault in the borewell pump which require lifting the pump from the bore well and reinserting after rectification of fault is to be borne by the contractor for a maximum of two occasions.
7. The rates quoted will include rewinding of motors and servicing of pump including spares such as cost of bearing, impellers, machining of shaft etc.,
8. The scope of work also includes replacement of faulty cables for submersible pump if required.

1.3.1 Quarterly maintenance:

- i) Complete pump set shall be checked for its healthiness. Thorough cleaning of pump and motor.
- ii) Inspection of glands for leakage (replace if necessary) / temperature and taking corrective action. Checking and tightening of gland packing.
- iii) Checking bearings noise / temperature / vibration manually.
- iv) All bearings shall be lubricated.
- v) Inspection of pump suction and discharge valves for leakage or any other abnormality and taking corrective action.
- vi) Tightening of foundation bolts.
- vii) Cleaning of strainers.

Note : Supply of bearings, Impeller, Shaft sleeves, bearings, lubricants and fasteners is included in the scope of contract.

Maintenance of the Electrical Lighting and Earthing system:

Annual Comprehensive Maintenance contract for Electrical Lighting System includes fault rectification along with the replacement of the accessories/components such as starters, chokes, lamps, rewinding of motors etc., cleaning of luminaries (outdoor and indoor) as well as the yearly painting of all mounting pole (including street lamp posts and double pole structures in Transformer yard).

1. The rate quoted should include replacements of minimum number as per the table below. Replacements in excess of this quantity, the bidder should provide rate for supply and replacement of items including labour charges (as per Annexure-IX).

| | |
|--|--------------------------------|
| 36 W tube lights | 60 |
| 36 W Tube Electronic ballast | 20 Single tube 20 Twin tube |
| 40W LED street light fitting with complete accessories | 5 |
| 18 W tube for WIPRO Recess ceiling fitting (4X18 W tube) with all accessories. | 60 |
| Recess fitting 36 W LED 2X2 feet panel | 6 |
| Running water Instant geyser of 3KW | 2 |

2. Electrical Lighting System includes LED street lamps and Lamps/FLs/CFLs/ or any other special lamps and fixtures and its related accessories like ballast, starter and wires/cables.
3. In any case, if the complete fitting has to be replaced, it can be done so with the prior approval of EIC/OIC quoting make of the product.
4. Rewinding of fans (ceiling/pedestal/ exhaust) is within the scope of work. No extra charges would be paid for the same.
5. Replacement of faulty switches/sockets/fan regulators/ heating element for geysers of existing make as required is part of the work. No additional charges would be paid for the same.

*Note: Any other make are subject to approval of Officer In-Charge.

Annexure-V

Maintenance of Earthing system:

Total Quantity-25

Preventive maintenance of earth pit involves following activities:

1. Cleaning of earth pit and surrounding area.
2. Removing of rust, replacement /tightening of nuts and bolts. Painting of earth pit, Marking of results, marking of test date and next due date.
3. Necessary treatment of the earth pit to ensure the earth resistance value to a maximum of 2 ohm.
4. Cleaning of the area after completion of the job.
5. Removing scrap materials from job site to scrap yard as per the direction of EIC/OIC.
6. Reconditioning of existing earth pit by digging out the old charcoal and GI electrode and cleaning the electrode of rust and reinstall it in the same earth pit filled with filling compound, connection, commissioning and testing of the same as per the direction of EIC.
7. Connectivity to the equipment/Breakers/Installations shall be inspected/verified. If found incorrect or any discontinuity shall be reported to EIC/OIC and corrective measures should be taken with the approval of EIC/OIC to restore it effectively.
8. Materials like copper wire/copper bars and any other consumables shall be borne by the contractor.
9. Recording/Logging of Earth resistance value in proper format showing following parameters and shall be approved/ signed by EIC/OIC.
10. In case of failure of earth-pit, new earth-pits have to be made detail specs for making the earth-pit are given at Annexure-VI (page 16). Company has to quote cost of making new earth-pit in the rate column of rate contract.

| S.No | Earth Pit No. | Section | Location | Date of Testing | Resistance in Ohms | Ok/ Not Ok | Action Taken (If not OK) | After Rectification Test Value | Next Due Testing |
|------|---------------|---------|----------|-----------------|--------------------|------------|--------------------------|--------------------------------|------------------|
| | | | | | | | | | |

SPECIFICATION FOR EARTHING INSTALLATION

The installation shall generally conform to IS 3043 - Indian Standard Code of Practice for Earthing, as amended up to date.

PLATE EARTHING

Where plate electrode for earthing is to be employed, the size of the plate shall not be less 0.6 m x 0.6 m x 3mm thickness copper plate. The plate shall be buried vertically with the top at a minimum of 4.0 M below the ground level for sandy soil and 2.0 M below the ground level for normal soil. In order to place the same at the prescribed depth, the dimension of pit to be excavated shall be 0.9 m x 0.9 m x 3 M deep. The plate shall be placed in position by the contractor only after the inspection of excavated pit and approval is obtained from the Engineer.

One no. 32 mm x 6 mm Copper flat (for electrical installation) should be connected to the plate at two points by means suitable Brass bolts, nuts and washers. In case of copper plate, copper flat of not less than 32 mm x 6.0 mm shall be used as the earth lead. Brass bolts, nuts and washers shall be used for fixing. All other details shall be in accordance with IS 3043-1987. No joint on the earth lead conductor is permitted. Every care shall be taken to ensure that the ends of the wire/flats have been securely clamped by the bolt on cleaned surface of the plate and established a good electrical contact.

After placing the plate the earth lead conductor shall be protected by means of a continuous length of G.I pipe (Class-B) having 50 mm dia bore or depending upon the size of the lead, right from the plate upto a height of 0.60 metre (2 ft) above ground level. The whole length of pipe shall be filled with bituminous compound of approved make and brand. The molten compound shall be poured from the top end of the pipe and topped up to overflowing. The plate electrode shall have a 50 mm galvanized iron water pipe buried vertically and adjacent to the electrode and reaching upto the center of the plate. The upper end of the pipe shall be at least 5 cm above the bottom of the inspection pit and with wire mesh, funnel, etc as per IS specification.

MASONRY INSPECTION PIT

The inspection pit for the earth station shall be approx 0.56 M x 0.56 M (1'-10"x1'-10") outside dimensions and approx 0.45 M (1'-6") deep when completed, having 5" thick cement brick work with 1st class bricks in cement mortar (6:1) both inside and outside plastered 19 mm (3/4") thick and neatly cemented 1.60 mm (1/16") thick, both inside, outside and top. The opening on top shall be provided with a C.I. ring with lockable cover fixed flush with ground surface.

All the excavations shall be duly back filled, dressed and rammed.

TECHNICAL TERMS & CONDITIONS

- 1) The company shall carry out the maintenance activities as given below.
 - a. Monthly maintenance - Twelve times
 - b. Quarterly maintenance - Four times
 - c. Halfyearly - twice
 - d. Yearly - Once
 - e. Breakdown service - On call basis
- 2) All personal deputed by the contractor for routine and breakdown services should be well trained and qualified
- 3) Apart from the scheduled maintenance activities, any other job/work related to the above said electrical systems has to be carried out in accordance with EIC/OIC instructions as part of the AMC.
- 4) The rates quoted shall hold throughout the currency of contract.
- 5) Any breakdown occurring in the above systems during the currency of contract will be in the scope of the contractor and no additional payment would be made.
- 6) For the breakdown visits, the service engineer shall attend the complaints within 06 hrs from the time of reporting of fault by telephone call/fax/email. The contractor shall complete the complaint within 24 Hrs.
- 7) Contractor shall prepare and submit date wise schedule of maintenance for each of the above activity for prior-approval.
- 8) Contractor shall arrange all the required tools, measuring instruments, spanner set, bearing puller set, filler gauge, dial gauge with magnetic base etc. for checking and recording the different parameters/maintenance of the machines.
- 9) Contractor should make his own arrangement to store materials, tools, tackles, consumable items etc. However, space will be given for making arrangements.
- 10) Contractor shall ensure safety working environment and instruct their employees to adhere the industrial safety norms. Contractor shall provide necessary safety accessories (safety helmet, shoes, goggles, safety belts) to his employees.
- 11) Contractor has to prepare and provide maintenance card (job card) showing the activity of scheduled maintenance. These cards shall be filled and signature of the departmental person supervising the work shall be obtained.
- 12) Spares/Materials are to be supplied as per the preferred make approved by OEM/EIC.
- 13) Test reports/certificates shall be submitted for the items supplied by the bidder.
- 14) For breakdown services the Service Engineer should submit a service report which needs to be signed by the departmental representative/Engineer for completion of work. A copy of the service report is to be handed over after completion of work.
- 15) If the contractor did not attend the complaint within the period 6 Hrs, a penalty @ Rs.250 per hour shall be levied on the contractor. For the non-rectification of fault within 24 Hrs, the penalty@ Rs.500 per hour shall be levied. However in case of any unavoidable delay, the time extension may be granted on the request of contractor but at the discretion of OIC/EIC, BARC, Gauribidanur.

- 16) The tenderer shall be solely responsible for the maintenance, repair and replacement of required parts etc. The dismantled parts shall be handed over by the tenderer to the departmental representative.
- 17) Supply of any kind of material parts/ consumables i.e., lube oil/ coolant/filters/gaskets etc. for routine maintenance purpose is included in the price quoted. The consumables and spares used should be approved make of OEM.
- 18) The Service representative shall also submit the recommendations time to time during the AMC period regarding the routine maintenance of DG set.
- 19) The company shall provide contact details of their supervisor, who would be single point of contact to co-ordinate and supervise the work.
- 20) Work carried out and material consumed shall be recorded/logged and maintained in a proper register and it shall be submitted to EIC/OIC on regular basis.
- 21) If the servicing/repair work not included in this contract for any of the above system is to be carried out by the company, prior approval from the departmental engineer in-charge/ Officer in-charge has to be obtained.
- 22) The contractor shall raise invoice for additional work along with the Half yearly service bills.
- 23) The contractor shall handover all the installations in good working condition on expiry of contract.
- 24) **Warranty:**
The parts replaced by the company (not of consumable nature) should bear a warranty for a period of one year.

Preferred Make of Materials

1. FRLS Wires/Power cables: Finolex / Polycab / RR Kable
2. Power Cables : CCI/ Finolex / Polycab (Daman) / RR Kable
3. MCCB/MCB : Legrand / Indoasian / L&T / Seimens
4. Cable lugs : Dowel

*Note: Any other make are subject to approval of Engineer-in- charge.

3. SUBMISSION OF TENDER

1. Interested parties are requested to submit the rates for AMC of Electrical Installations in the proforma enclosed. All the tender documents shall be duly signed & stamped by the bidder and shall be sent to “**Officer in-Charge, Seismic Array Station, BARC, Gauribidanur, Chikkaballapur District, Karnataka - 561 210**” in a sealed envelope accompanying the following documents:
 - a. Copies of Work orders/LOA for similar type of work undertaken (other than submitted as above) in last three years, preferably in a Govt. organization/department.
 - b. Authorization certificate from OEM if available
2. The proforma given below should be typed and filled in the company’s letter head, duly signed and official seal affixed on all pages.
3. The quotations with the tender documents should be sent by REGISTERED/SPEED / Hand delivered (dropped in Tender drop box). Tenders received after the due date & time of submission will not be considered.
4. The rates quoted should remain valid for four months from the last date of submission of tender.

(To be provided on Bidders letter head)

Annual maintenance contract for electrical installations at SAS/BARC, Hossur P.O., Gauribidanur Taluk, Chikkaballapur District, 561 210, Karnataka.

Particulars of Bidder

| | | |
|----|--|--|
| 1. | Name of the Bidder with full Address of the registered office Telephone number | |
| 2. | Name of the Proprietor /Director of the company | |
| 3. | Banker of Company with full address (Attach certified copy of statement) | |
| 4. | PAN/GIR No. (Attach attested copy) | |
| 5. | GST Registration No. (Attach attested copy) | |
| 6. | E.P.F. Registration No.(if applicable) (Attach attested copy) | |
| 7. | E.S.I.Registration No.(if applicable) (Attach attested copy) | |

DECLARATION

I, _____ Son / Daughter / Wife of Shri _____ Proprietor/Director, authorized signatory of the Company, mentioned above, is competent to sign this declaration and execute this tender document. I have carefully read and understood all the terms and conditions of the tender and undertake to abide to them. The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I / we, am/ are well aware of the fact that furnishing of any false information/ fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

I agree to keep my offer firm for a period of 1 year from the date of award of contract.

Signature of authorized person
Full Name:
Seal:

Date:
Place:

Annexure-VIII

PROFORMA FOR SUBMISSION OF TENDER

| S.N | Item Description | Rate | Unit | GST | Amount | | | | | | | | | | | | |
|---|---|------------------|------|------------------------------|--------------------------------|--|---|---|----|--|---|---|---|------------------|--|--|--|
| 1 | AMC for DG Set 100 kVA and 160 kVA including AMF panel and other accessories(1 each) as per scope of work in Annexure-I | Lumpsum per year | | | | | | | | | | | | | | | |
| 2 | AMC of Transformers (100 KVA & 200KVA) (1 each) As per scope of work in Annexure-II | Lumpsum per year | | | | | | | | | | | | | | | |
| 3. | AMC of AVR (100KVA & 200KVA(1 each) As per scope of work in Annexure-III | | | | | | | | | | | | | | | | |
| 4 | Maintenance of Mono block water pump (3 H.P) 2 Nos.And Submersible Pump (10 H.P) 2 Nos. As per scope of work in Annexure-IV (Electrical Water Pumps) | Lumpsum per year | | | | | | | | | | | | | | | |
| 5 | Maintenance of Electrical Lighting System. For the Lumpsum rate quoted, bidder has to supply minimum consumables as below. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">36 W tube lights</td> <td>60</td> </tr> <tr> <td>36 W Tube Electronic ballast</td> <td>20 Single tube 20 Twin tube</td> </tr> <tr> <td>40W LED street light fitting with complete accessories</td> <td>5</td> </tr> <tr> <td>18 W tube forWIPRO Recess ceiling fitting (4X18 W tube) with all accessories.</td> <td>60</td> </tr> <tr> <td>Recess fitting 36 W LED 2X2 feet panel</td> <td>6</td> </tr> <tr> <td>Complete LED street lamp fitting (18 W)</td> <td>5</td> </tr> </table> | 36 W tube lights | 60 | 36 W Tube Electronic ballast | 20 Single tube 20 Twin tube | 40W LED street light fitting with complete accessories | 5 | 18 W tube forWIPRO Recess ceiling fitting (4X18 W tube) with all accessories. | 60 | Recess fitting 36 W LED 2X2 feet panel | 6 | Complete LED street lamp fitting (18 W) | 5 | Lumpsum per year | | | |
| 36 W tube lights | 60 | | | | | | | | | | | | | | | | |
| 36 W Tube Electronic ballast | 20 Single tube 20 Twin tube | | | | | | | | | | | | | | | | |
| 40W LED street light fitting with complete accessories | 5 | | | | | | | | | | | | | | | | |
| 18 W tube forWIPRO Recess ceiling fitting (4X18 W tube) with all accessories. | 60 | | | | | | | | | | | | | | | | |
| Recess fitting 36 W LED 2X2 feet panel | 6 | | | | | | | | | | | | | | | | |
| Complete LED street lamp fitting (18 W) | 5 | | | | | | | | | | | | | | | | |
| 6 | Maintenance of Earth-pits (total 25 nos) As per scope of work in Annexure-VII | Lumpsum | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | |
| | Amount in words ----- | | | | | | | | | | | | | | | | |

We/ I have read and understood the scope of the work and We/ I certify that We/I shall hold the prices quoted firm for the entire period of contract. In the event of not being able to perform I understand that We/I am liable for penalties as applicable and We/I may forfeit the security deposit.

Date

**Signature of Bidder
with name and office seal**

Rate Contract for Electrical Items

Rate contract for supply and replacement of following electrical consumables (These rates would be applicable for quantity in excess of item-5 in the above table.

| Sl.No. | Item Description | Unit | Unit price | GST | Amount |
|--------|--|---------------------|------------|-----|--------|
| 1. | 18 W fluorescent lamp (2 feet length) | 1 | | | |
| 2. | 36 W fluorescent lamp (4 feet length) | 1 | | | |
| 3. | Electronic Ballast suitable for Philips Model : EBE-236TDL and 136TDL | Twin tube ballast | 1 | | |
| | | Single tube ballast | 1 | | |
| 4. | Anchor Roma Switch 5 Amp | 1 | | | |
| 5. | Anchor Roma Socket 5/15 Amp | 1 | | | |
| 6 | Legrand Sockets (Model: Mosaic) 5 /15 Amp | 1 | | | |
| 7 | Legrand Switch (model: Mosaic) 5/15 Amp | 1 | | | |
| 8 | HPSV 150 W Lamp | 1 | | | |
| 9 | Ballast for 150 W HPSV Lamp | 1 | | | |
| 10 | Complete Outdoor street lamp LED fitting (18 W), Make as per the approval of EIC/OIC | 1 | | | |
| 11 | Complete Outdoor street lamp LED Fittings (40 W), Make as per the approval of EIC/OIC | 1 | | | |
| 12 | Battery for DG-set (180 AH, pulse start, SMF) | 1 | | | |
| 13 | Making of new earth-pits as per Annexure-VI including labour and all materials such as charcoal, salt, GI-pipe, Copper plate, copper conductor etc | Per Earth pit | | | |
| 14 | Lifting of bore well pump and motor and reinserting the same in bore hole after fault rectification. | 1 | | | |
| 15 | Charges for rewinding of 10 Hp bore well motor and servicing of pump | 1 | | | |
| 16 | Recess fitting 36 W LED 2X2 feet panel | 1 | | | |

We/ I have read and understood the scope of the work and We/ I certify that We/I shall hold the prices quoted firm for the entire period of contract. In the event of not being able to perform I understand that We/I am liable for penalties as applicable and We/I may forfeit the security deposit.

Date:

**Signature of Bidder
with name and office seal**