



INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
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NIT No.: -IACS/EL (ADM)/09/2019-20/88

DATE: - 16/12/19

NOTICE INVITING TENDER (2nd call)

Sealed tenders are invited from bonafide, resourceful and eligible contractors for the following work in the campus of IACS, Jadavpur.

- **Name of the Work:** Non-Comprehensive AMC for 1 X 200KVA DG set along with its accessory AMF Panel.
- **Estimated cost: Rs. 23,600/- (inclusive of GST)** (Rupees Twenty three thousand six hundred only). The estimate however, is mentioned as rough guideline.

Eligibility Criteria: The minimum eligibility criteria for the contractors will be as follows:

- (1) Completion of **one similar AMC work, where the DG capacity is not less than 200KVA** and executed value of the work is not less than **80% of the estimated cost** put to tender under Government, Semi-Government, PSU or Govt. funded Autonomous Body in the **last 7 (seven) years** to be reckoned from the date of issue of NIT.
- OR
- (2) Completion of **two similar AMC works, where the DG capacity is not less than 100KVA** and executed value of the each work is not less than **60% of the estimated cost** put to tender under Government, Semi-Government, PSU or Govt. funded Autonomous Body in the **last 7 (seven) years** to be reckoned from the date of issue of NIT.

Similar work shall mean: AMC for turbocharged Diesel Generator sets, preferably Greaves make unit. AMC for alternators, AMF panels etc.

Currency of the Contract: contract shall remain valid for a period of 12 (twelve) months from the date of handing over/taking over of site between IACS & the successful bidder subject to fulfillment of the terms & conditions as laid down in this tender document. The contract may be extended for a period of another 12 months, subject to satisfactory performance of the agency concerned and approval accorded by the Competent Authority of IACS.

Earnest Money Deposit: **Rs. 500/-** (Rupees five hundred only) has to be submitted as EMD with the bid document in a separate envelop marked as "EMD". The EMD should be in the form of Demand Draft/Banker's Cheque/Pay Order of a Scheduled Bank drawn in favour of "**Indian Association for the Cultivation of Science**" payable at Kolkata. The EMD will be released to the unsuccessful bidders within 45 days from the date of opening of tender. No interest shall be paid by IACS in this regard. However, in respect of the successful bidder, the EMD will be kept as Security Deposit during the tenure of the contract. No interest shall be paid by IACS in this regard. Tender submitted without the prescribed EMD in proper form & shape shall be summarily rejected.

Cost of Tender Form: The intending bidders may submit the tender documents, downloaded from our Website (www.iacs.res.in), against a payment of Rs. 150/- + 5% GST = **Rs.158/-** (CGST & SGST @ Rs.7.50 rounded to Rs.8.00 each), per Set (Non refundable), in favour of "**Indian Association for the Cultivation of Science**", Payable at Kolkata. The payment should be made in the form Of

Demand Draft/Pay order/Banker's cheque (non- refundable) of a Scheduled Bank. The cost of tender should be sent in a separate envelope, along with the "Tender documents". Tender paper, submitted without the Cost of tender shall be summarily rejected.

Termination of Contract: The contract may be terminated by serving one month's notice from either side.

Tender Notice No.	NIT NO: IACS/EL(ADM)/09/2019-20/88 Date: 16/12/2019
Tender issue date and time	17/12/19 to 26/12/19 (up to 2.00PM on each working day)
Last date and time of application for physical sale	26/12/19 (up to 1.00 PM). Application should be made on printed letter head of the firm mentioning the NIT no. and name of work.
Last date & time of submission of tender	26/12/19 (up to 3.00PM).
Date and time of Opening tender	26/12/19 at 4.00 PM
Place of Opening Tender	Workshop conference room
Contact No.	Tel. +9133 2473 4971 (Extn. 1720/1730)

Details of Bid Documents:

The "Tender documents" shall consist of the following documents:

Photocopy of **(a) PAN Card, (b) Valid Trade License, (c) Valid Electrical Contractor's license, (d) valid Electrical Supervisor's license (e) GST registration certificates, (f) Company Profile, (g) Credentials/experience certificates** etc. and any other documents found to be suitable in support of their technical competency. Proofs of eligibility criteria i.e. copy of **"Work Orders" and "Completion Certificates"** thereof are required to be submitted. **(h) Quoted rates with respect to the Bill of Quantities (BOQ) provided with the tender document. (i) EMD and Cost of tender.**

Bank Name, Branch Name, IFS Code and MICR Code may also be required for making payment through RTGS/NEFT.

- **Note:** Each & every page of the tender documents must contain company's seal & signature of the bidder or their authorized representative. Letter of authority in the form of power of attorney has to be submitted with the tender documents in case the tender is signed by the authorized representative.

Conditional tender including conditional rebates shall not be accepted and shall be liable for rejection.

In case of any discrepancy is noticed, the office copy the NIT/tender documents will be considered as reference and shall be binding to the contractor.

The IACS Authority reserves the right to accept the lowest tender, reject any or all the tenders and to place the order on one or more firms without assigning any reason thereof. All the tenders should be in conformity with this NIT. Non-compliance may be the cause of rejection of tender.

Tender Submission Date: On or before 26.12.19 (up to 3.00 PM). The offer shall be submitted in a sealed envelope. The outer envelope shall bear the Name of work, NIT No., due date, sender's name etc. on the top of the envelope which would be addressed to the Registrar, IACS, Jadavpur, Kolkata-32. The complete tender has to be submitted to the Despatch & Receiving Section of IACS within the prescribed time & date.

Date of Opening: The Tender will be opened on 26.12.19 at 4.00 P.M. in presences of the intending bidders. If Holiday is declared on the Scheduled date of openings, the tenders will be opened on the next working day at the same time in presence of the intending bidders.

Acceptance of Tender: IACS authority is not bound to accept the lowest tender and reserves the right to reject any or all the tenders without assigning any reason thereof.

Other terms & conditions:

The EMD shall be treated as a part of the security deposit for the successful bidder. Tender submitted without EMD or EMD not in proper form & shape shall be summarily rejected. The EMD for unsuccessful bidders will be refunded on demand after finalization of tender.

If the contractor fails to maintain the required rate of progress or to complete the work and clear the site on or before the contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law, pay compensation the amount calculated at the rates stipulated below or such smaller amount as the Director may decide (whose decision in writing shall be final and binding) on the amount of the tendered value of the work for every completed day / week (as applicable) that the progress remains below or that the work remains incomplete.

- i. The Engineer in Charge may without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the state of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases.
 - if the contractor fails to rectify/replace the defects in spite of written notice by the Engineer –in-Charge.
 - If the contractor suspends the progress of work so that in the opinion of the Engineer-in-Charge will be unable to secure completion of the work by the date of completion and do not improve performance even after written notice.
 - If the contractor neglects to carry out his obligation under the contract and / or commits defaults in complying with any of the terms and conditions and does not remedy if even after written notice.

When the contractor has made him liable for action under any of the aforesaid cases, the Engineer-in-Charge on behalf of IACS shall have powers

- To determine or rescind the contract.
- After giving notice to the contractor to measure up the work done by him, get the balance work done by another contractor. Any expenses which may be incurred in excess of the sum which would work had been executed by him, shall be borne and paid by the original contractor and may be deducted from any of his dues.

Complete Tender Document will also be available at www.iacs.res.in and can be downloaded for submission. Conditional tender including conditional rebates shall be summarily rejected. **The quoted rate shall be inclusive of all taxes & duties, levies, cess etc i/c GST also.** Nothing extra will be paid to the Contractor except the accepted rate. In case of any discrepancies, the office copy of the tender document will be referred and shall be binding to the contractor.

Acting Registrar

TECHNICAL SPECIFICATIONS & SPECIAL CONDITIONS OF CONTRACT
FOR ELECTRICAL WORKS

CHAPTER 1

SPECIAL CONDITIONS OF CONTRACT

1.1 General

- 1.1.1 These Special Conditions of Contract supplement the General Instructions. General Conditions of Contract, Bill of Quantities and basic rates and Technical Specifications and tender drawings enclosed thereto, and shall be considered as part of the Tender Papers. Where the provisions of these Special Conditions of Contract are at variance with General Conditions of Contract, the Provisions of these Special Conditions of Contract shall prevail.
- 1.1.2 The several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scaled dimensions.
- 1.1.3 If there are varying or conflicting provisions in the documents forming part of the contract, the Engineer-In-Charge shall be the deciding authority with regard to the intentions of the provisions and his decision shall be final and binding on the contractor.
- 1.1.4 The Contractor may be required to carry out any addition or alteration work other than the specified in the schedule of work / bill of quantities as and when required, by the 'Employer' within the completion period of the AMC.

1.2 Scope of Work

The conditions given in this chapter deal with the special conditions for the work of Annual Maintenance of the D.G. Set, viz. preventive maintenance, specific maintenance, breakdown repairs and upkeep of the complete D.G. Set including A.C. alternator and AMF panel. It also includes all accessories, which are necessary for the operation of the set like pipeline, gauges, meters, and starter switches etc.

1.2.1 Preventive Maintenance to be carried out monthly

1. Check the engine oil level for the lubrication. 2. Drain Sediments from fuel tanks of fuel system. 3. Clean pre cleaner dust pan monthly. 4. Check air cleaner restriction clean/change air cleaner element if required. 5. Check the coolant level of the cooling system. 6. Check oil level of Gear box. 7. Cleaning, dusting, of D.G. Set including motor starters, control panels etc. 8. Repairing of leakage, if any 9. Checking of V-Belts tensions, tightness of nuts & bolts. 10. Checking of coupling, rubber bushes of pumps. 11. Checking of rubber seal, gasket and hosepipes. 12. Checking of coupling disk on fuel injection pumps. 13. Checking and setting the injectors. 14. Checking of batteries. 15. Checking and servicing of starter (cranking motor) and battery charging alternator. 16. Checking of output voltage and current on load. 17. Coolant level and conditioning of coolant shall be check and refilled if required. 18. The governor shall be checked and tuned for proper functioning.

1.2.2 Preventive Maintenance to be carried out quarterly

(1) Checking of all safety controls operation and also the set points of all controls such as temperature alarm and trip, high and low pressure alarm and trip, earth fault relay, thermostats, and over load relay. (2). Checking of all indicating lights, voltmeter, ammeter, battery charging meters for its proper operation. (3). Checking of control panel, checking of time relays. (4). Checking of turbocharger (5) Checking of battery terminal and de-sulphation. (6) Check battery specific gravity. (7) Cleaning of air-filters as per requirement.

1.2.3 Preventive Maintenance to be carried out Half-Yearly

(1) Insulation test for generator, motor and starter. (2) Greasing of generator. (3) Replacement of fuel filter (4) Changing of engine oil (5) Replacement of Lube Oil filters. (6) Replacement of Gasket Rocker Cover. (7). Removing of sump bottom cover and cleaning of the lube oil suction drain. (8). Checking and re-adjustment of tappet clearances. (9). Checking of speed governor and engine shut down for proper functioning. (10). Checking of all items covered under monthly and quarterly schedule. (11) Checking of carbon brushes, slip rings, AVR and AMF panel.

1.2.4. Preventive Maintenance to be carried out Yearly

(1) Alignment of engine and alternator with foundation. (2) Checking of V-belt and its pulley including replacement if required. (3). Checking of flexible and rubber engine mount. Replacement if required. (4). Checking of injector. (5). Checking/replacement of fuel filter element. (6). Checking of fuel injection pump. (7).Checking of monitoring functions. (8). Checking of compression pressure.

1.3 Quality of materials and works

All the materials to be used in the execution of the contract shall be of the approved quality and of the class most suited for the purpose specified. The work shall also conform to the following Acts, Rules and Orders:

- i) Indian Electricity
- ii) National Electrical Code
- iii) Indian Standard Specifications/IEC etc.

- 1.3.1 All erection work shall be of the best workmanship & quality to the entire satisfaction of the Employer. The Contractor shall ensure that the equipment and services under the scope of this contract whether manufactured or performed within the Contractor's premises or at his subordinate's premises or at the work site or at any other place are strictly in accordance with the provisions of this contract. For this purpose, if necessary the Contractor shall adopt necessary quality assurance programme to control such activities at all stages.

1.4 Electrical License

- 1.4.1 The work shall be carried out only by a Contractor holding a valid license issued by the State Government for carrying out the installation work of a voltage classes involved, under the direct supervision of the persons holding valid certificates issued or recognized by the State Government. The tenderer should furnish with his tender the particulars of the license with validity period held by him. The successful tenderer shall furnish the names and particulars of certificates of competency of supervisors and workmen to be engaged for carrying out this work.

- 1.4.2 The contractor shall not be allowed to engage sub-contractor directly or indirectly unless it is officially permitted by IACS.

1.5 Tools, Tackles & Safety articles

- Standard measuring instruments e.g. Tong Tester, Multi Meter, Megger Insulation Tester, Megger earth tester, phase sequence indicator, line tester etc should be provided by the Agency.
- Standard Tools i.e. Pliers, Chisels, Screwdrivers, Hammers, Hacksaw, Files, Brushes, all types of Wrenches, Cable Crimping m/c., including Neon Tester and Test Lamps, , should be provided by the Agency.
- Portable power blower, portable hammer drill machine, cutting & drill machine etc.
- Any other tools and tackles as may be necessary for break-down or periodic maintenance work should be provided by the Contractor at the time of requirement on urgent basis.
- All types of safety articles like safety gloves, safety belts, safety shoes, safety apron, and helmet etc .are required to be provided by the contractor.

1.6 SPARES & CONSUMABLES

All consumables, tools & tackles, required for the AMC work have to be provided by the agency. However, if any hardware component of the aforesaid DG set/Alternator/AMF panel demands replacement due to wear & tear, malfunction etc. shall be paid by IACS, subject to obtaining prior approval of the Competent Authority of IACS

1.7 Inspection

- 1.5.1 The Contractor shall provide without any extra cost to the Employer all materials, equipment, tools, labor and maintenance of every kind which the Employer's Inspecting Engineer may consider necessary for any test and examination to be made at the Contractor's or the Sub-Contractor's (if approved) premises and at site and shall pay all cost attended thereon.
- 1.5.2 All the equipment and materials shall be tested / inspected by the Employer or its authorized Inspecting Engineer and approved before they are installed / used in the execution of the works covered in the contract. If the Contractor uses any equipment / materials without the prior approval of Employer, those are liable to be rejected. The Contractor shall furnish, as and when demanded by the Engineer-in-Charge the T.C. (Test Certificate) and G.C (Guarantee Card) for verification of quality and make of the materials.
- 1.5.3 The Inspecting Engineer or his authorized Representative shall have at all times access to the Contractor's premises and shall have the power to
- i) Inspect and examine the materials and workmanship of the work at any time at the site of erection
 - ii) Reject any part of the work submitted by the Contractor as not being in accordance with the contract.
 - iii) Reject the whole of the work including equipment tendered for inspection if after the inspection of such portion as he may, in his discretion think fit he is justified that the same is unsatisfactory.
 - iv) Mark the rejected equipment with a rejection mark so that the same may be easily identified

- v) Re-inspect at the time of erection at site any equipment both previously inspected and approved by the inspecting Engineer at the Contractor or Sub-contractor's (if approved) premises. Notwithstanding any approval given earlier, the Contractor shall make good such rejections made based on such re-inspection at site to the satisfaction of the Engineer.
- vi) The decision of the Inspecting Engineer as regards to the acceptance or rejection of equipment / work shall be final and binding to the Contractor.

1.5.4 Consequence of Rejection

On the equipment / assemblies being rejected by the Inspecting Officer of the Employer at destination of the Contractor shall replace such rejected equipment/assemblies of the forthwith but in any event not later than a period of 2 (two) weeks in the case of minor equipment and 4(four) weeks in case of a major equipment from the date of rejection. The Contractor shall bear all the costs of replacement including freight, etc., but without being entitled to any extra time on this account. The decision as to whether the equipment is to be classified as Minor or Major for the purpose of this clause shall be that of an Engineer and is not questionable.

1.6 Installation

- 1.6.1 All works connected with and inclusive of installation and erection under this contract shall be done in accordance with the standard and established methods of installation and erection of electrical equipment and shall comply with relevant Indian Electricity Rules, National Electrical Code, BIS Codes of Specifications and Standards. The work shall also be strictly carried out in accordance with the instructions / recommendations of the manufacturers. The equipment shall be leveled carefully before being fixed finally in position. All fragile and sensitive equipment shall be protected adequately and handled carefully during installation and erection.

- 1.7 **Care of Building:** Care shall be taken by the Contractor to avoid damage to the building during execution of his part of the work. He shall be responsible for repairing of all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of his work from the site.

GENERAL TERMS AND CONDITIONS

1. Submission of a tender/quotation by a tenderer/ quotationer implies that they have inspected and examined the site and its surroundings and satisfied themselves as to the nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves, obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender.
2. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools and plants, water electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract document.

3. The tender/quotation for the work shall remain open for acceptance for a period of sixty days from the date of opening of tender/quotation. If any tenderer withdraws his tender before the said period or makes any modifications in the terms and conditions of the tender which are not acceptable to IACS, then IACS shall without prejudice to any other right or remedy be at liberty to forfeit 50% of the said earnest money as aforesaid.
4. All conditions/terms listed under "Terms and conditions" are applicable for all tenders/quotations.
5. The successful tenderer /contractor, on acceptance of his tender by the accepting Authority, shall, within 7 days from the stipulated date of start sign this contract/agreement.
6. The Director, Indian Association for the Cultivation of Science (IACS) does not bind himself to accept the lowest or any tender and reserves to himself the authority to reject any or all tenders received without the assignment of any reason.

General Rules and Directions

1. The tenderer shall fill in the rates both in words and figures. The amount against each item is also to be filled in. In case of any discrepancy, the rates quoted by contractor in words shall be taken as correct.
2. Canvassing whether directly or indirectly in connection with tenders is strictly prohibited and the tender submitted by the contractor who resorts to canvassing will be liable to rejection.
3. On acceptance of tender, the name of the accredited representative of the contractor who would be responsible for taking instructions from the Engineer in Charge shall be communicated in writing to the Engineer in Charge.
4. All the works shall be carried out as per **CPWD specification** corrected up to date and Indian Electricity rule. Where CPWD specification is silent Indian standard specifications of B.I.S./ Specification laid down by IACS is to be followed.
5. The time allowed for execution of the work or the extended time in accordance with these conditions shall be the essence of the contract.
In case of any event causing delay for which the contractor is not responsible, the contractor shall immediately give notice thereof in writing to the Engineer in charge but shall nevertheless make best endeavors to prevent or make good the delay.
The Director, IACS may consider the notice and allow suitable extension of time for completion of work.
6. The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in accordance with specifications. Unless otherwise given in the Contract documents the specification will mean standard specification of Central Public Works Department corrected up to date, Bureau of Indian Standard Specifications, and/or any other published standard or code.
7. The contractor shall provide all necessary superintendence during execution of work and as along there after as may be necessary for proper fulfilling of the obligations under the contract.
8. The contractor shall pay their workers as per the provisions of Minimum wages Act fixed and notified by the Government from time to time.

- No person below the Age of 14 years shall be employed to act as a workman.
 - First AID Box shall be made available by the contractor at all work sites.
 - The contractor shall provide all safety measures to his workmen like working platform, suitable scaffolding, gangways, ladder, helmets, gumboots, gloves safety belts, insurance coverage etc. according to the situation and nature of work.
 - In every case where compensation is to be paid to a workman employed by the contractor, as per provisions of Workmen's Compensation Act. The contractor shall arrange to pay such compensation in full and IACS will recover the same from the dues and/or security deposit of the contractor and make arrangement to pay the same to the concerned.
9. In case of any dispute arising out of this contract during the progress of the work or after the cancellation, termination, completion or abandonment, the decision of the Director, IACS, shall be final and binding on the contractor.
10. It is also a term of the contract that if the contractor does not raise any claim in writing within 90 days from the date of cancellation, termination, completion or abandonment, the claim of the contractor shall be deemed to have been waived and absolutely barred and IACS shall be discharged and released of all its liabilities under the contract in respect of these claims.

Chapter 2

Technical Specifications

1.

- i) **Engine Rating:** 253 HP, 1500RPM,
- ii) Governor: A1 Class.
- iii) Make: Greaves cotton Ltd.
- iv) Model No.:TBD3V6 MK-1
- v) **Alternator Rating:** 200KVA, 415V, 50Hz,1500RPM
- vi) Make: Crompton Greaves Ltd.
- vii) Series: AL
- viii) **AMF Panel:** consists of 2 Nos. of Power contactor, Protection relays, CT, PT and control wiring, Battery charging set, Microprocessor based panel and various meters.

2. Workmanship :

- i) Good workmanship is an essential requirement to be complied with. The entire work of manufacture / fabrication, assembly and installation shall conform to sound engineering practice involving highly skilled workers.
- ii) The work shall be carried out under the direct supervision of a highly experienced licensed SUPERVISOR, i.e. a person holding a certificate of competency issued by the State Govt. for the type of work involved, employed by the contractor, who shall rectify the defects pointed out by the Engineer-in-charge during the progress of work.

TENDER

I/We have read and examined the notice inviting tender, schedule of quantities, terms and conditions and all other contents of the tender document.

I/We hereby tender for execution of the work as per schedule of quantities, specification, drawing and instructions.

I/We agree to keep the tender open for Sixty days from the date of submission for acceptance and not to make any modifications in its terms and conditions.

A sum of Rs. _____ is hereby forwarded in the form of Demand Draft/ Bankers cheque/PAY Order of a Scheduled Bank as earnest money deposit which shall be retained by IACS as a part of security Deposit.

I/We agree that if I/We fail to commence the work as specified in the schedule of quantities, an amount equal to the amount of the earnest money mentioned above shall be absolutely forfeited to the IACS without prejudice to any other right or remedy available in law.

Date _____

Signature of Contractor

Postal address _____.

Witness _____

Address/Occupation _____

Acceptance

The above tender is accepted by me for and on behalf of Indian Association for the Cultivation of Science for a sum of Rs. _____ (Rupees _____). The letters referred to below shall form part of this contract agreement.

a) _____

Date: _____

For and on behalf of
Indian Association for the Cultivation of Science

Signature _____

Designation _____