



## AERONAUTICAL DEVELOPMENT AGENCY

(Ministry of Defence, Govt. of India)  
P.B. No. 1718, Vimanapura Post, Bangalore - 560 017, India.

0751:11:0900/ADA/MAINT/ELECT/AMC/HT-LT/DG.SETS

Date: 20<sup>th</sup> May 2019

To:

### INSTRUCTIONS TO BIDDERS AND GENERAL TERMS & CONDITIONS

Sealed tenders are invited by M/s. Aeronautical Development Agency for the "ANNUAL MAINTENANCE CONTRACT FOR MANNING, OPERATION AND MAINTENANCE OF HT-LT SUBSTATION, ELECTRICAL INSTALLATION AND DG.SETS AT ADA HQ.COMPLEX, NFTC, CAMPUS-II AND P-63 BUILDING"

2. The proposal duly signed on Technical and Commercial Bid should be addressed to CAO (R), Aeronautical Development Agency, P.B. No. 1718, Vimanapura post, Bangalore-560017, India, to reach on or before **04:00 PM on 09.06.2019**.
3. Tenders not properly filled, mutilated with incorrect calculation or generally not complying with the conditions will be rejected.
4. The quotation, would be supported by vendors "LETTER HEAD" which is mandatory.
5. In a two Bid Proposal, the Technical and Commercial proposals shall be sent through courier/speed post in separate sealed envelopes duly marked Technical Bid or Commercial Bid bundled in single cover superscribing Enquiry reference on all the envelopes and addressed to the CAO (R) , ADA, so as to reach ADA before scheduled time and date. Bidders may also drop their bids in tender box kept in reception near security main gate at ADA before due date and time. Further please note that, offers received unsigned shall be summarily rejected. The proposals shall not be sent by FAX or though E-Mail.
6. The scope of work, technical terms and conditions are briefly brought out in the statement of Work/Enclosure/Annexure.
7. Company's profile indicating the ownership, registration as per law of the land and range of products etc., along with the list of references to whom similar services executed, GST i.e. CGST/SGST/IGST & UTGST and income Tax registration details etc., are to furnished along with bids.
8. Tenderers should quote their prices and rates both in figures and in words. No blank spaces are left. All erasures and correction made while filling up the tender should be signed by the tenderer. If there is a discrepancy between words and figures the amount in words shall prevail.
9. The tender shall remain open for acceptance for a period of 90 days from the date of opening of the tender.
10. **Every tenderer is expected to inspect the site of the proposed work before quoting. The responsibility of maintaining the system shall rest solely with the contractor. The site visit can be made on working days from Monday to Friday between 9.30 hours to 16.00 hours by prior appointment with Jr.Manager (E & M) on phone No. 08025087241.**
11. Prices quoted shall include all duties, taxes leviable by the central and state governments and other statutory bodies and should be shown in the Bids. The rates quoted will be treated as all-inclusive and no further claims what so ever will be entertained in this respect.



12. **Contractor Capabilities:** The tenderer shall bring out specifically in the tender the setup available in Bangalore, for the execution of such projects and for rendering effective service. He shall also identify the engineer who will be assigned for supervision and control of this task listing details of his experience.
13. **Service Facility:** The contractor must have full fledged regular service and maintenance center at Bangalore with service engineers, skilled technicians, tools and adequate spares etc, to provide prompt and uninterrupted service to ADA. The contractor shall ensure that the security regulations of ADA are strictly followed.
14. **First Aid:** The contractor shall be responsible for all first aid and he shall keep the site fully equipped with requisite medical amenities.
15. Contractor, staff and labour shall strictly follow the factory regulation in existence. This is for the purpose of entry of labour and material, working condition, hours of working etc. The Contractors personnel should sign the attendance register maintained contract wise at the security at the time of entry and exit and for this purpose the contractor will submit a list of employees to be detailed for the job assigned. The contractor will also submit the list of employees with their qualifications who will be employed for the job. Any change in the list of employees to be intimated and a copy of which should be enclosed to the bill.
16. The contractor will be expected to employ skilled employees with experience for that particular work.
17. The compliance with Provident Fund, ESI for Employees and payment of GST as per extant rules shall be the sole responsibility of the contractor.
18. Payment towards the above will be made on production of documentary proof for having paid to the contributions for the previous month.
19. The AMC payment to the contractor shall be made through e-payment only within 15 days of the following month. The contractors shall submit the bill in triplicate duly pre-receipted along with the attendance certificate, detailed acquittance roll for the personnel indicating rates of wages for the number of days present, employer contribution of EPF/ESI, employee contribution of EPF/ESI, any other recoveries and net payment made with signature of the personnel employed. The net payment made should tally with e-payment remittance of net pay etc.
20. Payment for the workers engaged for the above work shall be paid through e-payment, bank transfer and such payment shall not be less than the Prevailing Minimum wages stipulated by the Ministry of Labour and Employment, Government of India or Government of Karnataka whichever is higher, for the entire work force, including variable dearness allowances notified by the Ministry, periodically. The proof of such e-payment to be submitted to the Jr. Manager (E & M) every month.
21. The Contractor should ensure that the number of personnel as indicated in the scope of work is employed daily for the job and absence/shortfall should be replaced with a substitute. **In case the absence is more than two consecutive days in respect of a particular trade of employee and if no replacement is made one day pay will be deducted as penalty in addition to deduction of pay for the absence period.**
22. The Variable dearness allowances on the minimum wages during the currency of the contract, as per the orders to be issued by Ministry of labour and Employment, Government of India or Government of Karnataka whichever is higher shall be duly paid by the contractor to the workers and the claim for the same will be reimbursed by the Department on production of satisfactory documentary proof of such payment. It may be noted that no additional compensation whatsoever shall be reimbursed by the Department during the prevalence of the above contract.



23. The Contractor shall ensure that prevailing minimum wages are paid to the labourers. In this regard, the bank statement of the workforce and wage disbursement statement shall be submitted regularly to Jr. Manager (E&M) for verification.
24. The contractor shall also ensure PF is deposited to respective provident fund (PF) account of the workforce and proof shall be submitted along with the bill periodically for verification of the statement.
25. The contractor shall ensure that ESI Card is provided to all labourers and their dependents within three weeks upon issue of work order. A Compliance statement from service provider/contractor shall be submitted to EIC and Finance for verification.
26. The contractor shall submit the documentary proof towards payment of GST, PF, ESI and other statutory levis & duties if any to the concerned Department for the previous month for verification and payment of such charges during the current month. In the absence of the documentary proofs as above, the payment of PF, ESI and GST etc. for current month will be with held till production of such proofs.
27. The contractor shall ensure that the payment to workforce deployed is made not later than 7<sup>th</sup> of succeeding month through e-payment only.
  - a) The contractor shall complete the payment through e-payment by 7<sup>th</sup> of succeeding month and submit necessary proof from their banker to EIC towards the payment made for preceding month along with Bill/Invoice and other documentary proof.
28. The contractor should issue a signed and sealed wage slip/statement to the personnel containing details such as number of days present, wages payable, recoveries made etc. and net payment credited to bank. Quarterly statement of PF balance also to be furnished to the employees.
29. Contractor shall supply two sets of uniform with COMPANY LOGO and one set of shoes for each worker during tenure of the contract, the cost of which can be recovered from the outfit allowance included in, the wage of each employee.
30. Police Verification report of all the contract personnel engaged for the AMC shall be furnished within fifteen days of deployment. In case of change of any person during tenancy of the contract, the police verification for such personnel should be submitted.
31. The AMC is effective from 01/07/2019 onwards for a period of one year. During this period no escalation or revision in rates shall be accepted except for increase in wages/VDA from time to time as notified by Government. The finalized AMC also includes maintenance of all additional new lines that may be introduced during the AMC tenure of one year. The workmanship and services provided by you will be checked periodically by ADA. In case of unsatisfactory performance, ADA reserves the right to terminate the contract by giving one month notice.
32. Initially the AMC period will be one year, based on satisfactory performance, ADA at its discretion may extend the contract for a further period not exceeding two years, at the same terms and conditions.
33. The contractor shall ensure that high standard of safety is maintained at all times by using appropriate safety gadgets. The contractor shall ensure safe working condition for the workmen and should adhere to all the safety requirements. Necessary safety belts / helmets / gumboots shall be used while carrying out the work at heights. Any loss/damage caused to the property of ADA by the contractors workmen during the course of execution of the work shall be made good by the contractor at his own cost and to the entire satisfaction of the Jr. Manager (Maint) or his representative.
34. The contractor shall be solely liable for accident/injury that may happen to any of the personnel engaged by him or his sub contractor in connection with the contract work. ADA shall not be liable for any damage or compensations in respect of or in consequence of any accident or injury to any personnel in the employment of the contractor or his sub-contractor and the contractor shall



indemnify ADA from compensation and proceedings. The contractor or his sub-contractor shall forthwith report to ADA all cases of accident to any of their personal/workmen and shall make every arrangement to render all possible assistance and aid to the victim of the accident.

35. The contractor shall, during the progress of work employ qualified and experienced engineers/supervisor and operators/helpers at site for executing the said work. Any decision, instruction, authorization or approval given by ADA to such contractor's supervisor shall be deemed to have been given to the contractor. The minimum qualification of the various categories of the employees to be employed for the job are as under:-
- 1) Supervisor - Degree in Electrical Engineering or Diploma in Electrical Engineering with minimum 1 year experience for degree holders and 2 years experience for Diploma holders.
  - 2) Operator/Electrician - Diploma in Electrical Engineering or ITI in Electrical Trade with 2 / 3 years experience for Diploma / ITI respectively.
  - 3) Operator Assistant - SSLC/PUC Pass with knowledge of Electrical works.
36. The contractor shall ensure that no personnel of doubtful character antecedents will be employed by him and the contractor shall follow all the security norms of ADA and willing to accept the security checks by the security personnel of ADA. **Your representative/Supervisor/Workers/Technicians should carry Original Identity Card issued by the company to our Security staff for obtaining Pass/Token.** The contractor shall ensure that the contractor's workmen shall not enter any other places in ADA and should restrict themselves to their work area. Any person employed by you shall not be found alcoholic while working inside ADA. ADA shall reserve the right of asking the contractor to expel any person from the work spot and deny entry due to security reasons. The contractor shall carry out the said work at ADA premises for which he shall provide all tools, equipment's, waste, etc and any other items required for executing the work. He shall also be responsible for the safe custody of his belongings/stores while working in ADA. Materials brought to site for incorporation into the work shall accompany with delivery Challan and all the materials shall be entered in the INWARD register at the entry gate.
37. Disputes, if any, arising out of this contract shall be subject to the jurisdiction of courts of law at Bangalore. All other general conditions and instructions for quotation of the tender documents shall be applicable to the contract.
38. If any difference of opinion or dispute would arise between ADA and the contractor in connection with implementation of this contract, both shall mutually discuss to arrive at an amicable solution. Failing an amicable solution, dispute arising in this connection shall be finally settled under the Arbitration and Conciliation Act 1996. The proceedings would be conducted in Bangalore by an Arbitration of three Arbitrators one each from the respective parties and one by mutual consent to be appointed by the respective parties and the award pronounced by the said Arbitrators would not be open to challenge and is final.
39. **Commercial Evaluation of the quotes:** The L1 will be determined with reference to the lowest amount quoted for each Abstract separately
40. **Earnest money deposit (EMD):** The EMD amount should be Rs 1,00,000/- which may be remitted by way of Banker's Cheque/Pay order/Demand Draft, Bank guarantee valid for six months from Schedule bank/Nationalized Banks in India, drawn in the name of "Aeronautical Development Agency" payable at Bangalore to be submitted. **The details of payment (number, date and amount) to be provided in pre-qualification profile of the bid and original one to be submitted with technical bid.** No other means of EMD payment will be accepted. Tender shall be considered as invalid and rejected if it does not accompany the appropriate earnest money deposit in the prescribed mode as above. Vendors exempted from the submission of EMD, etc as per Govt. of the India directives, copy of the certificate issued by Govt of India for such exemption in lieu of EMD, etc. The EMD Deposited by the tenderer shall not bear any interest to the contractor. The Earnest



Money Deposit of unsuccessful Tenderer will be refunded on finalization of the Contract. In case of the successful Tenderer (on whom the order is placed), the Earnest Money Deposit will either be returned on submission of the required Bank Guarantee/DD towards Security Deposit/ or adjusted in the Security Deposit. The Earnest Deposit is liable to be forfeited in case the Accepting officer feels that the Tenderer is not bonafide or the Tenderer modifies or revokes the tender after its submission. The decision of the accepting Officer is final and binding on the Tenderer

41. **Performance Security:** The vendor shall guarantee the faithful execution of PO and successful and satisfactory performance/AMC under the conditions and for the service specified.

The Performance Security shall cover the following:-

Faithful execution of PO. The successful and satisfactory performance/AMC covered under this contract, under the conditions and for the services specified. The performance security shall be issued by a Nationalized bank and made payable to the ADA in the prescribed form which will be furnished on award of contract. On due performance and completion of order in all respects, performance security will be returned to the Vendor without any interest. The PBG shall be for a value 5% of the total PO excluding taxes to be furnished along with the first AMC bill amount and shall have validity for 60 days beyond the completion date of the AMC period.



**Technical Bid**

**Part - A**

**COMPANY/FIRM/CONTRACTOR PROFILE**

Supporting Documents to be annexed with the Tender documents. ADA has the right to reject the applications if found deficient in any respect without further correspondence.

1. Name of the Applicant (Individual /Firm/ Company): .....
  2. Nationality: .....
  3. Address:
    - a) Registered Office:.....
    - b) Head Office:.....
    - c) Address for Correspondence:.....
  4. Contact Details:
    - (i) Telephone Number (with STD Code): .....
    - (ii) Fax Number (with STD Code): .....
    - (iii) Email ID:.....
    - (iv) Website URL (If any): .....
  5. PAN Number (Individual/Firm/Company):.....
  6. The Contractor should produce a copy of the SGST/CGST/IGST/UTGST Registration Certificate. Applicable GST (i.e. CGST, SGST, IGST & UTGST) paid to the Government after availing input tax credit (ITC) will be reimbursed to the supplier/contractor based on submission of documentary evidence to ADA as proof of remittance of GST by the Supplier/Contractor.  
If the bidders desires to ask for GST I.E. SGST/CGST/IGST/UTGST ETC the same must be specifically stated. In the absence of any stipulation, it will be presumed the prices include all such charges and no claim for the same will be entertained.
  7. Constitution of Company:.....
    - (a) Sole proprietorship, (b) Partnership firm, (c) Pvt. Ltd &. (d) Public Ltd.
  8. Name, passport size photo and signature of the Individual(s)/Partner(s)/Director(s) across the photograph (Size of photo should be 2.5 X 3.5 cm having white background and printed name at bottom).
  9. Is the individual/Sole Proprietor/Director of the Company .....
- a) Dismissed Government Servant. Yes..... No.....



- b) Removed from approval list of contractors in any dept. Yes..... No.....
- c) Demoted to a lower class of contractors in any dept. Yes..... No.....
- d) Having business banned/suspended by any Government } Yes..... No.....  
in the past.
- e) Convicted by Court of law. Yes..... No.....
- f) Retired Engineer/official from Engineering department } Yes..... No.....  
of Government of India within last one year.
- g) Direct or Partner of any other company/firm enlisted } Yes..... No.....  
with ADA or any other department.
- h) Member of Parliament or any state legislative Assembly. Yes..... No.....

10. Place of Business :

11. Full Time Technical staff in the Applicants employment and fill up the columns below respect of requisite trade and experience only (separate sheet may be used to furnish full information):-

Name	Qualification	Experience in years	Date of Appointment

12. a) Whether the firm has been already enlisted with ADA or } Yes..... No.....  
any other department.

b) If Yes, Give the details of the Name of the department, Class & Category, Enlistment Authority & address, Enlistment number and date, Date of Validity and Tendering limit:  
**Also Enclose self attested copies of the existing enlistment order.**

13. Details of works completed, in progress and secured during the last 3 years ending on March 2018 (i.e. from 2015-16 to 2017-18). This list should include all work whose amount of works done is more than the required magnitude for the class in which registration is required.

14. Certificates from clients in original or attested copy for all eligible works:  
**Number of documents Attached:**

**Name and full Signature with seal of the**

**Applicant/Contractor/Firm**

**Date:**



**Checklist of Documents Attached for Tender Document**

Sl.No.	Document Description	User Status	
		Yes	No
1.	Certificate of Incorporation, Factory License, ISO, IEC, SSI & Nsic Registration Certificates.		
2.	PAN, GST and Registration Copies.		
3.	Bank Details, Income Tax & Sales Tax returns, Annual Turnover for Last 3 Years.		
4.	Govt. Organization, Major orders for Maintenance work along with approvals, work orders & performance certificates.		
5.	Proof of constitution (In case of sole proprietorship /HUF: Proof of same to be attached).		
6.	Partnership deed Self Attested.		
7.	Form "A" or equivalent form issued by Registrar of firms.		
8.	Form "B" or equivalent form issued by Registrar of firms.		
9.	Form "C" or equivalent form issued by Registrar of firms.		
10.	In case of Private/Public Ltd. Co. Copy of Article of Association Self Attested.		
11.	Affidavit to be provided by individual/Sole proprietor/Every Partner/Director of the Company.		
12.	Self Attested Copies of the degrees/diplomas/ITI of the technical staff.		
13.	Power of attorney, if any attested by Notary Public.		
14.	Declaration from the technical staff that they are employed with the applicant.		
15.	Attested copy of Electrical License as applicable.		
16.	Original or attested copies of Certificates for works done from concerned clients.		
17.	Copy of Registration under Contract Labour (Regulation and Abolition) Act 1970.		
18.	EPF/ESI Registration Certificates.		





**Part – B**

**TECHNICAL BID**

**Abstract - A**

**ANNUAL MAINTENANCE CONTRACT FOR MANNING, OPERATION AND MAINTENANCE OF HT-LT SUBSTATION AND ELECTRICAL INSTALLATION AT ADA HQ.COMPLEX**

**Detailed scope of work**

1. The job of Manning, Operation and maintenance of the electrical installation shall be round the clock in three shifts including Sundays and Holidays as per details given below. You have to submit the shift schedule every week to Jr. Manager (E&M) or his representatives. If there are changes in the shift schedule, it should be brought to the notice of Jr. Manager (E&M). You shall employ personnel as per clause 34 of the RFP/Tender enquiry. The operators shall record the hourly meter readings in the logbook along with other specific incidences if any. In addition to the above, you will also carry out day-to-day maintenance problems in the lighting and power installation. All the above jobs shall be carried out under the supervision of a qualified and experienced supervisor holding valid license to handle 11 KV and Medium voltage installations approved by Electrical Inspectorate from KPTCL.

	<b>SHIFT</b>	<b>TIME</b>	<b>NO.OF OPERATORS</b>
1.	First shift	0600 to 1400 hrs	One Operator + One Operator Assistant
2.	Second shift	1400 to 2200 hrs	One Operator + One Operator Assistant
3.	Third shift	2200 to 0600 hrs	One Operator + One Operator Assistant
4.	General shift	0800 to 1700 hrs	One Supervisor, three Electricians and three Electrical helpers for ADA HQ Complex.
5.	Reliever duty	For Sl.No. 1 to 3 (weekly off)	One operator

2. AMC also includes Operation, Maintenance, repairs and upkeep of the following:-
- 5 Nos. of HT 11KV Ring Main Units (RMU).
  - 3 Nos. of 11KV HT Vacuum circuit breakers and instrumentation in HT panel.
  - 11 KV metering cubicle with PT, CT and metering instruments.
  - 2 Nos. of 1000 KVA Transformers.
  - 2 Nos. of 750 KVA Transformers and 1 no. of 500 KVA Transformer.
  - 1 no. of MV power panel, 3 Nos. of automatic power factor correction panel and 1 no. of UPS power panel in the sub-station.
  - 7 nos. of MV power panels, 2 nos. of lighting panels, 18 nos. of LDB's and 23 nos. of PDB's at various locations as per Annexure-I enclosed.
  - Maintenance and upkeep of HT, LT distribution, perimeter and pathway Lightings and cables.
  - Upkeep and maintenance of all fluorescent, CFL light fixtures, incandescent light fixtures, pathway and perimeter light fixtures, ceiling fans and exhaust fans at ADA HQ. Complex.



3. You shall also carry out the annual maintenance works by availing total or partial power shut down in co-ordination with the user department in ADA through Jr. Manager (E&M) by giving a request well in advance. All such works including day to day maintenance works shall be carried out as per direction of Jr. Manager (E&M) or his representatives. A proper record of maintenance/repair works carried out shall be maintained upto date and put up to the undersigned through the supervisor employed by you at ADA.
4. In addition to switch board operation, the following repairs and maintenance jobs are to be carry out:-
  - Replacement of all spare parts due to fair wear and tear in co-ordination with Jr. Manager (E&M). The spares will be supplied by ADA. List of spare parts required for efficient functioning of the installation shall be furnished well in advance to enable ADA to procure and keep the materials in stock.
  - Reactivation of earthing system incase earth resistance exceeds one ohm, by periodical checking at an interval of three months and to be recorded in the log book. This should be got signed by Jr. Manager (E&M) or his representative.
  - The silica gel moisture absorbent chemical shall be checked once in three months.
  - Monthly checking of ACB's to ensure that the contact points are clean, free of dust/foreign materials. The moving parts to be lubricated and bolts and nuts shall be checked for their tightness.
  - The relays provided in the protective equipment are to be checked for their proper functioning and accuracy once in a month.
  - Regular checking of cable ducts and cleaning if required including the surrounding areas and inside the substation.
5. In case of cable faults or any other faults/failures in the electrical installation/system, the contractor's representative shall take immediate action to rectify the same after informing about the fault immediately. Any major repair/rectification when required to be carried out will be done in consultation with the Jr. Manager (E&M) and with the approval of CAO (R).
6. The shutdown of the system for any repair/rectification/maintenance should be done after taking prior approval of Jr. Manager (E&M) or his representative and informing the concerned Groups/Departments, well in advance.
7. During annual maintenance contract the following works shall be carried out after taking power shutdown.
  - Opening, cleaning and checking of all the LDB's and PDB's. Checking of all the bolts, nuts fasteners of bus-bars etc for tightness.
  - Opening, cleaning of the GOS, Lighting arrestors, grease the moving parts, checking of all the bolts, nuts, fasteners for tightness.
  - Opening, cleaning of HT VCB's metering cubicle main power panel, capacitor panel & UPS power panel. All the dust and foreign bodies shall be cleaned and moving links of VCB's and ACB's shall be lubricated with grease. All nuts and bolts shall be checked their tightness.



8. All the above checks shall be recorded in a register and submitted to Jr. Manager (E&M) or his representative for their scrutiny.
9. You shall keep all the required tools, tackles and various testing instruments/equipment's and expendable items like insulation tape, re-wire able fuse wires, grease, etc., necessary for day to day maintenance works. A list of equipments, tools, instruments held by you at ADA should be intimated in writing. Any other items/spares required for replacement of worn out items shall be provided by ADA after verification of the requirement by Jr. Manager (E&M) or his representative.
10. Ensure cleanliness and upkeep of the HT / LT room, Transformer rooms, Substation, Electrical LT Panel rooms and surrounding should be maintained on daily basis.
11. ADA has critical requirement of Electrical power. In no case, outage of power for more than 5 minutes is acceptable. Hence, the essence of this contract is to achieve "Zero Break Down". The operators deployed must have the required qualification and well experienced in this line as explained in the technical specifications.
12. All efforts have been made to indicate our requirement. However it is the responsibility of the contractor to fulfill the scope of work as per our requirement without any extra cost. Therefore adequate care must be taken before bidding to ensure that all the items are covered.
13. In order that the bidders have a clear idea, it is important that the perspective contractors visit ADA to see the areas of work and have discussions before submitting the bids.
14. Routine checkup of batteries with specific reference to connections, temperature, water level, specific gravity, voltage, etc. The battery room should be kept clean and tidy.



**DETAILS OF SWITCH BOARD PANELS AND DISTRIBUTION BOARDS AT ADA HQ.COMPLEX**

Sl.No.	DESCRIPTION	QTY	LOCATION
1.	Capacitor control panels	3 Nos.	Substation
2.	Medium voltage panel	4 Nos.	Substation
3.	Panel PDU-(U1), PDU (H)	2 Nos.	Substation
4.	Panels PDU (U2) & PDU (U-3)	2 Nos.	200 KVA UPS Room
5.	Panel PDU (U-4) & PDU (U-5)	2 Nos.	160 KVA UPS Room
6.	Panel PDU (C1)	1 No.	80 KVA Power one
7.	Panel PDU (K)	1 No.	80 KVA Keltron UPS Room
8.	Panel lighting MLP-2	1 No.	CAD/ CAM ground floor
9.	AC panel	1 No.	CAD/ CAM ground floor
10.	Panel lighting MVP-7	1 No.	CAD/ CAM 80 KVA keltron UPS Room
11.	160 KVA UPS panel	1 No.	CAD/ CAM first floor
12.	Raw power panel	1 No.	CAD/ CAM first floor
13.	AC Voltas panel	1 No.	CAD/CAM first floor
14.	Panel lighting MLP Panel	1 No.	CAD/ CAM first floor AHU
15.	Panel MVP-6& MVP-5	2 Nos.	CAD/CAM weapons lab AHU
16.	Panel MCC-1, MCC Bluestar, MCC (Volta's)	3 Nos.	AC plant
17.	Panel lighting MVP panel	1 No.	Pump room
18.	Panel lighting MVP-3	1 No.	Canteen
19.	160KVA UPS panel	1 No.	Canteen first floor
20.	Lighting Raw power panel	1 No.	Canteen first floor
21.	AC panel	1 No.	Canteen second floor
22.	External lighting control panel	1 No.	Service station
23.	Panel MCC-2	1 No.	HQ.
24.	160KVA UPS panel	1 No.	HQ. basement
25.	Panel MVP-2	1 No.	HQ.
26.	Panel MVP-4	1 No.	HQ.
27.	Panel MVP-1	1 No.	HQ.
	<b>Total</b>	<b>39 Nos.</b>	
	<b>CAD/CAM Building Second floor</b>		
1.	Main ACB Panel (2500A)	1 No.	Substation for CAD/CAM second floor
2.	Main ACB Panel (800A)	1 No.	Next to DG. Room for CAD/CAM second floor
3.	Capacitor Bank MCCB (630A)	1 No.	Next to DG. Room for CAD/CAM second floor
4.	UPS DB (100A)	1 No.	CAD/CAM second floor
5.	Raw power PDB MCCB (160A)	5 Nos.	CAD/CAM second floor
6.	Main lighting panel	5 Nos.	CAD/CAM second floor
7.	UPS panel MCCB (400A)	5 Nos.	CAD/CAM second floor
	<b>Total</b>	<b>19 Nos.</b>	



	<b>New Store building</b>		
1.	Main RAW power PDB MCCB (250A)	1 No.	Store building
2.	Main lighting panel MCB (40A)	16 Nos.	Store building
3.	Light control panel MCB (63A)	7 Nos.	Store building
4.	Raw power PDB (100A)	8 Nos.	Store building
5.	Bore well control panel	1 No.	Store building
6.	UPS Control panel MCB (32A)	1 No.	Store building
	<b>Total</b>	<b>34 Nos.</b>	
	<b>New Reception (Main Gate)</b>		
1.	Main Raw power MCCB (250A)	1 No.	New Reception
2.	80 KVA UPS incoming & Out going MCCB (100A)	2 Nos.	New Reception
3.	Light control panel	3 Nos.	New Reception
4.	UPS Control panel (40A)	8 Nos.	New Reception
	<b>Total</b>	<b>14 Nos.</b>	
	<b>UPS Distribution Boards</b>		
1.	UDB's (1 to 7)	7 Nos.	Canteen first floor
2.	UDB's (1 to 8)	8 Nos.	HQ.
3.	UDB's (1 to 9)	9 Nos.	CAD/CAM first floor
	<b>Total</b>	<b>24 Nos.</b>	
	<b>Power Distribution Boards</b>		
1.	PDB's (1 to 2)	4 Nos.	Canteen ground floor
2.	PDB's	2 Nos.	Canteen first floor VIP canteen
3.	PDB's (1 to 7)	7 Nos.	HQ.
4.	PDB's	1 No.	HQ. Terrace
5.	PDB's	1 No.	HQ. lift Room
6.	PDB's (1.1& 2.1)	2 Nos.	Manufacturing system
7.	PDB's (1 to 8)	8 Nos.	CAD/CAM first floor
8.	PDB's (1 to 3)	3 Nos.	CAD/CAM Ground floor
9.	PDB's UPS (4,5,1 5.2& 5.3)	4 Nos.	CAD/CAM Ground floor Weapons lab
10.	UPS's (5.1, 5.12& 5.12) And CEF	4 Nos.	CAD/CAM Ground floor Weapons lab
11.	UPS PDB-1 from power 80 EVA	1 No.	Earth station
12.	UPS PDB-2 From keltron 80 KVA	1 No.	Earth station
13.	RP PDB-3	1 No.	Earth station
14.	PDB	1 No.	Avionics lab & CAD/CAM
15.	PDB	2 Nos.	AC Wind
16.	PDB	1 No.	CAM group raw power
	<b>Total</b>	<b>43 Nos.</b>	
	<b>Lighting Distribution Boards</b>		
1.	LDB's (1 to 9)	9 Nos.	HQ.
2.	LDB	1 No.	HQ. Terrace
3.	LDB	1 No.	Canteen ground floor
4.	LDB	1 No.	Canteen first floor
5.	LDB's (1 to 3)	3 Nos.	CAD/CAM ground floor
6.	LDB's (1 to 2)	2 Nos.	CAD/CAM first floor AHU
7.	LDB	1 No.	Weapons lab

8.	LDB	1 No.	Sub station
9.	LDB	1 No.	Store
10.	LDB	1 No.	Transport
11.	LDB	1 No.	Earth station
12.	LDB (Path way garage)	2 Nos.	Near canteen
	<b>Total</b>	<b>24 Nos.</b>	
1.	Lighting Points	<b>3500 Nos.</b>	
2.	Fan Points	<b>240 Nos.</b>	
3.	UPS Plug Points	<b>2500 Nos.</b>	
4.	Raw power Plug Points	<b>700 Nos.</b>	

Note: The quantities indicated are subject to change and approximate.



**Abstract - B**

**ANNUAL MAINTENANCE CONTRACT FOR MANNING, OPERATION AND MAINTENANCE OF DG.SETS AT  
ADA HQ.COMPLEX**

**Detailed Scope of Work**

1. The Operation and Maintenance of 5 Nos. of Diesel generators i.e. 2 Nos. of 1000 KVA, 2 Nos. of 500 KVA and 01 No. of 320 KVA on 24x7 basis which involve manning and running of DG set during power failure/power cuts from KPTCL. The job of manning, operation & maintenance of the Diesel generator shall be round the clock in three shifts including Sundays and Holidays as per details given below. You have to submit the shift schedule every month to Junior Manager (E&M) or his representatives. If there are changes in the shift schedule, it should be brought to the notice of Junior Manager (E&M). You shall employ personnel as per clause 34 of the RFP/Tender Enquiry. The operators shall record the DG Set running hour's reading in the logbook along with other specific incidences if any. In addition to the above, you will also carry out day to day maintenance problems in Generator room. All the above jobs shall be carried out under the supervision of qualified DG Mechanic and experienced supervisor.

SL. No.	SHIFT	TIME	NO. OF OPERATORS
1.	First shift	0600 to 1400 hrs	One Operator + One Operator Assistant
2.	Second shift	1400 to 2200 hrs	One Operator + One Operator Assistant
3.	Third shift	2200 to 0600 hrs	One Operator + One Operator Assistant
4.	General shift	0800 to 1700 hrs	One Supervisor, One DG Mechanic/ Technician and One operator Assistant.
5.	Reliever duty	For Sl.No. 1 to 3 (weekly off)	One operator

2. The Operation and Maintenance of Pump house, i.e. switching ON & OFF pumps, minor repair of water pumps and water pipe lines (as & when required). Ensure that sump is filled from the bore well, before pumping to OH tanks. Should understand the system in practice and adhere to the same drill while operating pump house.
3. The operator should record the water pumping hour's reading from bore-well to sump, sump to Over head tank in various places, ADA on daily consumption.

**Pump and Over Head Tank details:**

- Motor: 3 phases, 3 HP - 2 Nos. & 5 HP - 2 Nos.
- Sump: 80,000 LPD and One lakh LPD.
- OHT: 10 x 5,000 LPD PVC Tanks installed at Canteen.
- OHT: 02 x 15,000 LPD RCC tanks at main building.
- OHT: 25,000 LPD RCC tank at CAD building.
- OHT: 5,000 LPD RCC tank at transport building.
- 4 Nos. of Bore wells manning and operation.



4. Liaison with the manufacturers / authorized representatives for attending to major repairs with reference to generator / AMF panel. Replacing of minor spares shall be done after taking approval of Competent Authority; the reports shall be taken and submitted to Jr. Manager (E&M) or his representatives, ADA.
5. Daily checks, 'A' & 'B' checks shall be carried out periodically.
6. Proper accounting of Diesel supplied by ADA, utilization / consumption statement should be maintained and submitted to Junior Manager (E&M) or his representative. The register/ logbooks maintained regarding running hours of generators should be put up daily for check/ scrutiny.
7. Earthing resistance of generators shall be measured every 3 months once; it shall be recorded in the register and submitted to Junior Manager (E&M) or his representative for their scrutiny.
8. You shall keep all the required tools, tackles and various testing instruments / equipment's and expendable items like cotton waste, grease, lubricating oil, petroleum jelly etc., necessary for day to day maintenance works. A list of equipments, tools, instruments held by you at ADA should be intimated in writing.
9. All tools including meters required for maintenance checks and repairs shall be kept and maintained by the contractor (Multi meter, Clamp meter, Meggar, Hydro meter, Earth Meggar, Torque wrench, strap wrench, pressure gauge, and stethoscope).
10. It shall be duty of the contractor to adhere to all the instructions spelt out by manufacturers in their manuals incase of generator, AMF panel and system panel, Batteries etc.
11. Maintenance of Batteries, Topping of distilled water, Petroleum jelly, Cotton waste, grease etc., shall form part of the AMC.
12. The requirements for consumable items like engine oil, diesel etc. shall be furnished well in advance to facilitate procurement.
13. Ensure upkeep and Cleanliness of the generator rooms, pump house and surrounding should be maintained on daily basis.
14. ADA has critical requirement of Electrical power. In no case, outage of power for more than 5 minutes is acceptable. Hence, the essence of this contract is to achieve "Zero Break Down". The operators deployed must have the required qualification and well experienced in this line as explained in the technical specifications.
15. All efforts have been made to indicate our requirement. However it is the responsibility of the contractor to fulfill the scope of work as per our requirement without any extra cost. Therefore adequate care must be taken before bidding to ensure that all the items are covered.
16. In order that the bidders have a clear idea, it is important that the perspective contractors visit ADA to see the areas of work and have discussions before submitting the bids.
17. Routine checkup of batteries with specific reference to connections, temperature, water level, specific gravity, voltage, etc. The battery room should be kept clean and tidy.





### Abstract - C

## ANNUAL MAINTENANCE CONTRACT FOR MANNING, OPERATION AND MAINTENANCE OF ELECTRICAL INSTALLATION & DG. SETS AT NFTC, CAMPUS-II, & P-63 BUILDING (ADE CAMPUS)

### Detailed Scope of Work

1. The Operation and Maintenance of 2 Nos. of 320 KVA DG. Sets installed at NFTC and 1 No. of 320 KVA DG. Set installed at P-63 Building (ADE Campus) which involves manning and running of DG set during power failure/power cuts from KPTCL. The job of Manning, Operation and maintenance of the electrical installation/DG. Sets/UPS Units shall be in Two shifts / General shift including Sundays and Holidays as per the details given below. You have to submit the shift schedule every week to Junior Manager (E&M) or his representatives. If there are changes in the shift schedule, it should be brought to the notice of Junior Manager (E&M). You shall employ personnel as per clause 34 of the RFP/Tender Enquiry. The operators shall record the hourly meter readings in the logbook along with other specific incidences if any. In addition to the above, you will also carry out day-to-day maintenance problems in the lighting, power installation and Generator room. All the above jobs shall be carried out under the supervision of a qualified and experienced supervisor holding valid license to handle 11 KV, Medium voltage installations approved by Electrical Inspectorate from KPTCL/BESCOM.

	SI. No.	SHIFT	TIME	NO.OF OPERATORS
NFTC	1.	First shift	0600 to 1400 hrs	One Operator + One Operator Assistant
	2.	Second shift	1400 to 2200 hrs	One Operator + One Operator Assistant
	3.	General shift	0800 to 1700 hrs	One Supervisor
CAMPUS-II	1.	First shift	0600 to 1400 hrs	One Operator + One Operator Assistant
	2.	Second shift	1400 to 2200 hrs	One Operator + One Operator Assistant
	3.	General shift	0800 to 1700 hrs	One Electrician
P-63 Building	1.	General shift	0800 to 1700 hrs	One Electrician + One Electrical Helper

### Operation and Maintenance of Electrical/DG.Sets:-

2. AMC also includes Operation, Maintenance, repairs and upkeep of the following:-
  - a) Maintenance and upkeep of LT distribution, perimeter and pathway Lightings and cables.
  - b) Upkeep and maintenance of all fluorescent, CFL light fixtures, incandescent light fixtures, pathway and perimeter light fixtures, ceiling fans and exhaust fans at NFTC/Campus-II and P-63 Building.
3. You shall also carry out the annual maintenance works by availing total or partial power shut down in co-ordination with the user department in ADA through Jr. Manager (E&M) by giving a request well in advance. All such works including day to day maintenance works shall be carried out as per direction of Jr. Manager (E&M) or his representatives. A proper record of maintenance/repair works carried out shall be maintained upto date and put up to the undersigned through the supervisor employed by you at ADA.



4. In addition to switch board operation, the following repairs and maintenance jobs are to be carry out:-
  - a) Replacement of all spare parts due to fair wear and tear in co-ordination with Jr. Manager (E&M). The spares will be supplied by ADA. List of spare parts required for efficient functioning of the installation shall be furnished well in advance to enable ADA to procure and keep the materials in stock.
  - b) Reactivation of earthing system incase earth resistance exceeds one ohm, by periodical checking at an interval of three months and to be recorded in the log book. This should be got signed by Jr. Manager (E&M) or his representative.
  - c) Monthly checking of ACB's to ensure that the contact points are clean, free of dust/foreign materials. The moving parts to be lubricated and bolts and nuts shall be checked for their tightness.
  - d) The relays provided in the protective equipment are to be checked for their proper functioning and accuracy once in a month.
  - e) Regular checking of cable ducts and cleaning if required including the surrounding areas and inside the substation.
5. In case of cable faults or any other faults/failures in the electrical installation/system, the contractor's representative shall take immediate action to rectify the same after informing about the fault immediately. Any major repair/rectification when required to be carried out will be done in consultation with the Jr. Manager (E&M) and with the approval of CAO (R).
6. The shutdown of the system for any repair/rectification/maintenance should be done after taking prior approval of Jr. Manager (E&M) or his representative and informing the concerned Groups/Departments, well in advance.
7. During annual maintenance contract the following works shall be carried out after taking power shutdown.
  - a) Opening, cleaning and checking of all the LDB's and PDB's. Checking of all the bolts, nuts fasteners of bus-bars etc for tightness.
8. All the above checks shall be recorded in a register and submitted to Jr. Manager (E&M) or his representative for their scrutiny.
9. You shall keep all the required tools, tackles and various testing instruments/equipment's and expendable items like insulation tape, re-wire able fuse wires, grease, etc., necessary for day to day maintenance works. A list of equipment, tools, instruments held by you at ADA should be intimated in writing. Any other items/spares required for replacement of worn out items shall be provided by ADA after verification of the requirement by Jr. Manager (E&M) or his representative.
10. Ensure cleanliness and upkeep of the Transformer rooms, Substation, Electrical LT Panel rooms, UPS Room, Battery Bank room and surrounding should be maintained on daily basis.
11. Liaison with the manufacturers / authorized representatives for attending to major repairs with reference to generator / AMF panel. Replacing of minor spares shall be done after taking approval of Competent Authority; the reports shall be taken and submitted to Junior Manager (E&M) or his representatives, ADA.
12. Daily checks of 'A' & 'B' for DG. Sets shall be carried out periodically.
13. Proper accounting of Diesel supplied by ADA, utilization / consumption statement should be maintained and submitted to Junior Manager (E&M) or his representative. The register/ logbooks maintained regarding running hours of generators should be put up daily for check/ scrutiny.

14. Earthing resistance of generators shall be measured every 3 months once, it shall be recorded in the register and submitted to Junior Manager (E&M) or his representative for their scrutiny.
15. You shall keep all the required tools, tackles and various testing instruments / equipment's and expendable items like cotton waste, grease, lubricating oil, petroleum jelly etc., necessary for day to day maintenance works. A list of equipment, tools, instruments held by you at NFTC/Campus-II/P-63 Building should be intimated in writing.
16. All tools including meters required for maintenance checks and repairs shall be kept and maintained by the contractor (Multi meter, Clamp meter, Meggar, Hydro meter, Earth Meggar, Torque wrench, strap wrench, pressure gauge, and stethoscope).
17. It shall be duty of the contractor to adhere to all the instructions spelt out by manufacturers in their manuals incase of generator, AMF panel and system panel, Batteries etc.
18. Maintenance of Batteries, Topping of distilled water, Petroleum jelly, Cotton waste, grease etc., shall form part of the AMC.
19. The requirements for consumable items like engine oil, diesel etc. shall be furnished well in advance to facilitate procurement.
20. Ensure upkeep and Cleanliness of the generator rooms and surrounding should be maintained on daily basis.
21. NFTC/Campus-II/P-63 Building has critical requirement of Electrical power. In no case, outage of power for more than 5 minutes is acceptable. Hence, the essence of this contract is to achieve "Zero Break Down". The operators deployed must have the required qualification and well experienced in this line as explained in the technical specifications.
22. All efforts have been made to indicate our requirement. However it is the responsibility of the contractor to fulfill the scope of work as per our requirement without any extra cost. Therefore adequate care must be taken before bidding to ensure that all the items are covered.
23. In order that the bidders have a clear idea, it is important that the perspective contractors visit NFTC/CAMPUS-II/P-63 Building to see the areas of work and have discussions before submitting the bids.
24. Routine checkup of batteries with specific reference to connections, temperature, water level, specific gravity, voltage, etc. The battery room should be kept clean and tidy.



**DETAILS OF UPS UNITS AND PANELS AT NFTC, CAMPUS-II AND P-63 BUILDING (ADE CAMPUS)**

Sl.No.	EQUIPMENTS	REMARKS
<b>Campus-II</b>		
1.	2 x 120 KVA UPS units.	It requires One Operator and One Operator Assistant for first shift (0600 to 1400 hrs).
2.	120 KVA Isolation Transformer - 1 No.	
3.	120KVA UPS Battery Bank.	It requires One Operator and One Operator Assistant for second shift (1400 to 2200 hrs).
4.	UPS Input and output control panel.	
5.	Main Incoming Raw power control panel.	
6.	A/c Incoming and outgoing panel.	It requires One Electrician for General Shift (0800 to 1700 hrs).
7.	Lighting system, Power Point and MCB distribution board etc.,	
8.	Water Pumping and Bore well	
<b>NFTC</b>		
1.	2 x 200 KVA UPS units.	It requires One Operator and One Operator Assistant for first shift (0600 to 1400 hrs).
2.	200 KVA Isolation Transformer - 1 No.	
3.	200 KVA Servo control Voltage Stabilizer - 1No.	It requires One Operator and One Operator Assistant for second shift (1400 to 2200 hrs).
4.	320 KVA D G sets. - 02Nos	
5.	2 x 60KVA UPS units.	
6.	60KVA Isolation Transformer and SCVS.	
7.	200KVA and 60KVA UPS Battery Bank.	
8.	UPS Input and output control panel.	
9.	Main Incoming Raw power control panel.	
10.	A/c Incoming and outgoing panel.	
11.	Lighting system, Power Point and MCB distribution board etc.,	
12.	Water Pumping and Bore well.	
13.	Automatic power factor capacitor bank	
14.	ACB	
15.	Air Conditioning Control panels	
<b>P-63 BUILDING (ADE CAMPUS)</b>		
1.	2 x 120 KVA UPS units.	It requires One Electrician and One Electrical Helper for General Shift (0800 to 1700 hrs).
2.	2 x 120KVA UPS Battery Bank	
3.	320 KVA D G sets -01 Nos.	
3.	AMF Control panel	
4.	5.5TR package A/c unit -06 Nos.	
5.	UPS Input and output control panel.	
6.	Main Incoming Raw power control panel.	
7.	A/c Incoming and outgoing panel.	
8.	Lighting system, Power Point and MCB distribution board etc.,	



**PART - C**  
**COMMERCIAL BID**

Sl.No.	Description	Skilled	Semi Skilled	Unskilled
1.	Minimum Wages per day	710.00	645.00	584.00
2.	Number of days per month (including Sundays and National Holidays)	26	26	26
3.	Salary for the month	18,460.00	16,770.00	15,184.00
4.	Employer's Contribution of PF @ 12 % on Sl.No.3 (limited to Rs.1,800/-)	1,800.00	1,800.00	1,800.00
5.	Administrative Charges @ 0.50% on Sl.No.3 (limited to Rs.75/-)	75.00	75.00	75.00
6.	Employer's Contribution of ESI @ 4.75% on Sl.No.3	876.85	796.58	721.24
7.	Uniform outfit Allowance @ 5% of Sl.No.3	923.00	838.50	759.20
8.	Washing Allowance @3% of Sl.No.3	553.80	503.10	455.52
9.	Bonus @ 8.33 % of Sl.No.3	1,537.72	1,396.94	1,264.83
10.	Total (Sl.No.3 to 9)	23,374.57	21,463.52	19,670.07
11.	No. of Employees Required	3	18	15
12.	Total Wages (Sl.No.10 x 11)	70,123.71	3,86,343.36	2,95,051.05
13.	Service Charges @ _____ on Sl.No.12			
14.	Sub Total per month			
15.	GST @ _____ on Sl. No. 14			
16.	<b>Total Amount in Rs.</b>	<b>A</b>	<b>B</b>	<b>C</b>
17.	<b>Grand Total Per Month (A+B+C)</b>			

**Rupees in words: (.....)**

The above Wages is prepared based on Central Govt. vide notification No.1285 (E) dated 20.05.2009 of the Ministry of Labour and Employment, Office of the Chief Labour Commissioner(C), New Delhi. Published in circular F. No.1/8(3)/2019-LS-II, dated 27.03.2019.

Note: - L1 will be decided based on the lowest quote received as per Sl no. 17 above

