

**SCOPE OF WORK UNDER PART-B OF NIT
(FOR AMC OF SUBSTATION)**

A. Brief description of equipments:

- i. 3 nos. 1000 KVA, 6KV/415 V, Dry type transformer with accessories
- ii. 5-panel HT VCB switchboard of 800 A /6KV (vertical draw out type)
- iii. 4 sets of MV Panel board having ACBs (800A-1600A)/ 415 V along with outgoing switch fuse units, metering arrangement etc.
- iv. All control and power cables connected with above HT/MV panels including all outgoing feeders upto receiving end.
- v. Manual Capacitor banks of capacity likely to be installed upto.750 KVAR but presently running 525 KVAR
- vi. Any other equipments/accessories as may be required to install to improve the performance of the substation along with capacity addition (if required).
- vii. 1 no. 200 KVA Silent Diesel engine Alternator set with AMF Panel & Essential Panel.
- viii. Medium Voltage (415V) Distribution network and its equipments/fittings/accessories etc spread over the campus of IACS with provision of augmentation as may be taken up by IACS during the period of contract also.

B. Man power Deployment:

Daily round the clock deployment of technical staff (3-shifts a day basis) along with General Shift (normally during IACS working hours only) would be made within the scope of deployment of man power as per Annexure-I attached herewith. However, exact no. & type of man power would be decided by the Engineer-in-Charge as per requirement and location of the work to be deployed. The total no. of man power may vary from time to time as per discretion of the Engineer-in-Charge.

Note: After performing the duty of relievers under each category, the surplus manpower (worked as relievers) will perform their duty in the General Shift.

C. Responsibility:

- i. Daily opening / closing of doors / windows of the Sub-Station as will be required, daily cleaning, checking and care taking of all the equipments & accessories of the Sub-Station including up keeping of rooms and premises.
- ii. Maintenance of log book/sheet by half-hourly recording various parameters in the prescribed pro-forma to be circulated by the Engineer-in-Charge on round the clock basis including following up with CESC/ supply company authority during interruptions of service from their end for early restoration of power. The Charge Hands should be capable of understanding & handling various relays, relay setting, control wiring, switchgear operation etc as and when required.
- iii. Time-to-time capacitor Bank operation (manually) on round the clock basis to achieve the maximum power factor rebate on energy bill of CESC/Power Supplier.
- iv. Day to day repairing and breakdown-maintenance work of all the equipments as will be required. However, for extra manpower & materials (if required) during

major breakdown/Shut-down work payment may be made extra on this account. Subject to prior approval of IACS authority on case to case basis.

- v. Any preventive/periodical shutdown maintenance work in order to have uninterrupted supply has to be attended without any extra cost.
- vi. Apart from Sub-Station, any emergency & odd hours electrical maintenance work in the entire campus of IACS if occurs beyond the office hours including holiday / Saturday & Sunday should promptly be taken up. If necessary extra manpower has to be engaged as per requirement for which cost of additional labour and material if found necessary may be paid extra with monthly bill (as per condition mentioned in part iv).
- vii. Daily routine check of the silent canopy DG set as per the maintenance schedule of the manufacturer i/c cleaning.
- viii. Round the clock manning for operation of the DG set to supply stand-by power on need basis.
- ix. Routine “test run” of the DG set as per instruction of IACS officials
- x. Transportation of fuel, lubricant, coolant etc from Petrol Pump / Departmental store to the site of DG set
- xi. Maintenance of DG set log book/log sheet on regular basis
- xii. Any other maintenance schedule as will be prescribed by IACS from time to time
- xiii. Persons deployed under this contract should be covered with Accidental Insurance Policy under any GIC by the agency against any accident for which personal injury or loss of life may take place. No compensation will be given by IACS for any reason what so ever.
- xiv. It is to be explicitly undertaken by the Agency that all statutory and legal requirements in respect of electrical safety for the man power deployment by the agency shall be fulfilled by the agency and IACS shall not be responsible for any manner directly or indirectly.

D. TOOLS, TACKELS & SAFETY ARTICLES:

- i. Standard measuring instruments e.g. Tong Tester, Multi-meter, Megger Insulation Tester, Megger earth tester, phase sequence indicator; line tester etc should be kept at site by the Agency for day to work.
- ii. Standard Tools i.e. Pliers, Chisels, Screwdrivers, Hammers, Hacksaw, Files, Brushes, all types of Wrenches etc. should be maintain in 3 sets at least including a Cable Crimping m/c. (up to 400 sq. mm), including Neon Tester and Test Lamps, kept at site by the Agency for day to work.
- iii. Portable power blower, portable hammer drill machine, cutting & drill machine etc should be kept at site by the Agency for day to work in 2 sets at least.
- iv. Any other tools and tackles as may be necessary for break-down or periodic maintenance work should be provided by the Agency at the time of requirement on urgent basis within 12 to 24 hrs. positively.

- v. All types of safety articles like safety gloves, safety shoes, safety apron, helmet etc to be used by the substation personnel are duty which should be kept at site by the Agency for day to work
- vi. The contractor has to provide a first aid box with all necessary first aid materials for the use of substation personnel as and when required.

E. SPARES & CONSUMABLES:

Minor Spares & components of equipments e.g. cable sockets, HRC fuses, tubes & lamps, Copper ballasts, starter, copper cables & wires, MCBs, hardware, emery papers, petroleum jelly, lubricants, cotton waste, cloths or any other items as may be necessary up to the limit of Rs. 2,500/- (Rupees two thousand five hundred only) per month/Rs. 30,000/- (Rupees thirty thousands only) per annum based on requirements to be provided by the contractor within their scope of this work which will be reimbursed by IACS with their monthly bill. Necessary documents & records are to be maintained properly by the agency in this regard.

F. STATUTORY OBLIGATIONS:

Any statutory obligation imposed by the Government including the Central Electricity Authority, Govt. of India / Directorate of Electricity, Govt. of W.B. should be fulfilled by the Agency on their part.

The contractor shall be responsible for compliance of all statutory labour rules and regulations i/c Minimum Wages Act-1948 as will be amended from time to time.

G. EXTRA INVOLVEMENT:

Any extra work or man power required beyond the scope of this work have to be taken care of by the Agency on emergency basis if advised by the Engineer-in-Charge of the Sub Station at a negotiable cost not exceeding the market/Govt. rate whichever will be justified by the IACS

SCOPE OF WORK UNDER PART-A OF NIT

(FOR AMC OF ELECTRICAL DISTRIBUTION NETWORK)

1. Maintenance of Power Distribution Panels

(a) Checking, cleaning and servicing/repairing as and when required for all MCCB, MCB, TPN Switch Fuse Units & Bus Bars from 6 A to 400A rating.

2. Maintenance of 1-Phase/3-Phase Power Distribution Boards

(a) Replacement of MCCB including re- socketing & connections complete.

(b) Replacement of Bus Bar mounted HRC fuse base / top & connections complete.

(c) Replacement /repair of Neutral link including re- socketing & connections complete.

3. Maintenance of Switch Boards- Modular & Non-Modular types.

Replacement of 6 A. / 16 A. modular or Non-modular switch / socket / fuse / Indicator etc complete as required.

4. Maintenance of Tube Light fittings and other light fittings mounted on false ceiling / wall including.

Replacement of PL lamp, tube light, Choke, starter, Capacitor etc. as required.

5. Maintenance of ceiling fans / pedestal or table fans.

Repairing / replacement of ceiling fans, pedestal fans or table fans by rewinding of coils, change of bush / bearings, capacitors & other items as required with fitting & connections complete

6. Maintenance of Star-Delta Starter of Submersible pump.

Repairing of star-delta starter for submersible pump by replacing the contractors, timers etc. as required

7. Maintenance of outdoor Tube lights, Post Top Lanterns & Flood Lights

Repairing by replacing Tube lights, Choke, starter, Post top mercury vapour lamps, igniters, capacitors, Ballasts, Metal Halide/ sodium vapour lamp or sheds .

8. Maintenance of Electrical distribution system in Hostels & Staff quarters etc.

(a) Repairing / replacement of main switches, MCBs in Panel, switches & sockets in witch boards, tube lights etc. including KWH meter reading, processing & distribution of Bills to users etc.

(b) Any other maintenance work as needed by the Engineering-In-Charge of IACS.

(9) (a) Man power deployment:

It will be decided by the Engineer-in-Charge or his authorised representative. Only general shift would be operated for this work. Beyond the period of general shift, the persons to be deployed for the AMC of substation work will be looking after the Electrical Maintenance Work of the entire campus of IACS.

(b) Working hours

Working hour is normally 8hrs. per day in general shift from **9.30 AM to 6.00 PM** (including 30 minutes recess time which should not be counted as working hour).

Responsibility:

- (1) Daily opening & closing of doors & windows of the electrical maintenance section along with cleaning, checking and care taking of the equipments spread over the entire campus of IACS including up keeping of room.
- (2) Maintenance of Log book for recording the incoming job cards form various user's departments of IACS & to keep up-to-date status of the work assigned to maintenance team workers mentioning the exact date of work done with time and satisfactory acknowledgement report of the job card indenter.
- (3) Preventive periodical shutdown maintenance work in order to ensure uninterrupted supply has to be attended as per maintenance schedule from time to time.
- (4) Persons deployed should be covered with general insurance by the Agency against any accident for which personal injury or loss of life may take place complying WC. Act 1923 as amended up to date. This is in addition to ESI facility. No compensation will be given by IACS for any reason what so ever.
- (5) It is to be explicitly undertaken by the Agency that all statutory & legal requirements in respect of man power deployment by the Agency shall be fulfilled by the agency and IACS shall not be responsible for any manner directly or indirectly.
- (6) The IACS authority reserves the right to terminate the contract at any point of time during the currency of contract by serving one month notice without assigning any reason there of. On the other hand, the agency concerned can serve notice to IACS for withdrawal/termination of the contract at least one month before the effective date of withdrawal/termination of contract. The rehabilitation (if any) of the employees of the contractor shall rest solely upon the contractor in case of termination/withdrawal of contract and IACS shall not be responsible for any kind of rehabilitation of contractor's employee in any case.
- (7) It is the sole responsibility of the contractor to withdraw their employee (s) immediately in the event of any misconduct /misbehaviour with IACS officials/scholars/representatives including involvement with any theft case etc.
- (8) The Engineering Supervisor/Electricians have to maintain daily log book/register etc apart from technical work to record all the maintenance work and other formalities as will be required towards compliances of the provisions of Minimum Wages act – 1948/other labour rules. Weekly rest will be in staggered way for each category which should be spread on all days of the week.
- (9) Preparation of estimates & tender document for calling of tender, scrutiny of tender, Issue of Work Order, Giving layout at site, Works supervision, Assistance towards Measurement of work & preparation of bills etc falls under the scope of work of the Engineering Supervisor. He will also assist the Engineer-in-Charge /his authorised representative (from IACS side) in purchase procedure.
- (10) Any other work as will be entrusted by the Engineer-in-Charge from time to time have to be carried out by the employees to be engaged by the contractor for AMC of Substation & Electrical Distribution Network.

Instruments, Tools & Safety Articles:

- (1) Standard measuring instruments e.g. Multi meter, Tong Tester, Megger Insulation tester, Megger earth tester etc should be provided by the agency immediately after taking over the responsibility of the maintenance.
- (2) Standard Tools i.e. Pliers, screw drivers, Files, Hammers, Hacksaw, Brushes, all types of wrenches, Crimping tool (up to 400 sq. mm), Test Lamps etc should be provided by the agency in multiple sets so that, two independent team of workers can work simultaneously.
- (3) Portable power blower, portable hammer drill m/c, cutting & drill m/c etc are to be provided by the agency.
- (4) Any other tools & tackles as may be required for breakdown or periodic maintenance work should be provided by the agency at the time of requirement on urgent basis (within 12 hrs).
- (5) All types of safety articles like safety gloves, safety shoes, safety apron, helmet etc are to be provided for the use of the maintenance personnel by the contractor. Apart from this, the entrusted contractor has to provide uniform (2 sets per year) & Identity card for their employees to be deployed at IACS within 30 days from the date of taking over of maintenance.
- (6) The contractor has to provide a first aid box with all necessary first aid materials as and when required for the maintenance personnel.

EXTRA INVOLVMENT:

Any extra work or man power required beyond the scope of this work where extra man powers will be involved have to be taken care of by the Agency on emergency basis if advised by IACS at a negotiable cost not exceeding the market /Govt. rate whichever will be justified by the IACS.

MINIMUM QUALIFICATION & EXPERIENCES OF MANPOWER TO BE DEPLOYED

Shift Supervisor (Elect.) in the grade of supervisory staff should preferably be within 55 years of age and should have adequate working experiences (not less than 10 years) of distribution Sub-Stn and electrical maintenances of research laboratory/large office building works. They should possess a valid electrical license of appropriate category for Class i (b), ii, iii, v & viii (a) or Supervisor's Competency Certificate for part No. 1, 2, 3, 4, 5, 7A, 7B, 11 & 12 issued by the competent authority for handling up to 33 KV system.

Electricians (i.e. Skilled employee) should preferably be within 45 years of age and should possess a valid electrical license for Class i (b), ii, iii, v & viii (a) with adequate experience (not less than 5 years) in the relevant field

DG set Operators (i.e. Skilled employee) should preferably be within 45 years of age and should possess adequate experience (not less than 5 years) of operation of DG set of capacity not less than 500 KVA. He should have thorough knowledge about various components of DG set and its functioning.

Electrical Helpers in the grade of unskilled labour should have 3 years experience in electrical work field with sound physique acquainted with all types of electrical tools & tackles preferably within the age of 40 years.

Office Assistant in the Grade of Skilled employee is required to be deployed for maintenance of registers, files, preparation of duty chart etc and other formalities as will be required towards compliances of the provisions of Minimum Wages Act-1948 & other labour rules as applicable. An office asst. should have Graduation in any discipline with similar type working experience of not less than three years in a reputed organisation.

Engineering Supervisor (Electrical) in the grade of supervisory staff should preferably be within 55 years old. He should possess at least a Diploma in Electrical Engineering (DEE)/Licentiate in Electrical Engineering (LEE) from a State Polytechnic or Govt. Institute having at least 10 years post qualification experience in the field of general electrical maintenance of office/commercial building, Laboratories, Libraries including supervision of Electrical Construction Works etc.

Works Assistant (Electrical): Works Assistants should preferably be within 45 years old. He should have at least 10 years working experience in the field of general electrical maintenance of office/commercial building, Laboratories, Libraries including supervision of Electrical Construction Works etc. Selection would be made through personal interview.

Note: For all categories of employees as stated above, the prescribed age limit, qualification & experience etc. may be relaxed as per discretion of the IACS management if suitable candidates are not found. In the above situation, they will be placed in a lower category according to their qualification, age & experience. Further, it is explicitly mentioned that, selection would be made through personal interview.

In addition to the above, the Contractor may engage their authorised supervisory personnel on their behalf to supervise the job. However, it is categorically mentioned that the entire risk & responsibility pertaining to this contract i/c safety-security of men, materials & machine etc shall rest on the contractor during the currency of contract and extended period (if any).

The contractor shall issue Service Identity card in consultation with IACS for their employees. However, Bio-Data along with photocopy of Photo ID (Voter's I-card/PAN card or similar type evidence) in respect of their employees to be submitted by them before engaging any employee at IACS. Original of the documents may be asked for to produce before IACS towards verification of the same.

The contractor shall abide by the provisions of the Child Labour (Prohibition & Regulation) Act-1986. **No labour below the age of fourteen years shall be employed on the work.**

The contractor shall also abide by the Workmen's Compensation Act.

Since the nature of work is not conducive for female workers, therefore, engagement of female workers should be avoided. However, any such requirement if arises, it is required to be done with the written permission of the competent authority only.

PAYMENT OF WAGES:

The wages to the employees of the contractor will be paid as per **Minimum Wages Act-1948** as amended from time to time by the Govt. of India. The contractor shall be liable for payment of wages in time (latest by 7th day of the next month). The payment of wages to the contractor's employee should be made through A/C payee cheque. Necessary supporting documents should be forwarded with the monthly bill for reimbursement of the same by IACS. However, IACS authority reserves the right to verify the same from the concerned employee (s) of the contractor also. The contractor should have working capital of at least three month's wages to protect the interest of the employees to be engaged by them at IACS in unforeseen situation also. The employees to be engaged by the contractor shall be covered with ESI & EPF scheme. In exceptional cases (if any), the Director, IACS reserves the right to take a suitable decision in this regard which will be final and binding to the contractor.

The payment of minimum wages will follow the Gazette notification of the Govt. of India as circulated from time to time wherein the payment of bonus shall follow the "Payment of Bonus Act 1965 (with amendments).

In this regard, it is worthwhile to mention that, the minimum wages shall include the wages for weekly day of rest also.

COMPLIANCE OF MINIMUM WAGES ACT:

Maintenance of all types of registers pertaining to payment of labour's wages, attendance registers, display of the list of contract labour rate of daily wages etc. as will be required towards compliance of Minimum wages Act-1948 to be maintained by the agency.

REIMBURSEMENT OF WAGES ETC:

After completion of the process of disbursement of wages/salary, arrear wages, bonus etc. as per order of IACS, the contractor may submit their claim towards reimbursement of the same with necessary supporting documents. However, to give some financial relief to the contractor, IACS may also release upto 75% of the disbursed amount against submission of documentary evidences towards disbursement of wages as running A/C payment (in the event of non-submission of bank challan etc towards payment of EPF, ESI & P.Tax components to the concerned authorities. But on submission of the relevant documents of payment, the balance payment will be released to the contractor. All types of payments as will be made to the contractor's employee following the order of IACS shall be reimbursed by IACS.

PRIOR PERMISSION REQUIRED FOR WITHDRAWING ANY EMPLOYEE:

Once after accord of approval of IACS, any employee who is/will be engaged by the agency for the AMC work (Both substation & Electrical Distribution Network) can not be withdrawn without the written permission of the Principal employer (IACS) during the currency of contract. If the contractor intends to withdraw any employee (s) from the site of IACS, Jadavpur, a prior communication is needed to be made with the IACS authority with proper justification in this regard. Only after getting written approval of the competent authority, the contractor shall be allowed to withdraw their employee (s). However, the contractor should immediately withdraw their employee (s) on receipt of instruction from the IACS authority on the ground of misbehaviour/negligence in duty or any other reason/ activity which is harmful for IACS. The rehabilitation/re-employment etc of the withdrawn employee (s) will be solely the contractor's responsibility. IACS will not be responsible in any way for rehabilitation/re-employment etc. of the said employee (s) in this regard.

EPF & ESI CONTRIBUTION:

EPF & ESI Contribution as per Government's order (amended from time to time) shall have to be deposited by the contractor with the concerned authority in appropriate time. Necessary documents in this regard shall have to be submitted by the contractor from time to time to the IACS authority for reference and as when asked for. Any statutory changes in respect of subsequent revision of rate of EPF, ESI Contribution etc will be considered on production of relevant documents.

PROFESSION TAX:

P. Tax as has to be deducted from the wages in respect of employees of the contractor and deposited with the concerned authority in time as per rule.

DETERMINATION OF CONTRACT:

The Association may without prejudice to its other rights or remedy against the contractor in respect of inferior workmanship or any other provisions of this contract or otherwise may issue a notice in writing to absolutely determine the contract for the following case.

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 even after written notice.

When the contractor has been made liable for action under the aforesaid cases, the Association on behalf of IACS shall have powers:-

- a. To determine or rescind the contract. Upon such rescission, the full security deposit recoverable under the contract shall be liable to be forfeited and shall be absolutely at the disposal of IACS.
- b. After giving notice to the contractor to measure up the work done by him in order to 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.

TERMINATION:

The IACS authority reserves the right to terminate the Contract at any time by serving one month's notice or by making one month's payment in lieu of that without showing any reason whatsoever.