

## Scope of work

The scope of work includes round the year (365 days) electrical maintenance work in IACS for Breakdown & Preventive maintenance & replacement of consumable electrical items of the general electrical distribution system (Contract Demand 1.5 MW) in laboratories & office premises and electrical renovations as per requisition or as per maintenance need. The time schedule of the work is from **9-30 am to 6-00 pm**. All the materials required for maintenance work will be supplied from workshop. In case of urgent nature of work, the agency has to supply the materials subject to prior approval from the competent authority. In that case, the cost of material will be reimbursed by IACS.

### Detailed description of Work:

#### Maintenance of 3 phase Power Distribution Panels

- (a) Checking, cleaning and servicing of all TPN Switch Fuse Units & Bus Bar by tightening all contact points after applying petroleum jelly from 32 to 400Amps. Switch Fuse Unit.
- (b) Replacements of heavy duty copper lugs after cutting & dressing the conductor with glass tape & PVC tape with proper crimping of the lugs for cables ranging from 10 Sq. mm. to 400 sq.mm 3½ core Cable
- (c) Replacement of Switch Fuse Units with top & bottom cable entry box by fixing on existing angle frame in case of Switch Fuse Unit in sheet steel enclosure or by fixing inside the panel of modular type from 32 to 400Amps switch-fuse unit.
- (d) Replacement of Voltmeters, Ammeters including CT & connections complete.
  - (e) Painting of the whole panel by two coats enamel paint of steel gray colour & write the room nos./zones of distribution areas.

#### Maintenance of 3-Phase Power Distribution Boards

- (a) Replacement of MCB after re- Socketing & connections complete.
- (b) Replacement of MCCB after re-socketing & connections complete.
- (c) Replacement of Bus Bar mounted HRC fuse base / top & connections complete.
- (d) Replacement /repair of Neutral link after re-socketing & connections complete.
- (e) Painting with two coats of enamel paint of steel gray colour & marking the room nos./zones of the distributing area.

#### Maintenance of Single phase distribution board

Repairing / replacement of single phase distribution boards by replacing fuse, MCB, Neutral links, sockets with connections complete

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

Replacement of 6 A. / 16 A. modular or Non-modular switch / socket / fuse / Indicator & connections complete.

#### Maintenance of Starter or MCB DB for A.C

Replacement of 20 A. Starter or 20 A. Industrial metal clad plug top / base in MCB DB & connections complete

**Maintenance of Tube Light sets, PL sets– mounted on false ceiling, on wall directly or by down rod.**  
Replacement of PL, tube light, Choke, starter, Capacitor as required & connections Complete.

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

(a) 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

(b) Spray Painting by two coats white enamel paint

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

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

(b) Painting of the panel with two coats of steel gray coloured enameled paint

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

(a) Repairing by replacing Tube lights, Choke, starter, Post top mercury vapour lamps, ignitors, capacitors, Ballasts, Metal Halide/ sodium vapor lamp or sheds .

(b) Painting of the fittings with two coats enameled paint.

**Maintenance of Electrical distribution system in Hostels & Staff quarters**

(a) Repairing / replacement of main switches, MCBs in Panel, switches & sockets in witch boards, tube lights etc.

**Any other maintenance work as will be needed**

**Man power deployment:**

The following manpower should be provided by the contractor:-

- a) Four Electricians (i. e. Skilled)
- b) One Work Assistant (i.e. Skilled)
- c) Four Helpers (i.e. Un-skilled)
- d) Two Maintenance Supervisor (i.e. Supervisory category)
- e) One Site Supervisor (i.e. Supervisory category)
- f) One General Supervisor (i.e. Supervisory category)

**Qualification & Experience:**

- a) *The Maintenance Supervisor 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.*
- b) *The Site Supervisor 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 e.g. Internal Electrification Work (Surface/ recessed conduit Wiring system of large building) etc. He must be conversant with CPWD WORKS pattern and possess thorough knowledge about the CPWD Works Manual, CPWD General Specifications of Works, DSR (Delhi Schedule Rates), IE Rules, IS Specifications, General Financial Rules'2005 etc.*

- c) **The General Supervisor** should have minimum 3 years of experience in the relevant field which would include maintenance of Registers, Files, Record keepings, preparation of Duty Chart etc. in connection with the above job. The candidate shall be responsible for maintenance/monitoring of formalities as asked for in the Minimum Wages Act. 1948 and Minimum Wages Rules 1950 on behalf of the principal employer. The candidate should be Graduate in any discipline and should have obtained his/her degree from a Govt. University.
- d) **The Electricians** (i.e. Skilled Category) should be preferably within 45 years of age and should possess a valid electrical license (Workmen Permit) for Part i (b) & ii at least with adequate experience (not less than 5 years) in the relevant field.
- e) **The Works Assistant** should preferably be within 50 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.
- f) **The Electrical Helpers** (i.e. Unskilled Category) 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.

#### **Duties & responsibilities:**

- i) **The Maintenance Supervisors** will supervise the day to day maintenance work (preventive & breakdown) and will provide necessary guidelines to the Electricians /Works Assistant/ and other subordinate staff to carry out the maintenance work safely. They will be responsible for maintaining the safety of the users as well as the maintenance personnel. Compliance of necessary provisions as laid down in the IE Rules, IS Specifications and other applicable rules pertaining to safety will be the sole responsibility of the Maintenance Supervisors. They will take care of faults / breakdown etc. as quick as possible to restore the services following the guidelines of IACS and instruction of Engineer-in-Charge in this regard.
- ii) **The Site Supervisor** shall be responsible for the supervision of all Electrical Construction Works viz. Electrical renovation work of laboratories & offices, Internal Electrification Work (e.g. wiring for large building), campus lighting, Construction of Substation, works related to electrical infrastructure pertaining to distribution of emergency DG power to different locations, modification of existing substation work etc. He must be conversant with CPWD work pattern and possess thorough knowledge about the CPWD Works Manual, CPWD General Specifications of Works, DSR (Delhi Schedule Rates), IE Rules, IS Specifications etc. He must be capable of preparing estimate based on design & drawing (to be prepared by him) including cost analysis independently and should have knowledge of computer operation (MS WORD & Excel) to facilitate the same.
- iii) **The General Supervisor** will be responsible for general supervision including maintenance of various registers, preparation of duty chart, checking of attendances, cleanliness of the maintenance room, keeping records etc. and other formalities as will be required towards compliances of the provisions of Minimum Wages Act-1948 & Minimum Wages Rules 1950 and other rules as applicable.

- iv) **The Electricians** will work under the direct supervision of the Maintenance Supervisors. They will take up the work of maintenance as per instruction of the Maintenance Supervisor and shall work on war footing basis in order to restore the system at the earliest possible.
- v) **The Work Assistant** will assist the Site Supervisor/Maintenance Supervisors in their work. Apart from this, he will monitor the maintenance work and shall report to the Supervisors accordingly. He will assist the Supervisors to prepare the material lists & maintenance of stores etc. as will be required for providing maintenance of the buildings to the desired satisfaction of the users.
- vi) **The Electrical Helpers** will assist all categories of maintenance and construction personnel in their work. They will carry ladder, tool bag, instruments etc. as will be required to facilitate the maintenance as well as construction work at site.

*Note: For all categories of employees as stated above, the prescribed age limit, qualification and 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 authorized supervisory personnel on their behalf to supervise the job. No extra fees will be paid to the contractor in this regard. Also, it is categorically mention that, the entire risk & responsibility pertaining to this contract including safety & security of men, materials an machine etc. shall rest on the contractor during the currency of contract and extended period (if any).*

### ***Safety & Security:***

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. The contractor will enter into a formal agreement with IACS in this regard. The contractor shall issue necessary Service Identity card, uniform (two sets in a year which will include shirt & trouser as approved by the Principal Employer i.e. IACS), safety shoe, helmet etc. for their employees. However, Bio-Data along with photocopy of Photo ID proof (Voter's I-card/PAN card or similar type evidence) in respect of the employees to be engaged shall be submitted by them before engaging any employee at IACS. Original documents may be asked for to display before the IACS authority 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 14 years shall be allowed to be engaged in any circumstances.** Since the nature of work is not conducive for female workers; therefore, no female worker should be deployed. However, any such requirement if arises, it is required to be done with the written permission of the competent authority only.

## **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 provided by the Agency.
- ii. Standard Tools i.e. Pliers, Chisels, Screwdrivers, Hammers, Hacksaw, Files, Brushes, all types of Wrenches, Cable Crimping m/c. (up to 400 sq. mm), including Neon Tester and Test Lamps, HT line tester, should be provided by the Agency.
- iii. Portable power blower, portable hammer drill machine, cutting & drill machine etc.
- iv. 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.
- v. All types of safety articles like safety gloves, safety belts, safety shoes, safety apron, helmet etc to be used by the substation operators are required to be provided by the contractor.
- vi. The contractor has to provide a first aid box with all necessary first aid materials for the use of substation personnel.

## **SPARES & CONSUMABLES:**

Minor Spares & components of equipment e.g. PVC insulating tapes, cable sockets, HRC fuses, tubes & lamps, Copper ballasts, starter, loose copper cables & wires, MCB, hardware, lubricants, cotton waste, cloths or any other items as may be necessary up to the limit of Rs. 3,000/- (Rupees three thousand only) per month/Rs. 36,000/- (Rupees thirty six thousands only) per annum are to be provided by the contractor within their scope of this work which will be reimbursed by IACS against production of Cash memo/Invoice in original as per the requisition duly approved by the Engineer-in-Charge. Necessary documents & records are to be maintained properly by the Contractor in this regard.

### **Providing Stationary etc:**

Necessary registers, pen, pencil, refills, eraser, calculator, log sheet & log books have to be supplied by the Contractor from time to time to records various events & data during the currency of contract and also in extension period (if any). No extra payment will be made by IACS in this regard.

## **STATUTORY OBLIGATIONS:**

Person deployed for maintenance / operation work should be covered with insurance by the Contractor against any accident for which personal injury or loss of life may take place. No compensation will be given by the IACS for any reason what so ever.

It is to be explicitly undertaken by the Contractor that all statutory and legal requirements in respect of the manpower deployed by the Contractor shall be fulfilled by the Contractor themselves and IACS shall not be responsible in any manner directly or indirectly.

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

The contractor shall be responsible for compliance of all statutory labour rules and regulations i/c Minimum Wages Act-1948 & Minimum Wages Rules 1950 as will be amended from time to time.

## **EXTRA INVOLVEMENT:**

Any extra work or manpower required beyond the scope of this work have to be taken care of by the Contractor 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 found justified by the IACS.

## **PAYMENT OF WAGES:**

The wages to the employees of the contractor will be paid as per **Minimum Wages Act-1948 & Minimum Wages Rules 1950** as amended from time to time by the Govt. of India. The contractor shall be liable for payment of wages in time (latest by 7<sup>th</sup> day of the next month). The payment of wages to the contractor's employee should be made through RTGS/NEFT/Account Payee cheque. Necessary document has to be submitted during submission of claim for reimbursement of the same. Also, application of Form-X (Register of Wages) & Form-XI (Pay Slip) as stated in the Minimum Wages Act 1948/ Minimum Wages Rule 1950 has to be made. **A Labour deployment cum attendance report is also required to be submitted with each bill for payment of the same.** IACS authority may verify the same from the contractor's employee also. The contractor shall have working capital for at least three month's payment of wages & other dues to protect the interest of the employees to be engaged by them in unforeseen situation. The prospective tenderers are advised to incorporate the following components during working out of the wages in various categories of employees to be engaged by them. The employees to be engaged by the contractor must be covered with ESI & EPF scheme. The employees who will be governed by the **Minimum Wages Act-1948 & Minimum Wages Rules 1950** shall be entitled for availing the National Holidays as paid holidays apart from their weekly day of rest.

### **Wages:**

The wages & other benefits shall incorporate the following components in respect of the employees who are governed by the Minimum Wages Act 1948 & Minimum Wages Rules 1950:

1. **Basic wages, 2. VDA, 3. ESI, 4. EPF, 5. EDLIS 1976, 6. Bonus (if entitled).** The minimum wages shall be governed in accordance with the rates to be circulated by the Govt. of India from time to time through its Gazette notification. Payment of bonus will be made as per Payment of Bonus Act 1965 with amendments.

The prevailing rate of Minimum Wages for the central sphere in respect of labourers stationed at Kolkata for Scheduled Employment under the head "Construction/Maintenance/ Building operation" is as follows after revision of minimum wages w.e.f 01.04.2015.

1. Skilled labour: @ Rs. 424/- per day
2. Unskilled labour: @ Rs. 348/- per day

Maintenance of all types of registers pertaining to payment of labour's wages, attendance registers, display of the list of contract labour & their category including daily rate of wages, Brief description of the Minimum Wages Act 1948 etc are required to be displayed by the Contractor in a conspicuous space as per provision as laid down in the Minimum wages Act-1948/Minimum Wages Rules 1950.

**Under this Work Scope, the Employees with Designations 'Electrician', 'Electrical Helper' & 'Work Assistant' shall be governed as per Minimum Wages Act 1948/ Minimum Wages Rules 1950.**

**Salary:**

The Contractor's Employee with designation as (i) Maintenance Supervisor, (ii) General Supervisor & (iii) Site Supervisor will be paid Consolidated Salary @ Rs. 18,000/- per month + EPF & ESI benefits as per Govt. of India norms. On renewal of contract (if granted), annual increment will be granted @ 5% of the consolidated salary in respect of all the above three category of employees.

All Supervisory staff shall be entitled for availing National holidays as paid holidays apart from their weekly day of rest. They will also be entitled for availing casual nature of leave for not exceeding 12 (twelve) days in a year.

**COMPLIANCE OF MINIMUM WAGES ACT. :**

Maintenance of all types register pertaining to payment of labour's Wages, O.T. register, attendance register, 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 disbursement of Wages/Salary, arrear wages, Bonus etc. as per instruction of IACS, the Contractor may submit their claim towards reimbursement of the same in duplicate with necessary supporting documents. However, to give some financial relief to the contractor, IACS may release upto 75% of the disbursed amount against submission of documentary evidences towards disbursement of wages as running account 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 document 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.

**EMPLOYER'S PRIOR PERMISSION NEEDED TO WITHDRAW CONTRACTOR'S EMPLOYEE FROM WORKSITE:**

The Contractor shall not be allowed to withdraw any of their employees (whose name will be approved by the Competent Authority of IACS for deployment at worksite at IACS) without obtaining written permission from the Principal employer (IACS) during the currency of contract. If the contractor intends to withdraw any of their employees (s) from the worksite of IACS, prior permission of the Principal Employer (IACS) is needed in writing. Only after getting the written approval/permission of the Principal Employer, the contractor shall be allowed to withdraw their employee (s). However, the contractor shall be bound to immediately withdraw their employee (s) on receipt of instruction from the IACS authority on the ground of misbehavior / 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 the sole responsibility of the contractor. IACS will not be responsible in any way for rehabilitation/re-employment etc. of the said employee (s).

**EPF & ESI CONTRIBUTION:**

EPF & ESI Contribution as per Government of India's order (with amended from time to time) have to be deposited by the contractor to the concerned EPF & ESI authority in appropriate time. Necessary documents in this regard have to be submitted to IACS by the contractor with their monthly bill for reimbursement of the same. 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:**

Profession Tax has to be deducted from the Wages/Salary in respect of the Employees of the Contractor and to be deposited with the Concerned Authority in time as per rule.

**SPECIFICATIONS AND OTHER TERMS & CONDITIONS:**

Unless otherwise specified in this tender, the work shall be governed as per CPWD Specifications and CPWD WORKS MANUAL. Also, IE Rules, IS Specifications etc. has to be followed as applicable. The Engineer-in-Charge of the Substation should be consulted before taking any decision in this regard.

**DETERMINATION OF CONTRACT:**

IACS 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 this contract and / or commits faults in complying with the terms & conditions of this contract even after giving written notice.

When the contractor has been made liable for action under the aforesaid cases, the 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.

**K. TERMINATION:**

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