

S. N. BOSE NATIONAL CENTRE FOR BASIC SCIENCES

BLOCK-JD, SECTOR-III, SALT LAKE, KOLKATA-700 098

Tender Ref: SNB/ENGG/NIT/14-15/03/08

Dated: 28.06.2014

NOTICE INVITING TENDER

Sealed tenders are invited on behalf of S.N. Bose National Centre for Basic Sciences, from experienced and resourceful firms in two bids for **“Electrical Installation work for Erection, Testing and Commissioning of 11KV/433V Sub-Station of SNBNCBS, Kolkata-700 098”**.

Last date & time of submission of tender is on 17.07.2014 by 02.00 p.m. in the tender box kept near Nano Lab at Ground Floor, Main Building, Part-B.

Tender Document can be downloaded from the Centre's official website:
<http://newweb.bose.res.in/InfoAnnouncements/Tender.jsp>

Sd/-

Registrar

Tender Ref: SNB/ENGG/NIT/2014-15/03/08
June 2014

S N BOSE NATIONAL CENTRE FOR BASIC SCIENCES

**ELECTRICAL INSTALLATION WORK FOR ERECTION,
TESTING AND COMMISSIONING OF 11KV/433V SUB-
STATION OF SBNCBS, KOLKATA-98.**

S N BOSE NATIONAL CENTRE FOR BASIC SCIENCES
BLOCK-JD, SECTOR – III, SALT LAKE
Kolkata 700 098

PART - I

1 INVITATION TO TENDER

Sealed Tenders are invited from experienced and resourceful Contractors by S N Bose National Centre for Basic Sciences (SNBNCBS) for “**ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98.**”

1.1 Submission

1.1.1 Offers are to be submitted for the subject work in two bid system as explained herein. The sealed tender document, duly filled in, shall be submitted in the Tender Drop Box kept at the reception of S N Bose National Centre for Basic Sciences, Kolkata - 700098 (“*the Centre*” in short).

1.2 Tender Documents

1.2.1 Tender Documents can be downloaded from the Centre’s official Website: **www.bose.res.in** Bidders may visit the website for latest updates of this tender.

1.2.2 Amendment of Tender Documents: The Centre may modify the Tender Documents before the last date for submission of tenders by issuing Addenda which shall be part of the Tender Documents and the same will be published in the Centre’s website.

1.3 Earnest Money

No Tender shall be considered which is not made in the prescribed form and which is not accompanied by a deposit of Rs. 80,000 (Rupees eighty thousand) as Earnest Money. Earnest Money Deposit will be accepted only in the form of Crossed Account Payee Banker’s Cheque or Demand Draft or Banker’s Pay Order from Nationalised /schedule Banks payable at Kolkata and drawn in favour of “**S N Bose National Centre for Basic Sciences**” This shall be placed in an envelope, clearly super-scribed with Tender number, title and “Earnest Money Deposit” in bold letters. EMD in cash will not be accepted. The offer shall be submitted by the Tenderer in manner explained herein.

1.4 Validity

The Price Offer must be valid for 90 days from the date of opening of the Technical Cover of the Tender; otherwise the same will not be considered at all.

1.5 Due Date

The due date of Tender Submission is 17th July 2014 (**02.00 p.m.**) and the Technical Cover will be opened on the same day at 03.00 p.m.

1.6 Rejection

If the offers are not received according to the instructions detailed herein, they shall be liable for rejection. The corrections and remarks shall be either typewritten or legibly written and signed.

Campus Engineer cum Estate Officer

S N Bose National Centre for Basic Sciences
Sector-III, Block-JD, Salt Lake
Kolkata – 700098

2. WORK DESCRIPTION AND SCOPE OF WORK

2.1 Work requirements

The work included in this Tender comprises the following:

- 2.1.1 Receiving, Erection and Testing - Commissioning of Electrical Equipments i.e. Transformers, HT Panels, MV Panels and other accessories including all necessary peripherals, cabling and temporary & enabling works as per schedule of works enclosed following relevant Indian / International standards and best Engineering practices. The proposed electrical power supply work will serve as a main source of power for the existing and upcoming infrastructures facilities from Sub-Station to various location of the Centre.
- 2.1.2 A Guarantee against damage or failure due to defects in design, material, manufacture and workmanship for the duration of the **Defect Liability Period of 12 calendar months** shall be provided.

2.2 Site Familiarisation

Before quoting, the Tenderer in his own interest shall carry out site visits to know the site conditions and full implications of the assignment. This will also help him in proper assessment of the work. Failure to do so will not absolve the contractor of his responsibility to carry out the work as specified in the Tender Documents. The cost of visiting the site shall be borne by the Tenderer and shall be at his own responsibility and risk.

2.3 Tender Costs

The Centre will not reimburse any costs incurred by the Tenderer towards preparation and submission of the Tender.

2.4 Site Consultations

The work shall be carried out in consultation with the Centre's Engineering Section.

2.5 Specification for Cable Laying:

Trenches shall be 750 mm deep (minimum) and 450 mm wide for LT Cables and trenching work shall include all pumping and bailing out water. These trenches shall be wide enough to accommodate all the cables with brick separations as per the requirements specified in the relevant I.S.

When more than one multicore cable is to be laid in the same trench, a minimum horizontal inter-axial spacing at least 25/30 cm between cables will be provided as per relevant I.S.

After excavation of the trench of proper size, the bottom of the trench shall be dressed and levelled and filled with a 75 mm layer of fine sand. The cables shall then be laid with bricks in the middle of both the cables continuously, filled and packed up to a level of 75 mm (3") above top of cable with fine sand, the top layer of bricks in the middle of the both cables shall be covered by bricks placed side by side in continuous series as protective cover. The remainder of the trench shall be filled with excavated soil, well rammed and watered to a level of 75 mm (3") above surrounding ground level. The ground level surface of the whole trench route shall be restored properly after completion of cable laying.

- 2.6 The contractor shall have to submit computerised General arrangement circuit diagram of the finally executed New Sub-Station along with fabrication drawing after completion of the work duly approved by the centre.

2.7 Details of APFC Panel

The APFC Panel shall comprise the following:

The capacitors should be of Heavy duty type (Make: L&T/Meher/Siemens)

Power supply to all capacitors and contactors should be through 4 pole MCB.

All capacitors contactor should be of type MPX-15

Capacitors should operate also in manually by Push button switch.

All indicators i.e. ON/OFF shall be of LED type.

Volt meter should be of 0-650 V, 3 Ph, Digital type with selector switch.

Ampere meter should be of 0-400 AMP. 3 Ph, Digital type with selector switch.

The 14 steps APFC Relay unit should measure and display of V, I, KVA, KW, KVAR, PF, Current sensitivity 10 mA, type RPM-14.

There shall be a provision of 02 nos. 150 mm sweep Exhaust Fan s along with one timer unit.

The incoming of APFC Panel should be through 400 Amp. 4 pole MCCB of type DN3-400N, breaking capacity 50 ka, with auxiliary contact including extended rotary handle and spreader terminals.

M.S. base frame for APFC panel shall be made from 75mmX50mmX6mm M.S. Channel.

The panel box should be of back and front operated cubical type free standing panel and suitable for operation of 210 KVAR, 415 Volt, 3 Phase, 50 Hz A.C. supply system and to withstand a short circuit level of 35 KA symmetrical. The panel shall be fabricated out of 14 SWG CRCA sheet steel with necessary anti corrosive treatment and shall be dust and vermin proof construction suitable for installation on pedestal with following facilities.

A) Fire and corrosion resistant coating similar to VIPER FR-1101 applied two coats with necessary primer.

B) Fire retardant DMC/SMC fillings for openings around busbar near the sectional barriers.

C) Facilities in the terminals to have direct termination with ALU cables.

D) Shall have high mechanical dielectric strength.

E) Door interlocking facility and fire barriers.

F) Painting of APFC Panel and base frame shall be carried out through seven tank process after surface treatment and shall be painted through powder coating process with two coats of zinc chromate primer and two coats siemens grey painting.

G) Approximate size of panel 2000mmX1200MMx750mm with 600 AMP. TPN Copper Busbar.

N.B. The Panel Box should be complete with all internal wiring and with arrangement for receiving incoming and outgoing terminals.

3 INSTRUCTIONS TO TENDERER

3.1 Tender Documents

Sealed Tenders are invited for the work of “**ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98**” in accordance with the attached Conditions of Contract, Form of Tender and Price Schedules. Tender means Tenderer’s forwarding letter, making his offer against this Tender together with the return of Tender Documents duly filled and signed.

3.2 Earnest Money Deposit (EMD)

No bid will be considered which is not accompanied by a sum of Rs.80, 000/- (Rupees eighty thousand) as Earnest Money which is lodged on understanding that in the event of the bidder withdrawing the bid before the expiry of 90 days from the last date of submission of the bid, the bid shall be cancelled and the Earnest Money deposited shall be forfeited.

3.3 The EMD must be lodged by adopting following steps:

- (A) Earnest Money will be accepted only in the form of Crossed Account Payee Banker’s cheque or Demand Draft or Banker’s Pay order from any Nationalised/ scheduled Bank payable at Kolkata. EMD in cash will not be accepted.
- (B) The EMD shall be submitted as per the procedure laid down in the Tender notice.
- (C) Bids if not accompanied by the requisite EMD shall be treated as invalid and shall not be opened. The Earnest Money will be returned to the unsuccessful bidders on their request without interest after the bids are settled. The Earnest Money will be retained in case of successful bidder and will form a part of the Initial Security Deposit.

3.3.1 Return of Tender Forms

TENDERER MUST RETURN THE COMPLETE TENDER DOCUMENTS INCLUDING **FORM OF TENDER** WITH CONDITIONS OF CONTRACT, THE SPECIFICATIONS, AND SCHEDULES ETC. DULY SIGNED. ALTERATIONS TO THE CONDITIONS OF CONTRACT, SPECIFICATIONS, ETC. WILL NOT BE ENTERTAINED. ANY TENDER NOT SO SIGNED ON ALL THE DOCUMENTS IS LIABLE TO BE REJECTED.

3.4 Completion period

The time required for completion of the work from the date of award of the contract is 60 days.

3.5 Filling in contract price schedule

Tenderer must fill in the rates against all the items of works included in the schedule of quantities and rates and must extend the same indicating the rate applicable and the amount of taxes, duties, levies etc. and give the total figure.

3.6 Acceptance of the tender

The Centre reserves its right to accept or reject any tender in whole or in part without assigning any reasons thereof.

3.7 Taxes and Duties

Tenderers rates and amounts are to be fully inclusive of all taxes and duties. The Centre can avail excise duty / custom duty exemption against exemption certificate.

3.8 Tender price

Tender price shall be inclusive of all charges for design, manufacture/repair, transport, handling, supply and delivery at site, receipt and storage of all material and equipment at site, installation, trials, testing, commission, maintenance for Defect Liability Period, inspection, supervision and certification at all stages by the nominated inspecting agency, training of the Centre's staff, supply of spares and special tools, Defect Liability Period and all other incidental charges for the execution of the contract.

3.9 Cost of Stamps

The successful Tenderer shall bear the expenditure towards stamps and related expenditure involved in registering of the contract.

3.10 Mode of Submission of Tender:

Tenders enclosed in a sealed cover as mentioned in the "Tender Notice" indicating on the envelope the Tender No. and due date and time and endorsed "**ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98**" and addressed to the Registrar, SNBNCBS, will be dropped in the Tender Box kept at the reception area on or before the due date and time of the Tender submission. Outstation Tenders should be dispatched by post so as to reach SNBNCBS before 1400 hours (I.S.T.) on the due date. The Tenderers should specifically note that their offer sent by post or by hand must reach this office on or before the due date and time. **OFFERS RECEIVED LATE WILL NOT BE CONSIDERED EVEN THOUGH POSTED IN TIME.**

All Tenders shall be submitted in duplicate in sealed covers separately as mentioned below:

- (i) **The first cover** shall contain only EMD in the prescribed manner and shall be sealed and super-scribed with Tender no. and title and EMD as shown below:

"EARNEST MONEY DEPOSIT"

"ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98"

TENDER REF _____

CLOSING DATE _____ AT _____ HOURS

- (ii) **The second cover** shall contain Technical Offer (Part – I) along with all Conditions of Contract, Specification, annexures/schedules, attachments etc, in original and shall be sealed and super-scribed as shown below :

"TECHNICAL BID"

"ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98"

TENDER REF _____

CLOSING DATE _____ AT _____ HOURS

- (iii) **The third cover** shall contain only the Price Offer (Part - II), in duplicate, and shall be sealed, super-scribed as shown below:

“PRICE OFFER”

“ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SBNBCBS, KOLKATA-98”

TENDER REF _____

CLOSING DATE _____ AT _____ HOURS

- (iv) **The fourth cover** shall contain all the above three covers and shall be super-scribed with Tender No. title and **“Complete Offer”** as shown below:

“COMPLETE OFFER”

“ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V SUB-STATION OF SBNBCBS, KOLKATA-98”

TENDER NUMBER _____

CLOSING DATE _____ AT _____ HOURS

If the offers are not received according to the instructions detailed herein, they shall be liable for rejection.

The Tender will be opened in the presence of the Tenderers or their representatives who may wish to be present on scheduled date and time of opening the Tenders.

Evaluation of technical offers will be done first on the basis of criteria given in the Schedule of attachments. Price bids of technically qualified bidders only will be opened thereafter.

**SCHEDULE OF ATTACHMENTS (AS PROOF OF TECHNICAL COMPLIANCE)
TO BE COMPLETED BY THE TENDERER FOR THE TECHNICAL BID**

Item	Title	Attached? (Tenderer to initial)
Conditions of Contract, Specification, Annexures and Schedules duly signed.		
Technical Submission, to include:		
Tenderer Attachment Ref.	Subject	
A	Proof of experience in executing electrical substation (min. 11kV/433 V) work during last three years including value of contract, proof of satisfactory completion of works etc. to be submitted.	
B	Registration with specified organisation like CPWD, WBSEDCL, BSNL, BHEL, NTPC, NHPC, POWERGRID, DVC, Railways class/type of registration to be mentioned in the eligibility criteria.	
C	Proof of financial credential: Average annual turnover should not be not less than Rs. 50 (Fifty) lakhs during the last three years. Audited statement for last 3 financial years (2011-2012, 2012-2013, 2013-14) to be submitted.	
D	Proof of valid electrical contractor Licence, trade license, IT PAN, VAT, Service Tax, and Professional Tax Registration.	

4 CONDITIONS OF CONTRACT

4.1 Application

Unless otherwise provided for in the Contract Documents, these Conditions shall apply to the work of all sections of the Specifications attached herewith.

4.2 Definitions and Interpretation

Whenever the following words and expressions occur in the Contract Documents, they shall have the meanings herein assigned to them except where the context otherwise requires:

4.3 Owner

The 'Owner' means the S N Bose National Centre for Basic Sciences and referred to throughout in the Contract Documents by 'Owner' or 'the Centre' having its premises at Sector-II, Block-JD, Salt Lake, Kolkata - 700 098. The word 'Owner' or 'the Centre' when used in conjunction with the words 'as directed', 'where directed', 'approved', 'subject to approval', 'satisfactory', 'accepted', 'equal to', 'proper', 'determined by' shall mean the Acting Registrar of SNBNCBS or any other official nominated by the Owner from time to time.

4.4 Contractor

The 'Contractor' is the successful Tenderer who is awarded the Contract by the Owner to perform the Works covered by this Contract and shall be deemed to include the Contractor's successors, heirs, executors, administrators, representatives or assigns approved by the Owner and will be referred to as if of masculine gender and singular number, throughout in these Documents.

4.5 Sub-Contractor

The term 'Sub-Contractor' used herein refers to a party or parties having a direct Contract with the Contractor to whom any part of the contract has been sublet by the Contractor with the consent in writing of the Owner.

4.6 Work

'Work' means the work to be executed in accordance with the Contract and includes extra works and temporary works.

4.7 The Contract

'The Contract' means and includes the documents listed in Schedule A of the Form of Agreement.

4.8 Contract Price

'Contract Price' means the sum agreed to and named in the Letter of Intent of Contract.

4.9 Drawings

'Drawing' means all drawings, calculations and technical information of a like nature provided by the Owner to the Contractor under the Contract and all drawings, calculations and technical information of a like nature submitted by the Contractor and approved by the Owner.

4.10 Site

'Site' means the lands and other places, on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the Owner for the purpose of the Contract.

4.11 Month and Week

'Month' means English Calendar month; 'week' means calendar week.

4.12 Expected Risk

The 'Expected Risks' are riot (in so far as it is uninsurable), war (whether war be declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection or military or usurped power or acts of God such as earthquake, floods, cyclone, hurricane etc., or use or occupation by the Owner of any portion of the Works in respect of which a certificate of completion has been issued (all of which are herein collectively referred to as the 'Expected Risks').

4.13 Commencement Date

'Commencement Date' means the date for the commencement of the contract as stated in the Letter of Intent (LOI) or the Letter of Award (LOA).

4.14 Letter of Award

'Letter of Award' means a letter issued by the Owner to the successful Tenderer to notify him that he is awarded the contract.

4.15 Contractor to execute contract Agreement

The Contractor shall after acceptance of Tender/work order enter into and execute a Contract Agreement, on a non-judicial stamp paper of Rs. 100/- (One hundred only) within 15 days of issue of LOI/LOA, to be prepared as per **FORM OF AGREEMENT**. Until such Contract Agreement is executed the Conditions of Contract, Instruction to Tenderers, Scope of Work & Specifications, Price Schedule, Drawings and the Tender together with their acceptance thereof, shall be construed as Contract between the Owner and the successful Tenderer. No payment will be made to the Contractor until the Agreement is signed by him. The Contractor shall prepare and finalise the Contract Agreement for signing the formal Contract Agreement. After signing, Contractor shall prepare and submit the full contract documents to Owner duly well bound in both original and copy.

4.15.1 The cost of the non judicial stamp paper to be borne by the contractor.

4.16 Contractor to satisfy himself in all point

The Tenderer shall inspect and examine the Site and its surroundings and shall satisfy himself or shall be deemed to have satisfied himself before submitting his Tender as to the form and nature of the Site, ground and nature of the work, the means of access to the Site, the means of disposal of debris, the working space he may require, any other local conditions and in general shall himself obtain all necessary information as to risks, contingencies and any other circumstances which may influence or affect his Tender. No extra claim whatsoever shall be entertained on account of misunderstanding or otherwise of the prevailing conditions as well as scope of work.

4.17 Earnest Money and Security Deposit

- 4.17.1 Earnest Money, the amount of which is specified in the Invitation to Tender, deposited in the ways specified in the Instructions to Tenderer must accompany the Tender without which the Tender will not be considered at all.
- 4.17.2 Security Deposit shall be deducted from the progressive bills including final bill at ten per cent (10%) of each R.A. Bill/ Final bill value till such time the total deduction together with EMD already taken shall constitute five percent (5%) of the total contract value.
- 4.17.3 Security Deposit which shall be converted to Performance Bond after completion of work and shall be refunded after completion of Defect Liability Period without interest and after deduction, if any, made there-from under the provision stated below, on due successful completion of the work.
- 4.17.4 If the Contractor fails to carry out the work or perform or observe any of the Conditions of Contract, the said Security Deposit may be liable to forfeiture at the option of the Owner. The Owner will also be at liberty to deduct from the Security Deposit or from any sum due or to become due or under any other Contract with the Contractor sums that may become due to the Centre by virtue of any of the terms hereof.

4.18 Performance Guarantee:

The successful tenderer shall deposit an amount equal to 5 % of tendered and accepted value of the work as performance guarantee in the form of Demand Draft/ Bankers Cheque from a scheduled bank in favour of 'S N Bose National Centre for Basic Sciences', payable at Kolkata, which shall be refunded without interest after defect liability period of 01 (one year) from the date of satisfactory completion of work provided the contractor has satisfactory carried out all work and attended to all defects in accordance with the terms & conditions, specifications and items of the work.

4.19 Forfeiture of Performance Guarantee:

Performance Guarantee is to be forfeited and credited to the Centre in the event of a breach of contract.

4.20 The Contract and General Obligations of the Contractor

- 4.20.1 Applicability of Laws on the Contract
- 4.20.2 The Contract documents shall be drawn-up in English language.
- 4.20.3 The contract shall be governed by acts as applicable only within the jurisdiction of the Kolkata High Court, India.
- 4.20.4 The Contract shall be governed by the following Indian Acts :
- a) The Indian Contract Act, 1872.
 - b) The Workmen's Compensation Act, 1923.
 - c) The Minimum Wages Act, 1948.
 - d) The Contract Labour (Regulation & Abolition) Act, 1970.
 - e) The Arbitration and Conciliation Ordinance, 1996 (Ordinance No. 8 of 1996).
 - f) Payment of Wages Act, 1936.
 - g) The ESI Act, 1948.

- h) Child Labour Act 1986
- A) Factories Act 1948
- B) Employees P.F. & Miscellaneous Provision Act 1952
- C) Any other Act as may be applicable under the statutes from time to time.

4.20.5 Unless otherwise stated in the Conditions of Contract:

The Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Work and the remedying of any defects; and the Contractor shall indemnify and hold the Owner harmless from and against the consequences of any failure to do so.

4.20.6 Compensation to Workmen and Others

The Contractor shall at all times indemnify the Owner against all claims, damages or compensation under the provision of the Workmen's Compensation Act, 1923, or any other law for the time being in force as consequence of any accident or injury of any workmen, or other person whether in the employment of the Contractor or not, and also against all cost, expenses or charges of any suit, action or proceeding arising out of such accident or injury and against all sums or sums which may with the consent of the Contractor be paid to compromise any such claim suit or proceedings.

4.20.7 Labour Employed by the Contractor on Day Work Basis

4.20.8 Any labour supplied by the Contractor for the work on a day work basis either wholly or partly under the direct orders and control of the Contractor or his Representative, shall be still deemed to be person employed by the Contractor.

4.20.9 The Contractor shall employ no workmen below the age of 16 years on the work in construction of any nature.

4.20.10 The Contractor shall observe all the safety precautions as stipulated and necessary to ensure safety of his staff as well as material. Appropriate Personal Protective Equipment (PPE), and other necessary safety equipment is to be provided to staff while working and the staff are to be properly trained to use such safety equipment and to observe the safety norms.

4.20.11 Discrepancies in Contract Documents

The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained by the Engineer who shall there upon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows:

- a) The Contract Agreement.
- b) The Letter of Intent.
- c) The Conditions of Contract.
- d) The Specification
- e) The Price Schedule / Bill of Quantities.
- f) The Description and Scope of Work
- g) The Instructions to Tenderers.
- h) The Drawings.
- i) The Tender.

- j) Any other document forming part of the Contract which is stamped, signed and dated by the competent representatives of the Owner and the Contractors. Except that, where expressly stated, particular documents shall have higher priority.

4.20.12 Subletting by Contractor

The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the Owner. Even if such permission be granted, the Contractor shall remain responsible (a) for the act, defaults and neglect of any Sub-Contractor, his agents, servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen, and (b) for his full and entire responsibility of the Contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "piece rate" basis shall not be deemed to be subletting under this clause. However, all lapses delays due to sub-contractor will be treated as contractual failure solely on Contractor's part.

4.20.13 Contractor's Rates to be Fully Inclusive

Unless otherwise specified, the Contractor shall be deemed to have included in this Tender / Offer all his costs for supplying and providing all constructional plant, temporary work, materials both for temporary and permanent works, labour including supervision thereof, transporting to and from the Site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities, Insurance and other things of every kind required of the construction, erection, completion and maintenance of the work including contractor's overhead and profit.

In case of any statutory or imposition of new taxes and duties after submission of the bid due to notification of Government of India during the contract period and if applicable to the end product, the same may only be considered by Owner against documentary evidence'.

4.20.14 Contractor to be Fully Responsible

The Contractor shall be solely responsible for the adequacy, stability and safety of all site operations and methods of construction, even if any prior approval thereto has been taken from the Engineer or his Representative. The Contractor shall be fully responsible for the correct implementation thereof, as also for any design and specification prepared / proposed / used by the Contractor.

4.20.15 Supervision by Contractor

The Contractor shall provide necessary and adequate supervision during the execution of the works and as long thereafter as the Owner or his Representative shall consider necessary during the Defect Liability Period.

The Contractor or his competent and authorised agent or representative shall be constantly at site and instructions given to him by the Owner or his Representative in writing shall be binding upon the Contractor. The Contractor shall inform the Owner in writing about such representative / agent of him at site. Replacement of any of the authorised agent of the Contractor during the currency of Contract shall only be with prior written approval of the Owner.

4.20.16 Contractor to Keep Qualified Personnel at Site

The Contractor shall employ in execution of the Contract only qualified, careful and experienced persons and the Owner shall be at liberty to direct the Contractor to stop deployment of any of his staff, workmen or official at Site and the Contractor shall within 48 hours from the receipt of instruction comply with such instruction without any demur, Whenever Owner shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work.

The Contractor shall maintain a 'Site Order Book' at the work site to keep record of the order/instructions issued by Owner and its compliance by the Contractor and a 'Hindrances Register' to record hindrances, if any, duly countersigned by Owner.

4.20.17 Care of the Work

From the commencement of the works till issue of the completion certificate the Contractor shall take full responsibility for the care thereof. Save for the excepted risks, any damage, loss or injury to the work or any part thereof shall be made good by the Contractor at his own cost as per instruction and to the satisfaction of the Owner, failing which the Owner or his Representative may cause the same to be made good by any other agency and the expenses incurred and certified by the Owner, shall be recovered from the Contractor.

4.20.18 Safety

The Contractor shall strictly follow and maintain the safety measures while executing the work at site as per standard safety measures and rules.

4.20.19 Performance Guarantee

The Contractor shall carry out the services in conformity with generally accepted norms and sound standards of engineering and safety. The Contractor shall be responsible for carrying out the works in compliance with the Specifications and Codes. In the event of any deficiency in these works, the Contractor shall promptly rectify the offending works for which the Centre shall not be required to pay any additional compensation.

4.20.20 The Centre's Rules & Regulations to be followed.

The Contractor and all his agents / employees at the Site or, in and about the work shall be controlled and governed by the rules and regulations of the Centre restricting the conduct of persons within the Campus.

The Contractor shall ensure that all persons employed by him in connection with this project work have understood and shall be under the purview of Indian Official Secret Act 1923 (XIX of 1923).

4.20.21 Accidents

The Contractor shall within 24 hours of the Occurrence of any accident at or about the Site or in connection with the execution of the work, report such accident to the Owner and shall take all steps as is required by the prevailing law.

4.21 Terms of Payment

A) All bills shall be prepared by the contractor after the measurements were taken jointly and one interim bill (RA) shall be prepared each month. The bills in proper forms must be duly accompanied by detailed measurements in support of the quantities of work done and must show deductions for all previous payments, retention money, etc.

The Owner will deduct retention money as described in Clause 5.3 of these conditions. The refund of retention money will be made as specified in the said clause.

All the interim payments shall be regarded payments by way of advance against the final payment only and not as payments for work actually done and completed and shall not preclude the requiring of bad, unsound, and imperfect or unskilled work to be removed and taken away and reconstructed, or re-erected or be considered as an admission of the due performance of the contract, or any part thereof in any respect or the accruing of any claim, nor shall, it conclude determine or affect in

anyway the power of the Owner under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work or of the date of certificate of completion furnished by the Site Engineer and payment shall be made within four months from the date of receipt of the final bill by the Contractor.

B) All payments shall be subject to deduction of income-tax at source as per Income Tax Act and Income Tax Rules.

4.22 Delay/ Extension of Completion Time / Liquidated Damage / Risk Purchase/ Termination of Contract

A) Extension of Completion Time

Should the quantum of additional work of any kind and/or for the reasons of 'Excepted Risks' cause delay in completion of the work, the Contractor shall apply to the Owner in writing for suitable extension of completion time within 7 days from the date of occurrence of the reason and the Owner shall there upon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and grant the extension period as he would deem proper for completion of the work, with or without the imposition of 'Liquidated Damage' on the Contractor. The decision of the Owner shall be binding on the Contract. If an extension of completion time is granted by the owner without imposition of Liquidated Damage, the Liquidated Damage shall apply from the date of expiry of the extended period, if the work is not completed within the extended time.

B) Liquidated Damage or Other Compensation:

The Contractor should pay as compensation for delay of work @ 1.5% per month of delay to be computed on per day basis which shall not exceed 10% of the tendered value of the Cost.

4.22.1 Risk Purchase.

Without prejudice to any of his legal rights, the Owner shall have the power to recover the said amount of compensation / damage, from any amount due or likely to become due to the Contractor. The payment or deduction of such compensation / damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations / liabilities under the Contract and in case of the Contractor's failure and at the absolute discretion of the Engineer, the work may be ordered to be completed by some other agency or departmentally at the risk and expense of the Contractor, after a minimum 7 days notice in writing has been given to the Contractor by the Owner.

4.22.2 Termination of contract

Without being liable for any compensation to the Contractor, the Owner may, in his absolute discretion, terminate the Contract in part or as a whole after giving him a minimum 7 days notice in writing, due to occurrence of any of the following reasons and decision of the Owner in this respect shall be final, conclusive & binding on the contractor:

- a) The Contractor has abandoned the Contract.
- b) In the opinion of the Owner, either the progress of work is not satisfactory or the work is not likely to be completed within the agreed period on account of Contractor's lapses.
- c) The Contractor has failed to commence the works or has without any lawful excuse under these conditions, has kept the work suspended for at least 15 days despite receiving the Owner's written notice to proceed with the work.

- d) The Contractor has failed to remove materials from Site or to dismantle or demolish and replace work for 7 days after receiving from the Owner the written notice stating that the said materials or work were condemned and rejected by him under these conditions.
 - e) The Contractor is not executing the works in accordance with the Contract or is persistently or flagrantly neglecting to carry out his obligations under the Contract.
 - f) Any bribe, commission, gift or advantage is given, promised or offered by or on behalf of the Contractor to any officer, servant or representative of the Owner or to any person on his or their behalf in relation to the execution of the Contract.
 - g) The Contractor is adjudged insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsorily or voluntarily.
- 4.22.3 In all such cases of Termination of work, the Owner shall have the Power to complete the work through any other agency or departmentally at the Contractor's risk and expense and the Contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the Contractor, had he duly completed the whole of the work in accordance with the Contract.
- 4.22.4 The Owner shall have the power to retain all amounts due to the Contractor until the work is completed by other agency and the Contractor's liabilities to the Owner are known in all respects. The owner has the right to forfeit performance guarantee.

4.23 Defect Liability and Refund of Performance Guarantee

4.23.1 Contractor's Obligation for Defect Liability

The work including equipment or any component thereof are to be guaranteed for satisfactory performance for the period of **twelve (12) Calendar months** from the date mentioned in the Completion Certificate to be issued by the Owner, unless otherwise agreed in writing by the OWNER will be deemed as the 'Defect Liability Period'. Any defect / fault, which may appear in the work during aforesaid guarantee period, arising, in the sole opinion of the Owner, from the defective material and or due to improper design and or due to defective drawing or due to faulty workmanship, or not in accordance with the Contract and shall, upon the written notice of the Owner, be amended and made good by the Contractor at his own cost within seven days of the date of such notice, to the satisfaction of the Owner, failing which the Owner shall have the defects amended and made good through other agency or departmentally at the Contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the Contractor in any manner deemed suitable by the Owner. During the above guarantee period, the contractor shall assume full responsibility for rectifications of any defective equipment or components thereof including all direct expenses relating to removal and repositioning of replacement/repaired equipment or component thereof and subsequent test and trial, incurred thereon without any financial implication to Owner.

4.23.2 Certificate of Final Completion

The Contract shall not be considered completed and the work shall not be treated as finally accepted by the Owner, until a Final Completion Certificate shall have been signed and issued by the Owner after all obligations under the Contract including that in the Defect Liability Period, if any, have been fulfilled by the Contractor.

4.23.3 Refund of Performance Guarantee

On completion of the Contract in the manner aforesaid, the Contractor may apply for the refund of his Performance Bond by submitting to the Owner (a) The Receipts granted for the amount of Security held by the Owner, and (b) his 'No further claim' Certificates where upon the owner shall issue Certificate and within two months the Owner shall refund without interest the balance due against the Performance Bond to the Contractor, after making deduction there from in respect of any sum due to the Owner from the Contractor.

4.24 Removal of Defective Work

If the defect or damage cannot be remedied expeditiously on the Site and the Owner gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged.

4.25 Right to access

Until the Completion Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonable required in order to comply with this Clause, except as may be inconsistent with the Owner's reasonable security restrictions.

4.26 Contractor to Search

The Contractor shall, if required by the Owner, search for the cause of any defect, under the direction of the Owner.

4.27 Unfulfilled Obligations

After the Completion Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

4.28 Clearance of site

4.28.1 Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

4.28.2 If all these items have not been removed within 15 days after the Owner issues Completion Certificate, the Owner may sell or otherwise dispose of any remaining items. The Owner shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

4.28.3 Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Owner's costs, the Contractor shall pay the outstanding balance to the Owner.

4.29 Settlement of Disputes

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof during the tenure of after expiration/termination of this Contract.

- 4.29.1** Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party to arbitration in accordance with the provisions of Clauses 18, 19 and 20 hereinafter.
- 4.29.2** Any dispute pursuant to Clause 16 submitted to arbitration shall be subject to the provisions of the Arbitration and Conciliation Act, 1996 including any modification or amendment thereof for the time being in force shall apply, subject to Arbitration proceedings being held in Kolkata, India.
- 4.29.3** The matter under dispute shall be referred to an arbitral tribunal of three arbitrators, one to be appointed by each Party by designation/name and the third by the arbitrators so appointed.
- 4.29.4** In any arbitration proceeding hereunder, proceedings shall be held in Kolkata, India; the English language shall be the official language for all purposes; the decision of the arbitral tribunal shall be final and binding and shall be enforceable in the court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.
- 4.29.5** Cost of arbitration shall be borne equally by both parties.

ANNEXURES TO CONDITIONS OF CONTRACT

ANNEXURE - A

S N BOSE NATIONAL CENTRE FOR BASIC SCIENCES

FORM OF TENDER

**ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF
11KV/433V SUB-STATION OF SNBNCBS, KOLKATA-98**

Date _____

Invitation for Bid No. _____

Name of Work _____

To,
The Registrar
SNBNCBS
Sir,

1. I/We the undersigned having examined the Tender Documents and the Site of Works as above hereby submit this Tender amounting to the sum as indicated in Envelope-2.
2. I/We agree to keep the Tender open for acceptance for the period of 90 days from the due date of submission of the same and in default agree that the amount of Earnest Money deposited along with the Tender may be forfeited.
3. I/We undertake to complete and deliver the whole of the Works covered under this Tender within a period of 45 days from the Date of Commencement.
4. The Earnest Money as required in Invitation for Bid is being enclosed duly endorsed in favour of S N Bose National Centre for Basic Sciences, the full value of which may be retained by the Centre, in part payment of the Security Deposit as called for and in case this Tender is accepted.
5. I/We also undertake to enter into a Contract with the S N Bose National Centre for Basic Sciences, by executing an Agreement in the prescribed Contract Agreement Form with such additions and alterations there to which may be necessary to give effect to the acceptance of the Tender.
6. I/We hereby agree that until such Contract Agreement is executed, the said Tender Documents together with all correspondence, minutes of meeting, acceptance, etc. there of in writing by or on behalf of the S N Bose National Centre for Basic Sciences., shall be the Contract.
7. My/our Permanent Income Tax Account No. is _____.

Ours is a company with limited liability and a copy of our memorandum and articles of association will be sent for perusal upon acceptance of our order.

Dated.....day of20.....

Witness _____
Name _____
Address _____

Signature of Tenderer
Name _____
Designation _____
Address _____

Telephone No. _____
Fax No. _____

ANNEXURE – B

FORM OF AGREEMENT

This AGREEMENT made this..... day of20.. ,between S N Bose National Centre for Basic Sciences having its office at Salt Lake, Kolkata – 700098, hereinafter referred to as “THE CENTRE” which expression shall unless excluded by or repugnant to the context be deemed to include all its successors, legal representatives and assigns of the ONE PART and M/s. _____, a Company incorporated under Companies Act, 1956 having its registered office at _____ hereinafter referred to as “CONTRACTOR” which expression shall unless excluded by or repugnant to the context be deemed to include all its successors, legal representatives and assigns of the OTHER PART.

PREAMBLE

1. In order to execute electrical power supply work for execution of equipments for new Sub-Station at SNBNCBS, the Centre invited Tenders from reputed contractors for carrying out various activities of the work contained more fully in the said Tender vide NIT No. _____ dated _____20..... .

2. The offer submitted by the Contractor vide their letter No. _____ dated _____ for carrying out the aforesaid work was accepted by the Centre and a Letter of Award vide No. _____ dated _____ was issued by the Centre duly entrusting the said Contractor to carry out the said work under the terms and conditions contained in the Tender Documents.

3. In the aforesaid premises, Agreement by and between the parties herein, which would reflect the true intent, and scope of the agreement hereinafter is called the “Contract”.

NOW THEREFORE THIS DEED WITNESSES AS FOLLOWS:

Article 1.0: Award of Contract

1.1 The Centre has awarded the contract to Contractor for the entire scope of work as described in its Letter of Award No. _____ dated _____ and also on the terms and conditions contained therein and under these presents. The award has taken effect or shall take effect from The terms and expressions used in this agreement shall have the same meaning as are respectively assigned to them in the Tender/ contract documents referred to in the succeeding articles.

Article 2.0: Contract

2.1 The Contract shall be performed strictly in accordance with the terms and conditions stipulated herein and in the following documents attached herewith (hereinafter referred to as “Contract”)

2.2 The “Contract Documents” shall mean and include the documents described in the Schedule “A” hereto and also such other documents, minutes, correspondences, etc. forming mutual consent over issues relating to this Contract either inadvertently or otherwise not included in **Schedule “A”** hereto but forming integral part of this agreement.

2.3 The Letter of Award shall mean the Centre’s letter No. _____ dated _____ forming integral part of the Contract Documents and this agreement.

2.4 This agreement is subject to the terms and conditions and stipulations embodied in the relevant Tender enquiry, price-bid proposal and the Letter of Award (including any agreed alternations and/ or modification thereof and also other contract documents) and it shall supersede all such premises of the contract documents as are repugnant to each other or amount to unilateral acts, conditions or

stipulations inconsistent with the Tender enquiry or price-bid proposal (including any agreed variations and/ or modification thereof) made by either of the parties or have not been specifically agreed upon.

Article 3.0: Scope of Work

3.1 The Scope of Work under this agreement shall include and/ or cover the scope of work included and/ or embodied in Clause _____ of the Letter of Award No. _____ dated _____.

3.2 The Scope of Work shall also include all such work which are not specifically mentioned in the contract documents, but which are imperative to achieve completeness in all respects for its safe, reliable, efficient and trouble free working/ operation.

Article 4.0: Time Schedule

4.1 The total time frame for completion, commissioning and handing over of the Project shall be ____ months from the date of issue of LOA. The Contractor shall strictly maintain and/ or adhere to the Time Schedule annexed/ incorporated in the Letter of Award No. _____ dated _____.

Article 5.0: Contract Price

5.1 The Total Contract Price for the entire scope of work of this agreement as detailed in the Letter of Award No. _____ dated _____ is Rs. _____ (Rupees _____ in words).

5.2 The aforesaid price and the rates of work shall remain firm and fixed till completion/ commissioning of the project. No escalation in price or rates shall be allowed in any circumstances whatsoever.

Article 6.0: Settlement of Disputes, Arbitration

6.1 The provisions of the Arbitration and Conciliation Act, 1996 including any modification or amendment thereof for the time being in force shall apply, subject to Arbitration proceedings being held in Kolkata, India and in accordance with the terms of the contract.

Article 7.0: General Laws & Jurisdiction

7.1 The Contract shall be governed by the Indian Laws and Rules as amended from time to time and the principles of laws as applicable in this Contract.

7.2 Generally the Kolkata High Court shall have exclusive jurisdiction in all matters arising under this Contract.

Article 8.0: Notice of Default

8.1 Notice of Default given by either party to the other under this Contract shall be in writing and shall be deemed to have been duly and properly served upon the parties thereto if delivered at the addresses given hereinabove against acknowledgement or by registered mail with acknowledgement due.

SCHEDULE – A

CONTRACT DOCUMENTS

- a) The Contract Agreement.
- b) The Letter of Intent/ The Letter of Award
- c) The Tender Documents including Specification.

- d) Any other document forming part of the Contract which is stamped, signed and dated by the competent representatives of the Owner and the Contractors.

In witness whereof the parties have hereinto set their respective hands and Seals in day, month and year first above written.

SIGNED, SEALED AND DELIVERED

FOR _____

FOR S N BOSE NATIONAL CENTRE FOR
BASIC SCIENCES

Name

Name

Designation.....

Designation.....

Address.....

Address.....

Seal

Seal

IN PRESENCE OF

IN PRESENCE OF

Name

Name

Designation.....

Designation.....

Address.....

Address.....

Seal

Seal

PART – II

Tender Ref: SNB/ENGG/NIT/2014-15/03/08

Dated: 28.06.2014

**ELECTRICAL INSTALLATION WORK FOR ERECTION, TESTING AND COMMISSIONING OF 11KV/433V
SUB-STATION OF SNBNCBS, KOLKATA-98**

PRICE SCHEDULE

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
	Sub Head - I - Equipment Installation				
1.	Receiving, Erection, Installation, Testing, Commissioning & Transportation of materials at site as per Technical specification of Manufacturer details of materials and type of VCB panel is given below. Work has to be done as per direction of panel manufacturer & Engineer In charge.				
1.1.	4 panel HT switch Board (1 incomer & 3 outgoing feeder) as per detailed technical specification mentioned in the tender document.	Set	01		
1.2.	3 panel HT switch Board (1 incomer & 2 outgoing feeder) as per detailed technical specification mentioned in the tender document	Set	01		
2.	Receiving, Erection, Installation, Testing, Commissioning & Transportation of materials at site as per Technical specification of Manufacturer of 11 KV/433 V, 630 KVA ONAN type transformer with ON Load tap changer & RTCC, AVR all complete as per detailed technical specification.	Set	02		
3.	Receiving, Erection, Installation, Testing, Commissioning & Transportation at site MV LT—DB control panel for 2 Nos. 630 KVA transformer with proposed connection for 2 nos. 625 KVA D.G sets & 1 No. Bus Coupler with 42 Nos. outgoing feeders on either sides of the bus coupler as per SLD of approved drawing. Work has to be done as per direction of panel manufacturer & Engineer In charge.	Set	01		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
	Sub Head – II: Cabling				
1.	Supplying of unsheathed/earthed armoured, aluminium conductor XLPE power cable of 11 KV grade conforming to IS 7098 (Part II) amended up to date as per the following sizes: Make: Havell's/Polycab/Gloster				
1.1	3x300 sq.mm.	RM	100		
2.	Laying of 1 No. XLPE insulated power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size exceeding 120 sq. mm. but not exceeding 400 sq. mm. direct in ground i/c excavation, sand cushioning & protective covering and refilling the trench etc. as required.	RM	75		
3.	Laying of 1 No. XLPE insulated power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size exceeding 120 sq. mm. but not exceeding 400 sq. mm. in the existing masonry open duct as required.	RM	25		
4.	Laying of 1 No. PVC insulated and PVC sheathed/XLPE insulated power cable of grade 1.1 KV of size exceeding 185 sq. mm. but not exceeding 400 sq. mm. direct in ground i/c excavation, sand cushioning & protective covering and refilling the trench etc. as required.	RM	250		
5.	Laying of 1 No. additional PVC insulated and PVC sheathed/XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation i/c excavation, sand cushioning & protective covering and refilling the trench etc. as required.				
5.1	Above 185 sq. mm. and up to 400 sq. mm.	RM	250		
6.	Laying of 1 No. PVC insulated and PVC sheathed/XLPE power cable of 1.1 KV grade of following size direct in ground i/c excavation, sand cushioning & protective covering and refilling the trench etc. as required.				
6.1	up to 35 sq. mm.	RM	150		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
7.	Supplying and making end termination with brass compression gland and Al. lugs for following size of PVC insulated and PVC sheathed/XLPE Al. conductor cable of 1.1 KV grade as required:				
7.1	A) 3.5x300 sq. mm.	Set	20		
7.2	B) 3.5x240 sq. mm.	Set	06		
8.	Supplying and making indoor cable end termination with heat sinkable jointing kit complete with all accessories i/c lugs suitable for the following sizes of 3 core XLPE aluminium conductor cable of 11 KV grade as required.				
8.1	300 sq. mm.	Each	08		
9.	Supply of PILC/PVC insulated and PVC sheathed/XLPE power cable of 1.1 KV grade of approved cable conforming to IS 1554 (Part-I) of following sizes. Make: Havell's/Polycab/Gloster				
9.1	3.5x300 sq.mm. 1.1 KV grade XLPE Aluminum Armoured cable.	RM	350		
9.2	3.5x240 sq.mm. 1.1 KV grade XLPE Aluminum Armoured cable.	RM	150		
9.3	3.5x25 sq.mm. 1.1 KV grade XLPE Aluminum Armoured cable.	RM	150		
9.4	4x2.5 sq.mm. copper Armoured control cable.	RM	100		
9.5	2x6 sq.mm. copper Armoured control cable for D.C. supply.	RM	100		
	Sub Head – III: Earthing				
1.	Earthing with copper earth plate 600 mm X 600 mm X3 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.5 mtr. long etc. with char coal or coke and salt as required.	Set	24		
2.	Earthing with GI earth plate 600 mm X 600 mm X6 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr. long etc. with char coal or coke and salt as required.	Set	08		
3.	Supplying and laying 65 mm dia GI pipe medium class ISI marked in ground from earth electrode to building entry as required.	RM	50		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
4.	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connection etc. as required.	RM	120		
5.	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess for connection etc. as required.	RM	160		
6.	Riveting sweating & soldering of copper strip with another copper strip or any other metallic object as required.	Each	10		
	Sub Head - III: SAFETY EQUIPMENTS				
1.	Providing and fixing Danger Notice Plate made of mild steel at least 2 mm thick vitreous enameled white on both sides and with inscription in signal red colour on front side as required.				
1.1	A) High Voltage – size 250 mm X 200 mm	Each	4		
1.2	B) Medium Voltage – Size 200 mm X 150 mm	Each	4		
2.	Providing and fixing carbon dioxide (CO ₂) type fire extinguishers confirming to IS 2878: 1976 and cylinders fully charged of following capacity.				
2.1	A) 4.5 KG	Each	12		
3.	Supply and fixing of foam fire extinguishers, portable type 9 litre capacity hanged on wall with bracket complete as required.	Each	12		
4.	Supply and fixing safety instruction chart in wood duly framed with 5 mm thick glass as required (approx. front area 1.20 sq. mtr.)	Each	1		
5.	Providing of set of 4 Nos. 9.5 ltr. Capacity GI bucket painted in post office red colour with prior coat of red oxide paint and written with white paint 'FIRE' and mounted on a MS angle iron frame with bucket of approximate size and capacity i/c sand etc.	Each	10		
6.	Providing First aid box as approved by St. John Ambulance Brigade/Indian Red Cross society conforming to IS: 2217-1963.	Each	02		
7.	Supply and fixing Shock treatment chart duly mounted on a wooden frame with 5 mm thick glass as reqd. (approximate front area 1.20 sq. mtr.).	Each	02		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
8.	Providing of Rubber mat 1 mtr. wide and 12 mm thick to withstand 15 KV dielectric strength as per IS 5424 – 1969.	Each	10		
9.	Providing of Rubber mat 1 mtr. wide and 12 mm thick to withstand 3.3 KV dielectric strength as per IS 5424 – 1969.	Each	40		
10.	Supply & laying in position the following sizes of 'A' class MS pipes for cable sleeves in recess/on surface/ground complete with all accessories, pull boxes wherever required etc. including the chasing of wall/floor and plastering the chased portion, digging the earth work for trench and back filling, making good the damages, sealing of pipe entry etc. as required.				
A.	150 mm dia MS pipe	RM	25		
B.	100 mm dia MS pipe	RM	15		
11.	Supply and fixing of PVC Pipe Sleeves as required.				
A.	300 mm dia (300 mm long)	Nos.	10		
B.	200 mm dia (300 mm long)	Nos.	10		
13.	Fabrication, Painting & Fixing with supply of M.S. Channel, Angle and Flat for making Ladder type cable tray, cable support bracket, cable trench & other supporting structure for different H.T. equipment at site with Welding, Drilling etc. as per instruction of EIC.	KG	3000		
14.	Ladder type Cable Tray (For Power Cables): Supply and installation of following sizes of ladder type MS cable trays painted (stove enamelled) including clamps, connections, pieces and other required accessories. 600 mm wide, 75 mm high, 2.0 mm thick ladder type cable tray.	RM	25		
15.	Supply & Fixing G.I. perforated cable tray made from C.R.C sheet of following size.				
15.1.	150mm width x 50 mm depthX1.6mm thickness	Each	50		
15.2.	300mm width x 50 mm depthX1.6mm thickness	Each	50		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
16.	Supply, Installation, testing and commissioning of 1.0 KVA Deluxe Inverter along with lead acid batteries CSB/Exide make giving a back up as per specification along with powder coated cabinet for housing the Inverter and Batteries complete as required and as per specifications with 30 minute backup. Make: APC/Numeric	Nos.	01		
17.	Providing and laying in position the following size of Hume pipes in road crossing and paved area, including collars, joints filled with cement mortar 1:3:6 (1 cement: 3 coarse sand: 6 crushed stone aggregate 20 mm and down gauge) all round the pipes laid compact and finished smooth complete including sand cushioning at cable entry etc.				
17.1	A) 300 mm dia Hume pipe	RM	150		
18.	Supply & laying in position the following size of double wall corrugated pipe in road crossing. The pipes laid compact and finished smooth complete including sand cushioning at cable entry, etc.	RM	50		
18.1	A) 200 mm dia PVC Pipe (3 mm thick)				
19.	Control Cables: Supply, receiving, storing, laying, making proper connections, testing & commissioning of the following sizes of 1.1 KV grade PVC copper conductor armoured stranded control cable in the existing pipes, channels, trays etc. complete as required and as per specifications. Cables: 4 Core X2.5 Sq. mm. cable	RM	100		
20.	D.C. system Power Cables: 2X6 Sq. mm. cable	RM	100		
21.	Supply and making end terminal joints for the following sizes of 1.1 KV PVC insulated copper conductor cables, including providing tinned copper terminal lugs, double compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 Core X 2.5 Sq. mm. cable termination	Nos,	12		
22.	D.C. System Power Cable Terminations: 2X6 Sq. mm. cable terminations	Nos,	10		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
23.	Supplying & fixing of 5 meter M.S. Pole (4 meter above ground and 1 meter below ground) 75 mm dia suitable for fixing of marshalling box and luminary including 28 W CFL. Also provide a 16 SWG MS cable box of suitable size (at the bottom of the pole) with requires clamps and 10 amp. DP MCB along with 2 numbers of 32 mm dia GI pipes of suitable lengths from the ground in to the cable box 4 way bakelite connectors for looping the cables complete with water tight cover including providing cement concrete masonry work (of ratio 1:3:6) for erecting the pole, painting the pole with approved colour, numbering and earthing the pole with suitable earth wires complete as required.	Nos.	20		
24.	Supply and fixing K- Lite make Post Top Lantern (4 meter high above ground) with marshaling box and luminary.	Nos.	20		
25.	Supply and laying in position, effecting proper connections, testing and commissioning of the above fixture on top of the pole including providing and fixing of 2X4 sq. mm. copper conductor wires from the terminal box at the bottom of the pole to the fixture complete.	RM	60		
26.	Supply & laying in position the following sizes of 'A' class MS pipes for cable sleeves in recess/on surface/ground complete with all accessories, pull boxes wherever required etc. including the chasing of wall/floor and plastering the chased portion, digging the earth work for trench and black filling, making good the damages, sealing of pipe entry etc. as required.				
A.	150 mm dia MS pipe	RM	25		
B.	100 mm dia MS pipe	RM	15		
27.	Supply and fixing of PVC Pipe Sleeves as required.				
A.	300 mm dia (300 mm long)	Nos.	10		
B.	200 mm dia (300 mm long)	Nos.	10		

SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE Rs.	AMOUNT Rs.
28.	Supply, Erection, Installation, Testing, Commissioning & Transportation of automatic power factor capacitor panel of 210 KVAR (15 kVARx14Nos.) automatic operated power factor improvement capacitor Bank system in weather prove enclosure APFC panel. Make: LT/SCHENIDER/SIEMENS	Set	02		
29.	Supplying, installation, testing & commissioning of power pack with 220 Volt AC input & 24 Volt DC continuous output suitable for closing/tripping/indication of 02 Nos. HT panel boards with 02 Nos. 12 volt each maintenance free batteries of 200 AH each, charging unit, capacitor bank for emergency delivering for trip system complete with suitable capacity of Ammeter & Voltmeter i/c connections with 2.5 sq. mm. FRLS insulated copper conductor cable etc. as required.	Set	02		
30.	Supply and fixing of 6 mm thick MS chequered plate in the existing cable trench.	KG	1000		
	Total				

In words:

Signature of Tenderer

Date:

Name: _____

Place:

Address: _____

Company seal