

## TENDER DOCUMENT

**Name of work:** Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

**CLIENT:** DIRECTOR NIPGR,  
NEW DELHI

**COST OF TENDER DOCUMENT: Rs. 1,000.00**

L n

## TENDER DOCUMENTS

**Name of work:** Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

**Owner:** Director, NIPGR, JNU campus, New Delhi

**Tender Issued to:**

---

---

---

**Place for submission/  
Place opening of tender document:**

NIPGR Campus,  
Aruna Asaf Ali Marg,  
New Delhi-110067

Consultant Engineer  
NIPGR, New Delhi

<b>Last date for sale of tenders:</b>	<b>08.02.2018</b>	<b>up to 16:00 hrs.</b>
<b>Date/Time of submission:</b>	<b>09.02.2018</b>	<b>before 14:30 hrs.</b>
<b>Date/Time of opening:</b>	<b>09.02.2018</b>	<b>at 15:00 hrs.</b>

Consultant Engineer  
NIPGR, New Delhi





## TENDER FORM

To

**The Consultant Engineer  
NIPGR, New Delhi.**

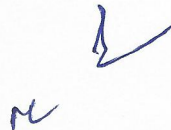
Dear Sir,

I/We have read and examined the following Tender Documents relating to the **“Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.”**

- Tender Form
- Notice Inviting Tender
- Terms & Conditions
- Scope of work
- General conditions
- Instruction to bidders
- General Information
- Memorandum
- General Conditions of contract agreement
- General site rules, procedures and precautions
- Annexure – I, II & III
- Schedule of quantity along with list of spares.
- General inventory

I/We hereby offer to execute the work complete in all respects specified in the under written Memorandum within the time specified therein or during the allowed extended time at the rates specified in the schedule of Quantities and in accordance, with the specifications, designs, drawings and instructions in writing referred to in the conditions of tender.

**(Seal & Signature of Contractor)**





# राष्ट्रीय पादप जीनोम अनुसंधान संस्थान

अरुणा आसफ अली मार्ग, एन.आई.पी.जी.आर. परिसर, नई दिल्ली – 110 067

फ़ोन: 26735161, 26735138, फ़ैक्स: 26741658

ईमेल: [engineering@nipgr.ac.in](mailto:engineering@nipgr.ac.in) वेबसाइट: [www.nipgr.ac.in](http://www.nipgr.ac.in)

F. No. NIPGR/Engg./6/6/2017-18

Dated: 18.01.2018

## NOTICE INVITING TENDER

Sealed item rate Tenders are invited in two bid system (Technical & Financial Bid) on behalf of the Director, NIPGR, Aruna Asaf Ali Marg, JNU Campus, New Delhi – 110067, from approved and eligible contractors of CPWD and those of appropriate class of contractors enlisted in the Department of Telecommunication, MES & Railways, Autonomous Bodies, State / Central Govt. Undertaking for specialized jobs in the category of Electric substation & DG Sets up to 02:30 P.M. on or before 09.02.2018 for the following work:

**Name of work:** Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

Sl. No.	Estimated Cost (In Rs.)	EMD (In Rs.)	Time for Completion	Last date & time for sale of Tender Documents	Date & time of Submission of tenders	Date & time of opening of tenders
1.	2.	3.	4.	5.	6.	7.
1.	65.80 Lakhs	1,32,000.00	12 months	08.02.2018 4:00 P.M.	09.02.2018 2:30 P.M.	09.02.2018 3:00 P.M.

Tender documents can be obtained up to 04:00 PM on all working days on payment of Rs. 1,000.00 (Rs. One thousand only) in cash (Non refundable) towards the cost of tender. Tender can be downloaded from our website [www.nipgr.ac.in](http://www.nipgr.ac.in) free of cost. Earnest money in form of Demand Draft of a Scheduled Bank issued in favour of the Director, NIPGR, New Delhi will be submitted.

The bids will be accepted in respect of those contractors having successfully completed three similar works each costing not less than Rs. 26.32 lakhs or two similar works each costing not less than Rs. 32.90 lakhs or single similar work of costing not less than Rs. 52.64 lakhs during the last 3 years ending Nov. 2017 and having annual financial turnover of Rs. 52.64 lakhs, during the last three years ending Mar, 2017. Similar works means "Running Maintenance and Operation of PLC based 11 KV Electric Sub-station comprises of 11KV VCB panel, transformers of capacity not less than 3x1500KVA and water cooled DG Sets not less than 1250KVA" in Govt. organizations, Govt. Autonomous organizations and PSUs.

The firms must be registered with ESI, EPF organization, GST authorities and must submit self-attested copies of registration.

Intending tenderers must enclose self-attested copies of Completion Certificates of having completed the work satisfactorily issued by an authority not below the rank of Executive Engineer or equivalent and PAN/TIN numbers along with originals for verification. All originals documents will be returned after verification. Tenders received without their details/documents will not be considered.





## GENERAL CONDITIONS

1. Sealed tenders on item rate basis are hereby invited from pre-qualified contractors for the work of **“Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.”**

The tender document consists of Tender form, Notice inviting tender, Terms & Conditions, Scope of Work, General Conditions, Instructions to bidders, General Information, Memorandum, General Conditions of contract Agreement, General site rules, procedures and precautions, Schedule of quantity and store issue rates, General Inventory, schedule of quantities etc. which can be had at a cost of Rs. 1,000.00 (Rs. One thousand only) from the office of Consultant Engineer, NIPGR, JNU CAMPUS,, New Delhi. Purchase of tender document is obligatory on the part of the tenderers & bid in no other form will be accepted.

2. The tender documents shall be placed in sealed cover as mentioned in Procedure of Submission of tender and addressed to the Consultant Engineer, NIPGR Campus, New Delhi. The tender shall be received by the Consultant Engineer, NIPGR Campus, New Delhi on or before 09.02.2018 up to 1430hrs and shall be opened on the same day at 1500hrs in the presence of tenderers or their authorized representatives who may like to be present. Any envelope received after the said date and time shall not be entertained under any circumstances and no consideration what so-ever shall be given to anything that might be contained in any such envelope.
3. The time allowed for the completion of work is 12 months as per order letter issued by the department. The institute has right to issue the order for the time period as required by the institute.
4. Every tender shall be accompanied by earnest money for Rs. 1,32,000.00 (Rs. One Lakh Thirty Two Thousand Only) in the form of demand draft drawn in favour of the Director, NIPGR payable at New Delhi. Any tenders not accompanied by such earnest money will be rejected straight away.
5. The contractor will submit his tender after examining the tender documents, scope of work, specifications, clauses, additional terms of contract agreement, special terms and conditions, bill of quantities etc.
6. The offer shall remain valid for 180 days from the date of opening of Tender. The value of tender can be increased or decreased and any item can be added, deleted, withdrawn or substituted without any notice as per the requirements of NIPGR without assigning any reason.
7. If a tenderer whose tender is accepted fails to undertake the work as per terms of the contract or as mentioned in the award letter, the earnest Money deposited will be forfeited.
8. NIPGR does not bind itself to accept the lowest or any tender and reserves the right to reject any or all tenders without assigning any reason.
9. NIPGR will not pay any expense, whatsoever incurred by tenderer for the preparation and submission of tenders.
10. This notice inviting tender, will form part of the contract agreement to be executed by the successful tenderer with the NIPGR
11. The successful tenderer shall have to sign the contract agreement within 15 days of the allotment of work.
12. All the correspondence on the tender shall be addressed to the Consultant Engineer.

Consultant Engineer

Seal and Signature of Contractor



## INSTRUCTIONS TO BIDDERS

### 1. GENERAL INSTRUCTIONS:

The works referred here-in shall cover the entire scope of the proposal which includes running maintenance & operation of PLC based Sub-station which the NIPGR desires to get carried out. The "Owner" where appearing in these documents shall mean Director, NIPGR,

### 2. PROCEDURE FOR SUBMISSION OF TENDERS:

The following procedure shall be adopted for submission and opening of tenders. The sealed envelope SUPERSCRIBED Tender for "Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018."

#### ENVELOPE NO. - 1

This envelope shall contain only the earnest money deposit & technical bid and will be opened first.

#### ENVELOPE NO. - 2

This sealed envelope shall contain only the financial bid of the contractor as per schedule of quantities. This envelope shall be opened only after the EMD contained in envelope No.1 and eligibility criterion are found in order as per the requirements of NIPGR. The date of opening of financial bid shall be intimated later on.

The sealed cover containing envelope 1 & 2 shall be opened on the prescribed date and time in the presence of tenderers or their authorized representatives who may wish to be present.

### 3. TENDERERS TO STUDY ENTIRE TENDER DOCUMENT CAREFULLY:

Submission of a tender by a tenderer implies that he has read all the stipulations contained in this tender document and has acquainted himself of the nature, scope and specifications of the works to be followed.

### 4. TENDERER TO SUBMIT THE ENTIRE TENDER DOCUMENT:

The tenderer shall submit all documents issued to him for the purpose of this tender after duly filled and signed the same in all respects. Tenders which are found to be vague or incomplete shall be rejected summarily.

### 5. INSTRUCTION FOR FILLING THE TENDER:

Tenders shall be forwarded under cover or a letter type written on the tenderer's letter-head and duly signed by the tenderer. Signatures must be in long hand, executed in ink by a duly authorized principal of the tendering firm. No oral, telegraphic or telephonic tenders or subsequent modifications there-to shall be entertained; If a tender is submitted on behalf of the partnership firm, then all the partners shall sign or may be signed by one in whose favour all the partners have given General Power Of Attorney. In case of tender submitted by a company, it shall be signed by one who has been authorized by the Board of Directors through a resolution. Copy of resolution and the authority letter in favour of the person signing must accompany the tender.

### 6. TENDERERS TO QUOTE FOR ALL ITEMS AND IN FIGURES & WORDS:

The tenderer shall quote his rates in words and figures with reference to each item and must enter for all the items shown in the attached Bill of quantities. Incomplete offer shall be liable for rejection. In case there is a discrepancy in "words" and "figures", the rate in words will be taken as correct for evaluation of tender. All quantities should be calculated as per percentage given by the contractor and total should be given of every sub head and grand total should also be given of all heads. The total amount shall be written both in figures and in words.





**7. VALIDITY PERIOD OF OFFERS:**

The rates quoted in the tender shall hold good for 180 days from the date of opening of the tender. The validity period shall be extendable with the mutual consent of both the parties. No tenderer can withdraw/or modify his tender or revoke the same within the said period of 180 days. If a tenderer on his own withdraws or revokes the tender or revises or alters or modifies the tender for any item or condition within a period of aforesaid 180 days his earnest money deposit shall stand forfeited.

**8. TENDERER TO SIGN ALL PAGES:**

The tenderer shall stamp and sign at the bottom right hand corner of every page of the tender documents in token of acceptance of tender conditions and for the purpose of identification.

**9. ERASURES AND ALTERATIONS:**

Tenders containing erasures and alterations of the tender documents are liable to be rejected unless these are authenticated by the person signing the Tender Documents.

**10. TENDERER TO SATISFY HIMSELF OF SITE CONDITIONS:**

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tender regarding nature of the site conditions, the means of access of the site, the accommodation they may require and in general obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender in any manner. A tenderer shall be deemed to have full knowledge of the site, whether he inspects it or not and no compensation or otherwise of any charges incurred or to be incurred consequent on any misunderstanding or otherwise shall be admissible.

**11. EARNEST MONEY:**

The tender shall be accompanied by earnest money of Rs. 1,32,000.00 (Rs. One Lakh Thirty Two Thousand Only) in the form of Demand Draft only drawn in favour of the Director, NIPGR payable at New Delhi. Earnest money of the unsuccessful bidder(s) shall be refunded / adjusted after expiry of the validity period of the tenders/allotment of works whichever is earlier.

**12. TENDER LIABLE TO REJECTION:**

Tenders which do not fulfill all or any of the conditions laid down in this notice, or contain conditions not covered and / or not contemplated by the Conditions of contract and/or expressly prohibited therein or stipulate additional/alternative conditions shall be liable to be rejected and his earnest money will be forfeited.

Tenders shall also be liable for rejection on any of the following grounds:-

- i) Tenders submitted late.
- ii) Tenders containing remarks uncalled for.
- iii) Conditional tenders.
- iv) Tenders not submitted on prescribed Performa.
- v) Telegraphic tenders.
- vi) Tender with NIL consideration.

**13. CORRESPONDENCE:**

Tenderers must mention their postal address and telephone number(s) of the Chief Executive/authorized agent or attorney in the tender. The tender submitted by the tenderer will be rejected if he or his agent cannot be contacted on the last known address or on the intimated telephone number(s) after reasonable search in which event earnest money may be forfeited by the NIPGR.

**14. NIPGR NOT TO ASSIGN ANY REASON FOR REJECTION OF TENDER:**

NIPGR hold absolute discretion to accept or reject the lowest or any other tender without assigning any reason. No claim on this account shall be entertained.

**15. AMENDMENT IN TENDER DOCUMENTS:**

NIPGR reserves the right to revise or amend the Bid Documents up to the date prior to the date notified for opening of the tenders and also the right to postpone the date of submission and opening of tenders without assigning any reason, whatsoever.



**16. REFERENCE IN TENDER DOCUMENTS:**

Director, NIPGR, shall be referred as "Owner" in all the documents of Tender documents/contract agreement.

**17. CONSULTANT ENGINEER**

Where ever the word "Consultant Engineer" occurs it shall mean the authorized Engineer appointed by the NIPGR for the superintendence of the execution of works.

**Consultant Engineer**

**Seal and Signature of Contractor**





## GENERAL INFORMATION

1	Accepting Authority	Director,  NIPGR, New Delhi.
2	Reference Book	i) CPWD specifications (Latest as on date of tender) ii) B.I.S. specifications (latest edition)
3	Earnest money	Rs. 1,32,000.00 (Rs. One Lakh Thirty Two Thousand Only) to be furnished with the tender in the form of the demand draft (No interest is payable on security deposit & E.M.D.).
4	Security deposit	<p>The security deposit will be collected by deductions from the running bills of the contractors at the rate mentioned below and the earnest money, if deposited at the time of tender, will be treated as part of security deposit. Performance Guarantee shall be an amount equal to 5% of the tendered and accepted value of work in one of the following forms:</p> <ol style="list-style-type: none"> <li>1. Deposit at Banker's cheque/D.D./Pay Order of scheduled bank.</li> <li>2. An irrevocable Bank Guarantee Bond of any scheduled bank or the State Bank of India in prescribed form given in the Annexure.</li> </ol> <p>A sum @ 5% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum along with the sum already deposited as earnest money, will amount to Security Deposit of 5% of the tendered value of the work. In addition, the contractor shall be required to deposit an amount equal to 5% of the tendered value of the contract as Performance Guarantee within the period prescribed in the letter of acceptance issued to him.</p>
5	Authority competent to grant extension of time	Director NIPGR or authorized person by Director, NIPGR
6	Tools & plants	To be arranged by contractor
7	Schedule of Minimum wages	As per notification issued by Govt. of National Territory Delhi.
8	Authority competent to reduce the compensation amount	Director, NIPGR
9	Release Security Deposit / Performance Guarantee	The Performance Guarantee shall be refunded to the contractor on completion of the work and recording of completion certificate and the Security Deposit be released after one month of completion of work.
10	<i>Periodicity of submission of interim Bills</i>	Monthly basis.
11	Authority Competent to  <i>Appoint Arbitrator</i>	Director, NIPGR

Seal and Signature of Contractor

Consultant Engineer



# MEMORANDUM

a)	Name of work		"Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018."
b)	Estimated cost		Rs. 65.80 lakhs.
c)	Earnest money		Rs. 1,32,000.00 (Rs. One Lakh Thirty Two Thousand Only) in the form of Demand Draft in favour of NIPGR payable at JNU CAMPUS,, New Delhi. (No interest is payable on earnest money).
d)	Time allowed for the completion of work		12 months

Place  
Date:

(Seal & Signature of Contractor)





## GENERAL CONDITIONS OF CONTRACT AGREEMENT

### SECURITY DEPOSIT

1. The person/persons whose tender may be accepted (herein after called the contractor) shall permit Consultant Engineer at the time of making any payment to him for works done under the contract to deduct such sum as will amount to 10 % of all moneys so payable to be held by the Consultant Engineer, by way of security deposit. Earnest money shall also be adjustable towards this security deposit. All compensation or other sums of money payable by the contractor to Consultant Engineer under terms of this contract may be deducted from his security deposit or from any account what so ever, and in the event of his security deposit being reduced by reason of any such deduction, the contractor shall within 10 days thereafter make good in cash any sum or sums which may have been deducted from his security deposit or any part thereof.

### COMPENSATION CLAUSE

2.1 The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor, and shall be reckoned from the 10th day of the date on which the order to commence the work is given to the contractor within ten days of award of work. The contractor shall prepare and submit a schedule for work execution in the form of a bar chart/CPM network and submit the same for approval of the Consultant Engineer, NIPGR. The work on the contract shall be executed according to the approved schedule as aforesaid and shall throughout the stipulated period of the contract be proceeded with all due diligence (time being deemed to be the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount equal to one percent or such smaller amount as Consultant Engineer, NIPGR may decide on the value of work as per contract, for every week that the work remains uncompleted or unfinished after the dates mutually agreed upon by the parties. Further to ensure good progress during the execution of the work, the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete one fourth of the whole of the work before one fourth of the whole time allowed under the contract has elapsed, one half of work before one half of such time has elapsed and three fourth of the work before three fourth of such time has elapsed. In the event of the contractor failing to comply with this condition he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as the Consultant Engineer, NIPGR, may decide of the value of balance work for everyday that the due quantity of work remains incomplete. Provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed ten percent of the awarded cost of work as shown in the tender. The Director, NIPGR, on a representation from the Contractor, is however, empowered to reduce the amount of compensation and his decision in writing shall be final.

2.2 In any case under which any clause or clause of this contract the contractor shall have rendered himself liable to pay compensation Consultant Engineer, NIPGR on behalf of the NIPGR, shall have power to adopt any of the following courses as he may deem best suited in the interest of the NIPGR.

- a) To rescind the contract (of which rescission notice in writing to the contractor under the hand of Consultant Engineer, NIPGR shall be conclusive evidence), and in which case the security deposit of the contractor shall stand forfeited, and be absolutely at the disposal of Consultant Engineer, NIPGR.
- b) To employ labour to be paid by Consultant Engineer, NIPGR and to supply materials to carry out the work or any part of the work debiting the contractor with the cost of the labour and the price of the materials (of the amount of which cost and price a certificate of Consultant Engineer, NIPGR shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respect in the manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of Consultant Engineer, NIPGR as to the value of the work done shall be final and conclusive against the contractor.
- c) To measure up the work of the contractor, and to take such part thereof as shall be unexecuted out of his hands and to give to another contractor to complete, in which case any expenses which may incurred in excess of the sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of Consultant Engineer, NIPGR shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by the Consultant Engineer, under this contract or otherwise from his security deposit or sale proceeds of the materials and tools and plants of the contractor lying at site.

✓ M



In the event of any of the above courses being adopted by the Consultant Engineer, NIPGR, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any material entered in to any agreement or made any advance on account thereof or with a view to the execution of the work of the performance of the contract. And in case the contract is rescinded under the aforesaid provisions, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until Consultant Engineer, NIPGR has certified in writing the performance of such work and the value payable in respect thereof, and the contractor shall only be entitled to be paid for the value so certified.

2.3 In any case in which any of the powers conferred upon the Consultant Engineer, NIPGR by clause 3 thereof shall have become exercisable and the same shall not be exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions thereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor for which by any clause or clauses thereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected.

In the event of Consultant Engineer, NIPGR putting force either of the powers (a) or (c) vested to him under the preceding clause he may, if he so desire, take possession of all or any tools, plants, materials and stores in or upon the works, or the site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work any part thereof, paying or allowing for the same in account at the contract rates, or in case of these not being applicable at current market rates to be certified by the Consultant Engineer, NIPGR whose certificate hereof shall be final, otherwise Consultant Engineer, NIPGR by notice in writing to the contractor or his authorized agent require him to remove such tools, plants, materials or stores from the premises within a time to be specified in such notice: and in the event of the contractor failing to comply with any such requisition, the Consultant Engineer, NIPGR or his authorized representative may remove them at the contractor's expenses to sell them by auction or private sale on account of the contractor and at his risk in all respects and the certificate of Consultant Engineer, NIPGR as to the expense or any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

2.4 All sums payable by way of the compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Consultant Engineer, NIPGR without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

#### **TIME EXTENSION**

3.1 If the contractor shall desire an extension of the time limit for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other ground he shall apply in writing to the Consultant Engineer, NIPGR within 30 days of the date of the hindrance on account of which he desires such extensions as aforesaid but before the expiry of time limit and the Consultant Engineer, if in his opinion (which shall be final) reasonable grounds as shown thereof, authorized such extension of time if any, as may, in his opinion be necessary or proper.

#### **COMPLETION OF WORK**

4.1 Without prejudice to the rights of Consultant Engineer under any clause hereinafter contained on completion of the work, the contractor shall be furnished with a certificate by the Consultant Engineer or his representative of such completion, but no such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work has been executed, all scaffolding, surplus materials and rubbish, and cleaning off the dirt from all doors, walls, floors, or any other parts of buildings said to have been completed, and the measurements in the said certificate shall be binding and conclusive against the contractor, if the contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding, surplus materials, and rubbish and cleaning off dirt on or before the date fixed for the completion of the work, Consultant Engineer, NIPGR may at the expense of the contractor have removed such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid and the contractor shall forth with pay the amount of all expenses so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any such sale proceeds actually realized by the sale thereof.

✓  
M



## ADDITIONS/ALTERATIONS

5.1 The Consultant Engineer, NIPGR shall have power to make any alterations or omissions or additions or substitutions in the equipments and instructions that may appear to him to be necessary or advisable during the progress of the work, and the contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing signed by the Consultant Engineer and such alterations, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to carry out in the manner above specified as part of the work shall be carried out by the contractor on same conditions in all respects on which he agreed to do the main work. The time for the completion of the work shall be extended in the proportion that the altered additional or substituted work has to the main work at the sole discretion of the Consultant Engineer, NIPGR and his decision in this regard shall be final and binding on the contractor. The rates for the additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order:

- i) If the rates for the additional, altered or substituted work are specified in the contract for the main work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the main work.
- ii) In case the rates for such items do not exist in the main contract but are available in the CPWD Schedule of rates, the same shall be derived on the basis of the percentage above/below the approved contract cost to the estimated cost for the work put to tender.
- iii) In the event, there is no similar class of work specified in clause(i) & (ii) above, the contractor shall work out a rate for each item on the basis of the prevalent market rates and submit the same together with the detailed analysis to the Consultant Engineer within a period of 7 days from the day that the order for the relevant items are issued by the Consultant Engineer, NIPGR. The market rates of material & labour shall be as finally determined by the Consultant Engineer. Contractor's profit shall be admissible @10% on the cost of material & labour. In case there is a difference between the rates quoted by the contractor and the rates found unacceptable by the Consultant Engineer, the later shall within a fortnight of submission, conduct necessary negotiations with the contractor to arrive at a mutually agreeable rate. The Consultant Engineer, reserves to himself the right to cancel his order to carry out such work and arrange to carry it out in such manner as he may deem fit. But under no circumstances the contractor shall suspend the work on the plea of non-settlement of rates for items falling under the clause.

## **ARBITRATION**

6A.1 Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions here in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever, in any arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the person selected from out of a panel of names to be supplied upon a request in writing by party invoking the arbitration by the Director, NIPGR, at the time of the dispute. It will be no objection to any such appointment that the arbitrator so appointed was associated with the work and that he had to deal with the matters to which the contract relates and that in the course of his duties in association with the Consultant Engineer, NIPGR, he had expressed views on all or any of the matters in dispute or difference. The arbitrator to whom the matter is originally referred being unable to act for any reason, the Director shall appoint another person to act as arbitrator in accordance with the terms of the contract. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is also a term of this contract that no person other than a person appointed by the Director as aforesaid shall act as arbitrator. In all cases where the amount of the claim in dispute is Rs.50000/- (Rs. Fifty thousand only) or above, the arbitrator shall give reasons for the award.

Subject as aforesaid the provisions of Arbitration and Cancellation Act 1996 or any statutory modifications or reenactment thereof and the rules framed thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of the contract that while invoking arbitration the party invoking arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.



It is also a term of the contract that if a party does not make any demand for arbitration in respect of any claim(s) in writing within 90 days of receiving the intimation from the Consultant Engineer that the bill is ready for payment, the claim if any, shall be deemed to have been waived and absolutely barred and the owner shall be discharged and released of all liabilities under the contract in respect of these claims.

The Arbitrator should be of the rank of retired / working Chief Engineer (CPWD) or (B & R) Delhi or equivalent post. The contractor will be entitled to file only those claims for arbitration which had already been raised before the Consultant Engineer and rejected by him time to time during the execution of work.

### **CARRYING OUT OF WORK**

6A.2 All the work shall be carried out in accordance with CPWD specifications prevalent as on date of tender & strictly as per the specifications given in the tender to the total satisfaction of the Architect. In the case of an item for which specification are not available in the said specifications relevant BIS specifications applicable as on the date of tenders shall be followed.

**Seal and Signature of Contractor**

**Consultant Engineer**





## **GENERAL SITE RULES, PROCEDURES AND PRECAUTIONS**

### **1. SITE WORKING RULES AND REGULATIONS**

a) The contractor shall furnish Consultant Engineer, NIPGR the Power of Attorney name and signature of his authorized representative who will be in-charge of the execution of the works at site. The contractor shall also furnish the list of technically qualified persons employed by him for execution of the works.

b) Save as otherwise specifically provided in this Agreement the rates and prices herein, unless otherwise stipulated elsewhere in this Agreement, include all the costs, expenses and outlays of the contractor for executing the works and fulfilling all the obligations of the Contractor under this agreement.

**Seal and Signature of Contractor**

**Consultant Engineer**



(Undertaking on a Non-Judicial Stamp Paper worth Rs. 100/- duly notarized)

I / We (bidder) hereby give an undertaking that:

- a) I/We have not been blacklisted during last three years by any Govt. Department/Govt. Autonomous Body/Institution, etc.;
- b) I/We do not have any dispute with any of the Govt. Departments/Govt. Autonomous Bodies/Institutions, etc.;
- c) I/We have never been certified as 'Unsatisfactory Performer' for the said services provided to the Govt. Departments/Govt. Autonomous Bodies/Institutions;
- d) I/We have not submitted any fake/forged certificates/documents and later, if any such 'Certificates/Documents' found to be fake/forged or contains willful wrong/incorrect information, suitable legal action may be initiated against me/us/agency besides 'forfeiture of Earnest Money Deposit' and 'Blacklisting' etc.
- e) I/We shall not withdraw my/our bid after opening of Technical Bid and if done so, the NIPGR shall be authorized to forfeit the EMD submitted by me/us.

Seal and Signature of the Authorized  
Person of the Agency

Name and designation of the  
Authorized Person of the Agency

Place:

Date:

✓

μ



**'CERTIFICATE FOR SITE INSPECTION'**  
**Pre-qualification criteria of NIT**

Certificate that we have visited the site on ..... and assessed the nature and amount of work involved before submitting our offer. We will be able to complete the works within the stipulated time and also that we will be able to execute the work suit to the site conditions.

**(Signature of Bidder with Seal)**

Name:

Address:

Date:

Consultant Engineer





**CHECK-LIST FOR PRE-QUALIFICATION BID FOR NAME OF WORK: NAME OF WORK:**  
**"Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018."**

Sl. No.	Documents asked for	Page number at which document is placed
1.	Tender Documents	
2.	Earnest Money & Tender Cost	
3.	Name of authorized person of the firm/agency, designation, address and office telephone numbers. If the bidder is a partnership firm/private or limited company, name designation, address and office telephone numbers of partners/ Directors also.	
4.	Undertaking on a Non-judicial Stamp Paper of ₹ 100/- (as per format prescribed in Annexure-I)	
5.	Self-attested copy of the PAN card, issued by the Income Tax Department.	
6.	Self attested copy of Service Tax Registration Number, TIN, EPF & ESI, GST Registration.	
7.	Proof of experiences / Completion Certificates of last three years ending 30 <sup>th</sup> Nov. 2017 as specified in the NIT along with satisfactory performance certificates and work order copy from the concerned employers.	
8.	Annual turnover of last three financial years ending 31 <sup>st</sup> Mar. 2017 duly certified by the Statutory Auditors.	
9.	Licence of Electrical Contractor issued by the Competent Authority.	
10.	Registration of Labour Licence certificate under Govt. of NCT, New Delhi.	
11.	Any other documents, if required.	

Signature of the Bidder  
 (Name and Address of the Bidder)  
 Telephone No.





**SCHDULE OF QUANTITIES**

ITEM NO.	DESCRIPTION OF ITEM	QTY.	UNIT	RATE	AMOUNT
Attached at next page :					

**List of spares required for day to day maintenance**

-

**Attached for quoting the  
Rates only valid during the  
currency of contract**

Should this tender be accepted, in whole or in part I/We hereby agree to abide by and fulfill all the terms & provisions of the conditions of tender as applicable or in default there of a sum of for Rs. 1,32,000.00 (Rs. One Lakh Thirty Two Thousand Only) deposited by me/us as earnest money in favour of NIPGR , New Delhi., shall stand absolutely forfeited to NIPGR.

I/We agree:

- (i) that should I/We fail to commence the work specified in the above mentioned Memorandum the NIPGR without prejudice to any other right or remedy shall be at liberty to forfeit the earnest money. Otherwise the said earnest money shall be retained and adjusted towards security deposit mentioned in the above Memorandum.
- (ii) To execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

The names and postal addresses and contact phone nos. Of our representative(s) authorized to deal with this tender are:

1)

2)

3)

Dated the \_\_\_\_\_ day of \_\_\_\_\_ 2018

**Signature of Tenderer**





## TERMS & CONDITIONS

**Name of work:** Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

1. The tenderers are advised to visit the site, i.e., the location of the equipments, panels, routes of cables, etc., before tendering. It shall be presumed that while quoting, the tenderer has taken due note of the working conditions. The agency needs to get certificate for site inspection verified by E.I.C. for confirmation of site visit.
2. All required tools such as Test lamps, Spanners, cutting pliers, screw drivers, crimping tools, Grease gun, drill machine, vacuum cleaner / blower, megger, millimeter etc., required for the proper maintenance of the installation shall be arranged by the contractor.
3. Separate set of working tools of good condition shall be provided to tradesmen all the times as under:

a) Plier	-	4 No.
b) Set of Screw Drivers	-	4 Set
c) Test Lamp	-	4 No.
d) Line Tester	-	11 No.
e) Tools Bag	-	3 No.
f) Multi meter	-	2 No.
g) Tong tester	-	1 No.
h) Megger	-	1 Nos.
i) Earth tester	-	1 No.
j) Crimping tool	-	1 No.
k) Telephone & Internet system tools	-	1 set box
l) Rubberized Gloves	-	1 Set
4. The contractor is responsible for watch & ward and the upkeep of the electrical installations in perfect working condition, carrying out routine check ups and to attend any breakdown immediately.
5. Proper record has to be maintained for all the complaints attended and the routine checks and cleaning of substation & all other equipments etc. shall be carried out.
6. Inventory for the electric installations like HT panels, transformers, LT panels and other small boards, feeder pillars, etc. is enclosed.
7. After taking over the site, the contractor will check all the installations and submit the report mentioning the defects during taking over the system within 15 days. After 15 days every defect noticed will be attended by the contractor and nothing extra will be paid.
8. Recording of all necessary operating parameters and tripping of relays of HT/LT VCB's/ ACB's and temperature of transformer, gensets etc. shall be maintained in log-book arranged by the agency at his own cost and produced before EIC regularly.
9. The Contractor shall inform the department well in advance about the requirement of any spares, consumable items necessary for satisfactory maintenance and up keep of the sub-station.
10. Any loss or damage to the inventory by way of theft sabotage or mal-operation of equipment and machinery/switch gears shall be made good by the contractor at his own cost.
11. Any addition or alteration in the inventory shall have no bearing and shall form no basis for revision of rates. Nothing extra in this regard shall be payable.
12. Contractor would be bound to execute such additional items, which can be termed as logical, essential and necessary (even though not listed in schedule of quantity) for the effective execution of the work in totality, rates for such items of work shall be rationally analyzed / derived and would be binding on the contractor.
13. The rates quoted shall be firm and hold good throughout the contract period. The same may be extended depending upon satisfactory performance and mutual consent.





13. The rates quoted shall be firm and hold good throughout the contract period. The same may be extended depending upon satisfactory performance and mutual consent.
14. Payment shall be made on monthly basis after submission of bill with all supporting documents and deduction of the Security Deposit, income tax, statutory deductions as per Government rules.
15. If a tenderer whose tender is accepted fails to undertake the work as per terms of the contract or as mentioned in the award letter, the earnest Money deposited will be forfeited.
16. The security deposit will be returned after one month of completion of the contract period or payment of last bill, whichever is earlier.
17. The agency shall have an office established in Delhi NCR region.
18. All routine cleaning materials such as brooms, duster, detergent, blowing equipment, old dhoti as well as fuses, indicating lamp, distilled water / electrolyte, lubricating grease, gland dori, etc. shall be arranged by the contractor to keep the premises clean, tidy & in presentable shape.
19. The contractor shall be responsible for any damage caused to any equipment, fitting of building of NIPGR due to the negligence of the staff. The same shall be made good by the contractor at his cost. In this case the decision of the Engineer-in-charge shall be final & binding to the contractor.
20. All the dismantled materials shall be taken into account and a separate register shall be maintained which shall be certified by E.I.C. or his authorized representative. The cost of the register shall be borne by the contractor and shall be handed over to the institute after completion of work.
21. All instruments as & when required for testing, checking, measuring, etc., shall be arranged by the contractor in addition to day to day maintenance items.
22. Work is to be carried out as per Indian Electricity Rules, CPWD specification and to the full satisfaction of Engineer-in-charge.
23. Preventive maintenance checks shall be carried out weekly/monthly/quarterly/half yearly/yearly and as per direction of EIC and record of having checked shall be maintained in history registers. All log books & registers shall be arranged by the agency at free of cost.
24. NIPGR reserves the right to terminate the contract any time without assigning any reasons thereof.
25. Electricity and water will be supplied free of cost by NIPGR. The material for servicing like pipe, motor, pump, ladder etc., shall be arranged by the contractor & nothing extra shall be paid.
26. The necessary details of the staff members shall be given in advance so as to know and allow the individual to attend complaint.
27. No labour below the age of 18 years shall be employed on work.
28. The agency should also quote their lowest rates for the spares (list enclosed) required for day to day maintenance and the same shall be arranged & supplied at their quoted rates. Nothing extra will be paid towards handling, transportation, fixing, etc. The approved rates of spares are valid for the whole period of contract. The replacement of approved switchgears, lamps and chokes etc. shall be arranged by contractor. The spares other than approved list of spares costing not more than Rs. 2000.00 shall also be arranged by contractor at justified amount as per prevailing market rates of the item. Nothing extra on account of handling & transportation etc. shall be paid. All spares as & when required shall be replaced **after getting approval of the E.I.C or his authorized representative**. The payment however shall be made on production of valid vouchers. The decision of E.I.C in this matter shall be final & binding on contractor.
29. The engaged staff shall be qualified and fully conversant with the operation and maintenance of Sub-station and DG sets. The contractor shall submit the proof of qualification, experience etc., of the staff deployed within 10 days after taking over the site as per detail given below.
  - a. Supervisor : Shall be 3 years Diploma holder in Electrical Engg. with 2 years' experience or ITI passed in electrical trade with 4 year relevant experience.
  - b. Electrician : Should possess ITI certificate in Electrical Trade with Two years' experience in similar Trade or wireman's

*h*

*h*



License – II issued by Electrical inspector with two year exp.

- c. Substation cum D.G. Set Operators : ITI certificate in Electrical / Mechanical trade Possessing minimum of 2 years' experience in R.M.O of 11 KV Substation and Gen Set capacity not less than 1250 KVA water cooled D.G. set.
- d. Instrument Mechanic : Should possess ITI certificate in Instrumentation/ electrical Trade with Two years' experience in similar Trade and telephone and internet systems works.
- e. Helper : 8<sup>th</sup> standard pass (minimum).

30. No staff shall leave his duty unless relieved by his reliever. Engineer-in-charge reserves the right to detain the staff for duty in the next shift if the reliever fails to turn up.
31. All the pages of the tender should be signed by the owner of the firm or his authorized signatory. In case the tenders are signed by the authorized signatory, a copy of the power of attorney / authorization may be enclosed along with tender.
32. A copy of the terms and conditions shall be signed on each page and submitted with the technical bid as a token of acceptance of terms and conditions.
33. To assist in the analysis, evaluation and computation of the bids, the Authority may ask bidders individually for clarification of their bids. The request for clarification and the response shall be in writing **but no change in the price or substance of the bid offered shall be permitted.**
34. After evaluation, the work shall be awarded normally to the Agency fulfilling all the conditions and who has quoted the lowest rate. In case two or more agencies are found to have quoted the same rates, then NIPGR shall decide about the agency to which the offer shall be granted based on the report on the past performance of the firm, and length of experience etc. The decision of the Competent Authority shall be final.
35. There should be no case pending with the police against the Proprietor / Firm / Partner or the Company (Agency).
36. The institute has the liberty to increase/decrease the staff by 50% or more (If required). The rates for payments/reduction shall be derived from the rates quoted by the agency in Financial Bid.
37. If any worker is found to be not suitable for the position, the contractor has to remove the person from the site immediately and substitute posted. The decision of Engineer-in-charge in this regard shall be final and binding on the contractor.
38. Attendance register of the staff shall be maintained and the same shall be submitted daily basis or as desired by the Engineer-in-charge.
39. The contractor shall be responsible for good behavior and character of the staff engaged by him.
40. Department shall in no way be involved in any dispute of whatever kind between the contractor and the staff engaged by him.
41. Any accident / electrocution caused due to negligence or during the course of normal work etc., shall be responsibility of the Contractor. The contractor shall be responsible for all compensation to the staff engaged by him.
42. Any damage to the building equipment caused during the execution of work, shall be the responsibility of the contractor to restore the same in its original position and nothing extra shall be paid on this account.
43. The Institute will not be responsible, if any accident occurs or whatsoever due to negligence of worker employed & no compensation shall be paid by the Institute.
44. NIPGR does not bind itself to accept the lowest or any tender and reserves the right to reject any or all tenders without assigning any reason.
45. The contractor shall provide sufficient safeguard to avoid any accident.

✓

✓



46. The firm will have to arrange furniture like Bench, stool, table and chairs for the staff at his own cost and nothing extra will be paid.
47. The quantity of spares may vary as per requirement and shall be paid as per rates quoted in SOQ.
48. In case of leave of any staff, a substitute has to be arranged by the contractor who has got the required qualification and adequate experience. The staff will attend the duty on all working days round the clock including holidays, Sundays.
49. If any agency quotes rates below minimum wages, his tender shall be rejected.
50. The wages of deployed staff shall be payable as per minimum wages fixed by Govt. of National Territory Delhi. The statutory increase in wages from time to time by Govt. of NCT shall be reimbursed on production of having paid the said increase.
51. The agency shall submit the analysis for the rates quoted in Financial Bid.
52. In case of non-availability of staff, recoveries as given below will be made.
- |                                    |                                |
|------------------------------------|--------------------------------|
| a) Substation / DG Operator        | : Rs. 1000/- per shift per day |
| b) Electrician/Instrument Mechanic | : Rs. 1000/- per shift per day |
| c) Helper                          | : Rs. 800/- per shift per day  |
| d) Any staff without uniform       | : Rs. 200/- per shift per day  |
| e) Supervisor                      | : Rs. 1000/- per shift         |
53. Any type of breakdown in any services shall be restored by deploying extra manpower without any extra charge to the Department.
54. If any complaint remains pending due to contractors negligence or any other reason for which contractors is held responsible recovery will be made as under.
- a) The complaint should be attended within 24 hours after getting the complaint. Major and urgent power supply complaints should be attended on the same day. If not attended, a penalty @Rs. 100 per day per complaint shall be levied. In case the contractor fails to attend complaint subsequently for two days, the Institute is at liberty to get the complaint rectified at its own and at the cost of the contractor.
- b) For any total power breakdown due to contractors negligence / poor maintenance, a penalty @ Rs. 50,000/- shall be levied and the decision of Institute shall be final and binding on contractor.
55. The earth resistance of all the pits has to be measured once in every six months i.e. in the month of May/June and November/ December, failing which a recovery of Rs. 5,000/- per pit shall be made. The results of earth resistance test shall be submitted duly signed by the contractor. The insulation value of cable will be checked as & when required by the Engineer-in-charge.
56. NIPGR will not pay any expense, whatsoever incurred by tenderer for the preparation and submission of tenders.
57. The successful tenderer shall have to sign the contract agreement within 15 days of the allocation of work.
58. The agency shall provide valid ID cards to the staff which must be produced during the time of inspection / check by the E.I.C.
59. The Contractor shall ensure compliance of all statutory Laws and bye laws of the Central Govt. / State Govt. / Municipal authorities related to the employment of their staff and all such obligation under wage act., workmen compensation act., ESI act., provident fund and Miscellaneous provision Act., Bonus Act. And contract Labour Act. 1970 etc. NIPGR will not be responsible for such purposes in any way.
- 60. Payment of bills:**
- a) Bills will be submitted by the Contractor every month & after satisfactory service and submission of pre-receipted bill along with documents in support of payment of wages to labour through RTGS / NEFT only. Proof of remittance of PF / ESI / GST to respective agencies are also required to be submitted with monthly bill.
- b) Wages: Wages shall have the same meaning as defined in payment of Wages Act. The contractor shall pay his workers not below the rates under Minimum wages act and to



- c) TDS on payments will be made as per rules in this regard.
61. Registration of Labour licence certificate of the firm should be under GOVT of NCT New Delhi and document of the same must be submitted along with the tender.
62. The Agency must have valid License of Electrical Contractors Issued from the Competent Authority and the same shall remain valid during the period of the contract.
63. The bidder should have the following Registrations and details of the same should be provided in the Technical Bid.
- i) Documents of previous experience in the field and list of organizations to which services are being provided at present.
  - ii) Permanent Account Number Card (PAN) and TIN number.
  - iii) PF Registration number
  - iv) ESI Registration number
  - v) Service Tax / GST Registration number
  - vi) An undertaking on a Non-Judicial Stamp Paper worth ₹ 100/- duly notarized (Annexure I), and duly filled in Annexure III in all respects, may also be furnished with the technical bid.
  - vii) Annual Financial Turnover.
  - viii) Electrical contractor licence issued by the Competent Authority.
  - ix) Registration of Labour Licence certificate under Govt. of NCT New Delhi.
64. The Contractor shall arrange uniform and shock proof shoes for all the workers at his own cost and nothing extra will be paid.
65. The department reserves the right to terminate the contract by giving one month notice in writing during the period of the contract without any financial repercussions on either side.
66. The Engineer deployed by the agency shall be responsible for the RMO of electrical installation at Institute.

SEAL AND SIGNATURE OF CONTRACTOR

CONSULTANT ENGINEER



## SCOPE OF WORK

**Name of work:** Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

**Scope of work:** The scope of the work covers the following:

1. Operation & maintenance of 5 Nos. HT panel (11 KV), 3 Nos. 1500 KVA transformers for item at SL. No. 1 (11 KV / 433 volts) HT cable, LT Panels, LT cables, joints, etc. installed at Main Substation.
2. Operation & maintenance of 3 Nos. HT panel (11 KV), 2 Nos. 750 KVA transformers for item at SL. No. 2 (11 KV / 433 volts) HT cable, LT Panels, LT cables, joints, etc. installed at PGF Substation.
3. Complete maintenance of internal EI and fans as well as External EI, consisting of various types of Electrical fitting, Fans, Plugs, Street light fittings, Earth pits etc. Various Distribution board, Switch boards, LT panels at substation and U.G. cabling etc., complete in respect of the subject works.
4. Cleaning and maintenance of following.
  - a) Cleaning and maintenance of all types of switches, electrical fixtures & fittings, distribution boards, feeder pillars, panels of the lab building, residences, AVR's etc. installed in NIPGR Campus.
  - b) All street light fittings including solar lights, gate light fittings with street light feeder pillar etc.
  - c) All distribution boards, switchboards and accessories.
  - d) Cleaning of L.T. / H.T. panels, feeder pillars, and control panels quarterly basis or as per direction of Engineer-in-charge.
  - e) All cabling works and earthings.
5. The staff attending complaints shall go with the complaint register and got signed from the reporting person for having attended the complaints to his satisfaction and inform E.I.C. on regular basis.
6. The following registers are to be maintained by the contractor. The registers are to be provided by the contractor for item at SL. No.1 & SL. No. 2 separately.
  - a) Attendance registers
  - b) Complaint registers
  - c) Material issue registers for day to day maintenance.
  - d) Dismantled material account register.
  - e) Insulation & earth test register
  - f) History book.
  - g) Log Book for Sub-station and generator set.

The following periodical checks are to be carried out:

- |    |                               |           |
|----|-------------------------------|-----------|
| a) | Attending to complaints       | : Daily   |
| b) | Cleaning of L.T. panels       | : Weekly  |
| c) | Inspection of DB's and SDB's  | : Weekly  |
| d) | Cleaning of External fittings | : Monthly |
7. The material required for replacement shall be supplied by the Department free of cost except the daily use material like insulation tape, gland dori, old dhoti, brushes, broom, detergent, soap, lubricating oil / grease, indicating lamps, distilled water for batteries, which shall be arranged by the Contractor and nothing extra shall be paid.
  8. In case the department is unable to supply the material in replacement of the defective item, the same shall be arranged by the contractor with the consent of Engineer-in-charge and the justified payment shall be made on producing the valid vouchers.
  9. All breakdowns are to be attended immediately with minimum down time. Contractor has to deploy more manpower if required, for attending complaints / breakdowns for which nothing extra will be paid.



10. All the material required for attending maintenance / breakdown shall be supplied by the department. However contractor shall arrange his own T & P including special T & P if required and cleaning materials etc.
11. In addition to the above any other duties assigned by the Engineer-in-charge shall be carried out by the contractor without any extra cost.

### **CHECKS TO BE CARRIED OUT**

#### **A. DAILY CHECKS**

1. Reading and recording of HT Voltage, LT Voltage, Load & Temperature of transformer etc as prescribed every hour.
2. Check for oil leakage from conservator, transformer & take remedial measures.
3. Check oil temperature of transformer for abnormal rise. Check load on transformer and reduce load in case of over-loading. Abnormal rise in temperature should be brought to the notice of Jr. Engineer-in-charge immediately.
4. Check colour of silica gel in the breather (the colour should remain blue).
5. Check HT/ LT – cable end boxes for over heating.
6. Cleaning the LT panels, transformer rooms, and HT & LT panel room and panel ventilators.
7. Check the buchholz relay for accumulation of gas. (It should be released immediately and check for overheating of transformers).
8. Check electrolyte in battery and top up with distilled water or electrolyte as required.
9. The battery circuits and the battery shall be checked. The battery charger shall also be cleaned and checked for proper functioning.
10. Check all ampere meters, voltmeters, selector switches etc for proper functioning.

#### **B. MONTHLY CHECK**

1. Check incoming and outgoing cable termination for overheating / sparking / pitting.
2. Check earth strip termination with the body of all HT & Lt switch gears.
3. Check neutral earth connection of transformers for tightness.
4. Check battery circuit, battery charger and electrolyte density etc change electrolyte / battery if necessary.

#### **DIESEL GENERATOR SETS**

1. The scope of operation of generating sets covers the following.
  - a) Operation of 2 no: 1250 KVA and 1 no.: 625 KVA generating sets. at SI. No. 1.
  - b) Operation of 1 no: 500 KVA and 1 no.: 320 KVA generating sets. at SI. No. 2.
  - c) General Cleaning of the generators sets AMF / PLC panel boards etc. complete as required
  - d) Cleaning of cooling towers and associated equipments.
2. The contractor has to maintain the generating sets, oil & water pumps, cooling tower fans etc. including electrical mechanical system in such a way so that the generating set is ready to give essential supply to connected load.
3. Required diesel and lubricating oil for DG will be supplied by the NIPGR free of cost to the contractor and requirement of HSD oil shall be informed at least 3 working days in advance.
4. The material required for cleaning, distilled water, petroleum jelly, grease, nut bolt, gland dori, fuses, indicating lamps, etc as required are to be arranged by the contractor without any extra cost.
5. The contractor has to maintain the log book of the generator sets. The number of hours runs during the month and the average consumption of the fuel oil etc shall be recorded in the log book.
6. The generating sets will be trial tested for 10 minutes every day for its readiness and the same will be recorded in the logbook.
7. The following periodic checks are to be carried out in addition to the checks recommended by the manufacturer.
 

a) Trial run of the D.G sets	: Weekly
b) General cleaning of Sets	: Daily
c) Checking of Fuel and Oil level	: Daily
d) Checking of coolant level in Radiator	: Daily
e) Checking of Battery connection and Distilled water and filling up	: Weekly
f) Maintenance & cleaning of cooling towers	: Weekly

✓

M



8. The above checks are only guidelines. The Contractor's staff shall check the alternator for accumulation of dust etc. and clean the same. Check the AMF panel connection for the functioning of the equipments, etc. all maintenance carried out shall be entered in the Log book

CONSULTANT ENGINEER

SEAL AND SIGNATURE OF CONTRACTOR



# SCHEDULE OF QUANTITY

No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1.	<p>Running, Maintenance &amp; Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA &amp; 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA &amp; 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX &amp; Internet system &amp; wiring, Internal Electric Installations of Labs, PGF, Administration, Residential &amp; Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.</p> <p>The contractor has to engage the following minimum man power:</p> <p>(Main Substation) Supervisor in General Shift -1 No.</p> <p>Substation cum DG set operator (3 shifts) - 1 No.</p> <p>Helper (3 shifts) - 1 No.</p> <p>(PGF Substation) Substation cum DG set operator (3 shifts) - 1 No.</p> <p>Helper (3 shifts) - 1 No.</p> <p>Electrician (3 shifts) - 1 No.</p> <p>Instrument Mechanic (Telephone/-Internet system etc.) cum Electrician (General Shift) - 1 No.</p> <p>Helper (General Shift) - 2 No.</p> <p style="text-align: right;"><b>Total - 19 Nos.</b></p>	12	Per Month		
			<b>TOTAL</b>		

NOT  
TO  
BE  
FILLED

Amount in Words

Consultant Engineer

Signature & Seal of contractor

✓

PC



2

## LIST OF SPARES ( if &amp; when required)

S No:	Item description	Preferred Make	Qty.	Rate	
	<b>LAMPS</b>				
1	CFL Lamp 8 Watt with choke	PHILIPS/Havells/Osram	1	Not To Be Filled	
2	CFL Lamp 11 Watt with choke	do-----	1		
3	CFL Lamp 20 Watt with choke	do-----	1		
4	CFL Lamp 9 Watt (2 pin)	do-----	1		
5	CFL Lamp 11 Watt (2 pin)	do-----	1		
6	CFL Lamp 11 Watt (4 pin)	do-----	1		
7	CFL Lamp 13 Watt (2 pin)	do-----	1		
8	CFL Lamp 36 Watt	do-----	1		
9	CFL Lamp 18 Watt (2 pin)	do-----	1		
10	Reflector lamp/Ring Mirror Spotline 60W	do-----	1		
11	Flourescent lamp for Mosquito Killer 18/20 Watt	do-----	1		
12	Flourescent lamp 20 Watt (2 ft)	do-----	1		
13	Flourescent lamp 36 Watt (4 ft)	do-----	1		
14	Flourescent lamp 36/40 Watt (4 ft), ELA-056	do-----	1		
15	Flourescent lamp 28 Watt (4 ft)	do-----	1		
16	Flourescent lamp for 4x14Watt (2'x2') light fitting	Wipro	1		
17	LED Tube Rod 18W, 2 pins at both end, 4ft. complete with inbuilt chock	Cortex Power/LSI/ Goldwyn/AV Energies/ ISI equivalent	1		
18	LED Light 18W, 4 pins complete with inbuilt chock	do-----	1		
19	LED Tube Rod 9W,T5, 2 pins at both end, 2ft. complete with inbuilt chock	do-----	1		
20	LED Tube Light 9W,T5, 2 pins at both end, 2ft. complete with inbuilt chock	do-----	1		
21	LED Blub 5W	Philips/Havells/ Crompton/Syska	1		
22	LED bulb 7W	do-----	1		
23	LED bulb 9W	do-----	1		
24	LED bulb 12W	do-----	1		
25	LED bulb 15W	do-----	1		
26	LED bulb 18W	do-----	1		
27	Lamp Holder	Anchor/MK/ISI	1		
28	500 Watt Halogen lamp	PHILIPS/Havells/Osram	1		
29	1000 Watt Halogen lamp	do-----	1		
30	70 Watt Sodium Vapour Lamp	do-----	1		
31	150 Watt Sodium Vapour Lamp	do-----	1		
32	400 Watt Metal Halide Lamp	do-----	1		
	<b>CHOKE</b>				
33	Choke for 9 Watt CFL fitting	PHILIPS/Havells/Wipro	1		
34	Choke for 11 Watt CFL fitting	do-----	1		
35	Choke for 13 Watt CFL fitting	do-----	1		
36	Choke for 18 Watt CFL fitting	do-----	1		
37	Choke for 20 Watt Flourescent fitting	do-----	1		
38	Electronic Choke for 36 Watt Flourescent fitting	do-----	1		
39	Choke for 36 Watt Flourescent fitting	do-----	1		
40	Pins connected Choke for 36/40 Watt Flourescent fitting for tissue culture	do-----	1		
41	Choke for 2x36 Watt Flourescent fitting	do-----	1		
42	Choke for 4x14 Watt Flourescent fitting	do-----	1		
43	Choke for 70 Watt sodium vapour fitting	do-----	1		
44	Choke for 150 Watt sodium vapour fitting	do-----	1		
45	Choke for 400 Watt mercury vapour fitting	do-----	1		
	<b>CIRCUIT BREAKERS</b>				
46	6/10/16/20/25/32 Amp SP MCB	Legrand/Havells/L&T/ ABB	1		
47	40 / 63 Amp SP MCB	do-----	1		
48	6/10/16/20/25/32 Amp DP MCB	do-----	1		
49	40 / 63 Amp DP MCB	do-----	1		
50	6/10/16/20/25/32 Amp TP MCB	do-----	1		
51	40 / 63 Amp TP MCB	do-----	1		
52	6/10/16/20/25/32 Amp FP MCB	do-----	1		



S No:	Item description	Preferred Make	Qty.	Rate
53	40 / 63 Amp FP MCB	do-----	1	Not To Be Filled
54	40 A DP ELCB	do-----	1	
	<b>MODULAR SWITCHES, SOCKETS, PVC PLATES, GI BOXES</b>			
55	5/6 Amp Switch	MK/CPL/Legrand/L&T	1	
56	15/16 Amp Switch	do-----	1	
57	5/6 Amp Socket	do-----	1	
58	15/16 Amp Socket	do-----	1	
59	Modular plate 1 or 2 module	do-----	1	
60	Modular plate 4 module	do-----	1	
61	Modular plate 6 module	do-----	1	
62	GI Box 1 or 2 module (75mmx75mm)	do-----	1	
63	GI Box 4 module (125mmx75mm)	do-----	1	
64	GI Box 6 module (200mmx75mm)	do-----	1	
65	Industrial metal clad socket with plug top complete	do-----	1	
66	Telephone Socket	do-----	1	
67	Cat-6 Data Socket	do-----	1	
68	T.V. Socket	do-----	1	
69	6 Amp Switch ( for wall points & raceway points)	do-----	1	
70	16 Amp Switch ( for wall points & raceway points)	do-----	1	
71	6 Amp Socket ( for wall points & raceway points)	do-----	1	
72	16 Amp Socket ( for wall points & raceway points)	do-----	1	
73	Modular plate 1 or 2 module ( for wall points & raceway points)	do-----	1	
74	Modular plate 4 module ( for wall points & raceway points)	do-----	1	
75	Modular plate 6 module ( for wall points & raceway points)	do-----	1	
76	Fan Regulator	do-----	1	
	<b>MISCELLANEOUS</b>			
77	Halogen lamp holder	ISI Mark	1	
78	Flourescent tube Starter	do-----	1	
79	Combined switch socket 6 pin 16 Amp	do-----	1	
80	6 Amp Plug Top	do-----	1	
81	16 Amp Plug Top	do-----	1	
82	Capacitor (upto 5 microF)	do-----	1	
83	Ignitor for 70W,150W,250W,400W lights	PHILIPS/Bajaj	1	
84	call bell/buzzer	ISI Mark	1	
85	3-phase Heating Element of 5 KW for solar water heating system	do-----	1	
86	Thermostate for solar water heater, 1' long, range 40*c to 80*c	do-----	1	
87	Exhaust fan (12") rewinding	do-----	1	
88	Exhaust fan (24") rewinding	do-----	1	
89	Ceiling fan rewinding (All types)	do-----	1	
90	Exhaust fan (12") blade	do-----	1	
91	Exhaust fan (24") blade	do-----	1	
92	Bush & Shaft for Exhaust fan (12") /wall fan	do-----	1	
93	Bearing for ceiling fan of all types	do-----	1	

Consultant Engineer

Seal and Sign of Contractor



# NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

## GENERAL INVENTORY OF ELECTRICAL INSTALLATIONS For MAIN BUILDING AT NIPGR, J.N.U CAMPUS

S No:	Item Description	Quantity	Make
1.	H.T.Panel	5	ABB
2.	H.T.Cable (3 core 240sqmm)	As per site	Fort Gloster
	11 /0.433 KV Transformer with OLTC -1500 KVA	3	VOLTAMP
3.	Main L.T.Panel with all associated accessories	2	L&T and Neptune
4.	L.T.Cables & Cable end joints		FORT GLOSTER
	3.5 core 300sqmm	As per site	----DO-----
	3.5 core 240sqmm	--DO--	----DO-----
	3.5 core 120sqmm	--DO--	----DO-----
	3.5 core 95 sqmm	--DO--	----DO-----
	3.5 core 70 sqmm	--DO--	----DO-----
	3.5 core 50 sqmm	--DO--	----DO-----
	3.5 core 35sqmm	--DO--	----DO-----
	4 core 25 sqmm	--DO--	----DO-----
	4 core 16 sqmm	--DO--	----DO-----
	4 core 10 sqmm	--DO--	----DO-----
	2 core 10 sqmm	--DO--	----DO-----
5.	L.T.Panels with all associated accessories		
	a) Lab GF	1	ADLEC
	b) Lab FF & SF	2	ADLEC
	c) Administration GF	1	ADLEC
	d) Administration FF	1	ADLEC
	e) C.I.F GF	1	ADLEC
	f) Lift Panel	1	ADLEC
	g) STP Panel	1	ADLEC
	h) ETP Panel	1	ADLEC
	i) Panel in the Fields	1	ADLEC
	j) Street Light Panel	1	ADLEC
	k) Essential Accommodation panel	2	TRICOLITE
	l) Transit Accommodation panel	1	TRICOLITE
	m) Type-III, IVS, V housing	1	NEPTUNE
	n) Borewell panel	1	
	o) New Lab Block	1	NEPTUNE
6.	Capacitor Panels	3	L&T & neptune
7.	AVR & AVR bypass Panel	4 sets	SERVO
8.	Service block DB's & DB for OLTC & RTCC	5 nos:	LEGRAND
9.	Battery bank & charger (S/S & DG)	6 no:	STATCON & Su-Kam
10.	Earthing Stations copper (S/S & DG)	As per site	
11.	Earthing Stations G.I (S/S & DG)	As per site	
12.	Panel in the Fields	1	
13.	Street Light panel & its accessories	1	
14.	1250 KVA D.G Set & accessories i/c bus duct	2 no:	CUMMINS
15.	625 KVA D.G Set & accessories i/c bus duct	1 no:	CUMMINS
16.	D.G Pump panel	2 no:	TRICOLITE & Neptune
17.	Water circulation pumps	6 nos:	KIRLOSKAR
18.	Fuel transfer pumps	4 nos:	KIRLOSKAR
20.	Fuel Tanks	6 nos:	
21.	Cooling towers with fans	3 nos:	BELL
22.	All street lights, solar water heaters, internal lights, ceiling, Pedestal, wall & Exhaust Fans Installed in the campus	As per actual site	
23.	Internal power point, light point, telephone point & internet point wiring		
24.	Distribution boards		
	a) Transit Accommodation	17	LEGRAND
	b) Essential staff Accommodation	10	----DO-----



	c) Directors residence	4	---DO---
	d) Lab Ground floor	15	---DO---
	e) Lab First floor	22	---DO---
	f) Lab Second floor	22	---DO---
	g) Administration Ground floor	4	---DO---
	h) Administration First floor	5	---DO---
	i) C.I.F Ground floor	5	---DO---
	j) C.I.F First floor	1	---DO---
	k) C.I.F Second floor	1	---DO---
	l) Machine room	1	---DO---
	m) Type-III, IVS, V housing	40	LEGRAND & Neptune
	n) New Lab Block	89	LEGRAND & Neptune
25	DNA Room Distribution board	1	
26	CIF First Floor Distribution board	1	
27	CIF Second Floor Distribution board	1	
28	Confocal room Distribution board	1	
29	Green House Panel	1	
30	Plant Growth Chamber	1	
31	Air-Washer for D.G	2	
32	Earthing Stations G.I for lab blocks, housing & others area	As per actual site	

HANDING OVER  
N.I.P.G.R

TAKEN OVER




# NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

## GENERAL INVENTORY OF ELECTRICAL INSTALLATIONS AT PLANT GROWTH FACILITY AT NIPGR, J.N.U CAMPUS

S No:	Item Description	Quantity	Make
1.	H.T.Panel	3	Crompton
2.	H.T.Cable (3 core 240sqmm)	30 mtr	
3.	11 /0.433 KV Transformer with OLTC -750 KVA	2	Crompton Greaves
4.	Main L.T.Panel with all associated accessories	1	NEPTUNE
5.	L.T. Panels with all associated accessories	As per actual site	
6.	Street Lights	8	Twinkle
7.	Capacitor Panels	2	NEPTUNE
8.	Battery bank (S/S & DG)	3 no:	
9.	Earthing Stations copper (S/S & DG)	8	
10.	Earthing Stations G.I (S/S & DG)	12	
11.	500 KVA D.G Set	1 no:	CUMMINS
12.	320 KVA D.G Set	1 no:	CUMMINS
13.	Fuel transfer pumps	2 nos:	KIRLOSKAR
14.	Fuel Tanks	2 nos:	
15.	All internal lights, ceiling fans & Exhaust Fans Installed in the facility.	As per actual site	
16.	Internal power point & light point wiring		
17.	Sub distribution L.T. board	3	Hagger
16.	Isolator	26	NEPTUNE
17.	Chemical Earthing	2	
18.	Earthing Stations G.I for Plant Growth Facility	As per actual site	

HANDING OVER  
N.I.P.G.R

TAKEN OVER

*(Handwritten signature)*



## **FINANCIAL BID**

Name of Work:- Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018.

CLIENT : DIRECTOR NIPGR  
NEW DELHI





**A.**

**Schedule of Quantity**

S.N.	Description Of Item	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
1	Running, Maintenance & Operation of PLC based 11KV Sub-station, transformers (3 x 1500 KVA), DG Sets (2 x 1250 KVA & 1 x 625 KVA ) equipments for main substation and transformers (2 X 750 KVA), DG Sets ( 1 X 500 KVA & 1 X 320 KVA ) equipments for PGF substation including Street Lights, solar lights, EPABX & Internet system & wiring, Internal Electric Installations of Labs, PGF, Administration, Residential & Non-residential buildings, Students hostel etc. at NIPGR Campus, New Delhi, during the year 2017-2018. The contractor has to engage the following minimum man power. (Main Substation) Supervisor in General Shift -1 No. Substation cum DG set operator (3 shifts) -1 No. Helper (3 shifts) -1 No. (PGF Substation) Substation cum DG set operator (3 shifts) -1 No. Helper (3 shifts) -1 No. Electrician (3 shifts) -1 No. Instrument Mechanic (Telephone/Internet system etc.) cum elctrician (General Shift) -1 No Helper (General shift) -2 No.	Per Month	12		
	<b>Total - 19 Nos.</b>	<b>Total Amount</b>			

**Amount in Words:**

**Consultant Engineer**

**Seal & Signature of Contractor**

✓

~



## LIST OF SPARES ( if &amp; when required)

S No:	Item description	Preferred Make	Qty.	Rate
<b>LAMPS</b>				
1	CFL Lamp 8 Watt with choke	PHILIPS/Havells/Osram	1	
2	CFL Lamp 11 Watt with choke	do-----	1	
3	CFL Lamp 20 Watt with choke	do-----	1	
4	CFL Lamp 9 Watt (2 pin)	do-----	1	
5	CFL Lamp 11 Watt (2 pin)	do-----	1	
6	CFL Lamp 11 Watt (4 pin)	do-----	1	
7	CFL Lamp 13 Watt (2 pin)	do-----	1	
8	CFL Lamp 36 Watt	do-----	1	
9	CFL Lamp 18 Watt (2 pin)	do-----	1	
10	Reflector lamp/Ring Mirror Spotline 60W	do-----	1	
11	Flourescent lamp for Mosquito Killer 18/20 Watt	do-----	1	
12	Flourescent lamp 20 Watt (2 ft)	do-----	1	
13	Flourescent lamp 36 Watt (4 ft)	do-----	1	
14	Flourescent lamp 36/40 Watt (4 ft), ELA-056	do-----	1	
15	Flourescent lamp 28 Watt (4 ft)	do-----	1	
16	Flourescent lamp for 4x14Watt (2'x2') light fitting	Wipro	1	
17	LED Tube Rod 18W, 2 pins at both end, 4ft. complete with inbuilt chock	Cortex Power/LSI/ Goldwyn/AV Energies/ ISI equivalent	1	
18	LED Light 18W, 4 pins complete with inbuilt chock	do-----	1	
19	LED Tube Rod 9W,T5, 2 pins at both end, 2ft. complete with inbuilt chock	do-----	1	
20	LED Tube Light 9W,T5, 2 pins at both end, 2ft. complete with inbuilt	do-----	1	
21	LED Blub 5W	Philips/Havells/ Crompton/Syska	1	
22	LED bulb 7W	do-----	1	
23	LED bulb 9W	do-----	1	
24	LED bulb 12W	do-----	1	
25	LED bulb 15W	do-----	1	
26	LED bulb 18W	do-----	1	
27	Lamp Holder	Anchor/MK/ISI	1	
28	500 Watt Halogen lamp	PHILIPS/Havells/Osram	1	
29	1000 Watt Halogen lamp	do-----	1	
30	70 Watt Sodium Vapour Lamp	do-----	1	
31	150 Watt Sodium Vapour Lamp	do-----	1	
32	400 Watt Metal Halide Lamp	do-----	1	
<b>CHOKE</b>				
33	Choke for 9 Watt CFL fitting	PHILIPS/Havells/Wipro	1	
34	Choke for 11 Watt CFL fitting	do-----	1	
35	Choke for 13 Watt CFL fitting	do-----	1	
36	Choke for 18 Watt CFL fitting	do-----	1	
37	Choke for 20 Watt Flourescent fitting	do-----	1	
38	Electronic Choke for 36 Watt Flourescent fitting	do-----	1	
39	Choke for 36 Watt Flourescent fitting	do-----	1	
40	Pins connected Choke for 36/40 Watt Flourescent fitting for tissue culture	do-----	1	
41	Choke for 2x36 Watt Flourescent fitting	do-----	1	
42	Choke for 4x14 Watt Flourescent fitting	do-----	1	
43	Choke for 70 Watt sodium vapour fitting	do-----	1	
44	Choke for 150 Watt sodium vapour fitting	do-----	1	
45	Choke for 400 Watt mercury vapour fitting	do-----	1	
<b>CIRCUIT BREAKERS</b>				
46	6/10/16/20/25/32 Amp SP MCB	Legrand/Havells/L&T/ ABB	1	
47	40 / 63 Amp SP MCB	do-----	1	
48	6/10/16/20/25/32 Amp DP MCB	do-----	1	
49	40 / 63 Amp DP MCB	do-----	1	
50	6/10/16/20/25/32 Amp TP MCB	do-----	1	
51	40 / 63 Amp TP MCB	do-----	1	



S No:	Item description	Preferred Make	Qty.	Rate
52	6/10/16/20/25/32 Amp FP MCB	do-----	1	
53	40 / 63 Amp FP MCB	do-----	1	
54	40 A DP ELCB	do-----	1	
	<b>MODULAR SWITCHES, SOCKETS, PVC PLATES, GI BOXES</b>			
55	5/6 Amp Switch	MK/CPL/Legrand/L&T	1	
56	15/16 Amp Switch	do-----	1	
57	5/6 Amp Socket	do-----	1	
58	15/16 Amp Socket	do-----	1	
59	Modular plate 1 or 2 module	do-----	1	
60	Modular plate 4 module	do-----	1	
61	Modular plate 6 module	do-----	1	
62	GI Box 1 or 2 module (75mmx75mm)	do-----	1	
63	GI Box 4 module (125mmx75mm)	do-----	1	
64	GI Box 6 module (200mmx75mm)	do-----	1	
65	Industrial metal clad socket with plug top complete	do-----	1	
66	Telephone Socket	do-----	1	
67	Cat-6 Data Socket	do-----	1	
68	T.V. Socket	do-----	1	
69	6 Amp Switch ( for wall points & raceway points)	do-----	1	
70	16 Amp Switch ( for wall points & raceway points)	do-----	1	
71	6 Amp Socket ( for wall points & raceway points)	do-----	1	
72	16 Amp Socket ( for wall points & raceway points)	do-----	1	
73	Modular plate 1 or 2 module ( for wall points & raceway points)	do-----	1	
74	Modular plate 4 module ( for wall points & raceway points)	do-----	1	
75	Modular plate 6 module ( for wall points & raceway points)	do-----	1	
76	Fan Regulator	do-----	1	
	<b>MISCELLANEOUS</b>			
77	Halogen lamp holder	ISI Mark	1	
78	Flourescent tube Starter	do-----	1	
79	Combined switch socket 6 pin 16 Amp	do-----	1	
80	6 Amp Plug Top	do-----	1	
81	16 Amp Plug Top	do-----	1	
82	Capacitor (upto 5 microF)	do-----	1	
83	Ignitor for 70W,150W,250W,400W lights	PHILIPS/Bajaj	1	
84	call bell/buzzer	ISI Mark	1	
85	3-phase Heating Element of 5 KW for solar water heating system	do-----	1	
86	Thermostate for solar water heater, 1' long, range 40*c to 80*c	do-----	1	
87	Exhaust fan (12") rewinding	do-----	1	
88	Exhaust fan (24") rewinding	do-----	1	
89	Ceiling fan rewinding (All types)	do-----	1	
90	Exhaust fan (12") blade	do-----	1	
91	Exhaust fan (24") blade	do-----	1	
92	Bush & Shaft for Exhaust fan (12") /wall fan	do-----	1	
93	Bearing for ceiling fan of all types	do-----	1	

Consultant Engineer



Seal and Sign of Contractor