#### **NATIONAL PHYTOTRON FACILITY**

# ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE NEW DELHI-110012

No.NPF/2018-19/W/DG Sets

Date:

# **TENDER DOCUMENT**

(TECHNICAL-BID)

2018\_DARE\_406956\_1

Name of work: Job contract for ARMO of DG Sets, 11 KV Substation including all electrical installations at National Phytotron Facility, IARI, New Delhi-12

1. Last date and time for submission Last date of receipt of e-Tenders is

6.12.2018 up to 1.00 p.m.

2. Date of opening (PQ Bid) 7.12.2018 at 03.00 PM

3. Validity of Tender 180 days

4. Please visit www.iari.res.in for details And www.eprocure.gov.in for online log.

5. Estimated Cost of Tender 20 Lakhs

#### Note:

If the date up to which the Tender is open for acceptance is declared to be a holiday the Tenders shall be deemed to remain open for acceptance till the next working day.

# National Phytotron Facility ICAR-Indian Agricultural Research Institute, New Delhi - 110012

#### **Tender Notice**

1. Online tenders are invited on behalf of the Director, IARI, from registered, experienced contractors for the job contract for ARMO of Three DG Sets, 11 KV Substation including all electrical installations at National Phytotron Facility. The detailed specifications of the equipment are given in <u>Annexure-I.</u>

#### 2. Preparation of tender:

The bidder should read the schedule and the annexure as well as terms and conditions before filling and submitting the Tender. Such tenders are liable to be ignored if complete information on specifications as required therein, is not filled in. Rates should be quoted in words also. Online Tender should be submitted in two parts: "Pre-Qualification Bid" and "Price Bid". Online Pre-Qualification Bid will contain the attested/signed scanned papers related to eligibility and other essential clauses described at Sr. No. 10 & 11 along with tender document (Technical Bid) by authorized person and the Online Price Bid envelope will contain only duly filled rates mentioned in Schedule of Work.

#### 3. Delivery of tenders:

All tenders should be addressed to the **AO**, **National Phytotron Facility**, Indian Agricultural Research Institute, New Delhi 110012 and should be submitted online only , therefore, any offline tender received will be considered ineligible . No responsibility, whatsoever, will be accepted with regard to non-receiving of online tender. The tenderers are, therefore, advised to ensure that e-tenders are submitted to the aforesaid site before the last date and hour specified for receipt of tenders.

#### 4. Earnest Money/Security Deposit:

Each tender shall be considered only after receipt of an earnest money of the amount Rs.50000- (Rupees fifty thousand only) without which no tender shall be valid. The scanned copy of EMD may be attached with the Pre-Qualification Bids document too. The earnest money should be furnished in the form of Bank Draft/Pay Order drawn in favour of Director, IARI New Delhi, payable at New Delhi. Earnest money deposited in any other form or request for treating any other dues to the tenderers from the Institute as earnest money will not be accepted. The earnest money will be refunded to all the unsuccessful tenderers however the successful tenderer will have to deposit security money of a sum equal to 10% of the quoted price / total contract value in the form of DD/PO as stated above, within 10 days of the award of the work order. The EMD will not carry any interest on it. However, in case of tender accepted for work order, the EMD will be refunded only after final execution of work. The refund of EMD not claimed within three years from the last date of the receipt of tender will stand forfeited.

5. GST or any other tax or any other charges applicable or made applicable after awarding the contract in respect of this contract shall be payable by contractor and IARI will not entertain any claim whatsoever in this respect. However, the GST or any other tax which is as per the rules of the Govt shall be deducted at source from monthly bills of the successful tenderer, as per rules / instructions made applicable from time to time by government. GST or any other taxes applicable may be quoted as per rules and norms of Govt of India. This may please be taken into consideration before quoting the tender.

- 6. In accordance with O.M. No 29(1)/2014-PPD dated 28.01.2014 of Department of Expenditure, Ministry of Finance, bids quoting 'Nil' consideration/service charges shall be treated as unresponsive and will not be considered. Service charge quoted should not be in percentage, it should be in the multiple of whole rupee.
- The bidder should be asked to fill in rates and prices for all items of the services described in the activity schedule. Items for which no rate or price is entered by the bidder will not be paid for by the procuring entity when executed and shall be deemed covered by the other rates and prices in the activity schedule. The priced activity schedule contains sections on remuneration for staff deployed, reimbursable expenses and miscellaneous expenses. All duties, taxes and other levies payable by the service provider under the contract, or for any other cause, as in the month prior to the month of the deadline for submission of bids, should be included in the total bid price submitted by the bidder. For the purpose of determining the remuneration due for additional services, a breakdown of the lump-sum price shall be provided by the bidder. Bidding documents should include a clause that "if a firm quotes NIL charge/consideration, the bid shall be treated as unresponsive and will not be considered"
- 8. The standard formats for technical proposals should include: Service provider's Bid Cover letter (including eligibility, following code of integrity in public procurement-CIPP Power of attorney; Qualification information with enclosures; Write up on bidder's organisation, confirmation of compliance with (or deviations from) Description of Services, Activity Schedule, Essential Equipment Schedule, Manpower/team, statutory obligation and facilities to be provided by the procuring entity, statutory and contractual requirements, respective obligations of procuring entity and service provider, Contract for, GCC and SCC; etc. And Enclosures: Cost of bid/bid processing fee/ bid security.
- 9. The standard formats for a financial proposal include: Financial bid format Summary price schedule include Part-A Rates for Electrician cum Operator & Helper required in 3 shifts round the clock including Saturdays/Sundays and all holidays and Part-B providing of petty parts, servicing & maintenance of GE make ACBs, HT Panel and dehydration/filtration of transformer oil of HT Transformers.

NOTE: The technical bids and financial bids must be both submitted online separately.

#### **10.** Eligibility Conditions(scanned copies to be attached):

- Scanned copies of proofs of work order and satisfactory completion certificate of the firm in the field of providing such services i.e. Substation, DG sets and Electrical Installations in central govt./semi-govt./autonomous bodies etc. during last three years i.e.
  - 1. Three similar completed services costing not less than the amount equal to 40% of the estimated cost.
  - 2.Two similar completed services costing not less than the amount equal to 60% of the estimated cost.
  - 3.0ne similar completed services costing not less than the amount equal to 80% of the estimated cost.
- The firm must be **registered in CPWD/Other Govt. Organizations** for the similar nature work like: **Substation, DG sets and Electrical Installations**
- The contractor must have valid **E.P.F. & E.S.I.** Registration number. The proof of latest payments made towards EPF and ESI contributions must be attached.
- They must have valid electrical contractor license issued from the **competent authority of Delhi Govt**.
- A list of **minimum 25 numbers** of employees of the firm registered with ESI & EPF.

- Audited financial statements for the last 3 years(scanned copies of the Profit & Loss statements along with balance sheet for the period). Minimum turnover of the firm should be Rs.30 Lakhs.
  - ➤ GST Registration certificate and PAN card .
- ➤ The firm/agency must enclose a scan copy certificate indicating that there is no criminal legal suit pending or contemplated against it or blacklisted by Central Govt./State Govt. or autonomous body on a stamp paper of Rs.100/- value.

#### 11. Other terms

Director, IARI, reserves the right to accept or reject any or all tenders, or part thereof without assigning any reason thereto. The working contractors may be given preference if the rates offered by them and other firms are found same. The firms who have been contracted /sub contracted by IARI earlier and their performance have been found unsatisfactory will not be considered.

The Work may be awarded after satisfaction of the IARI authorities that the firm has the necessary facility/infrastructure to handle the work. The successful firms will allow IARI authorities to inspect their facility/infrastructure, if required so.

If the said requirements in the tender form are not fulfilled, and attested photo copy of certificates as asked for issued by the concerned authorities/ departments, are not attached with the tender form, the tender will not be accepted.

Admin. Officer
National Phytotron Facility
IARI, New Delhi 110012

# National Phytotron Facility ICAR-Indian Agricultural Research Institute New Delhi 110012

Fro M/s	m: 5
Nat	ministrative Officer ional Phytotron facility I, New Delhi110012
Sub	Tender for the job contract of ARMO of Three DG Sets, 11 KV Substation including all electrical installations at National Phytotron Facility, IARI, New Delhi-12
Dea	ar Sir:
1.	I/we offer to provide services detailed in the schedule hereto or such portion thereof as you may specify in the acceptance of tender at the rates given in the said schedule and agree to hold this letter open till the specified date. I/we shall be bound by a communication of acceptance dispatched within the aforesaid date.
2	I/we have understood the instructions and conditions of contract pertaining to the above mentioned tender and have thoroughly examined the specification quoted in the schedule thereto and my/our offer is to provide services strictly in accordance with requirements.
3	A Demand Draft/Pay order bearing NoDatefor Rsfor Rsfavouring Director, IARI New Delhi is enclosed towards the EMD as required and copy of the GST registration, Income Tax PAN, TIN and satisfactory performance certificates and other documents as asked for are also enclosed.
4	A Demand Draft/Pay order bearing NoDatefor Rsfavouring Director, IARI New Delhi is enclosed towards the cost of tender document which has been downloaded from your web site.
	This is to certify that we are licensed firm to undertake such work in government departments. Copy of the certificate to this effect is also enclosed.
Sig	nature of witness: Yours faithfully
	I name: dress Signature of Tenderer

Authorised Signatory (with seal)

#### **TERMS & CONDITIONS (LEGAL)**

Bidders should furnish specific answers to all the questions given below. Please note that if the answers so furnished are not clear

	and /or are evasive, the tender will be liable to be ignored.
1.	Tender no Due for opening on
	Offer is open for acceptance till
2.	Whether the contract /job offered fully conforms to the technical particulars and specifications specified in the schedule to tender, if not mention here details of deviations
3.	What is your Permanent Income-tax a/c No?
4.	Name & full address of your Banker
5.	Business name and constitution of the firm
	Whether the firm is registered under:
	a)The Indian companies act 1956
	b) The Indian partnership act 1932 (please give full names of partners)
	c) Any act, if not, who are the owners (Please give full names and address)
6.	Whether the tenderer / firm is licensed to undertake the job tendered for & registered with Govt. organizations like CPWD / MES / DoT / Railways / ICAR (attach scanned copy)
7.	Specify the class/category of the registration and financial limits (attach scanned copy)
8.	State specifically, whether the price quoted by you is to the best of your knowledge and belief, not more than the price usually quoted by you for the same nature of work in any other organization, if not state the reasons thereof, if any, also indicate the margin of difference
9.	State whether business dealing with you ever have been banned by any Government Departments / ICAR / IARI on a stamp paper of Rs.100/- value:

#### 10. ARBITRATION:

- a) In the event of any question /dispute or difference arising under these conditions any special conditions of contract or in connection with this contract, the same shall be referred to the sole arbitration of an officer, appointed to be the arbitrator by the Director, IARI.
- b) In the event of the arbitrator neglecting or refusing to act or resigning or being unable to act for any reason, or his award being set a side by the court for any reason, shall be lawful for the Director, IARI, to appoint another arbitrator in place of the outgoing arbitrator.

- c) It is further a term of this contract that no person other than the person appointed by the Director, IARI, as aforesaid should act as arbitrator and that if for any reason that is not possible, the matter not be referred to arbitration at all.
- d) The arbitrator may from time to time with the consent of all the parties to the contract enlarge the time for making the award.
- e) Upon every and any such reference, the assessment of the costs incidental to the reference and award respectively shall be in the discretion of the arbitration.
- f) Subject as aforesaid, the arbitration Act-1980 and rules there-under and any statuary modification thereof for the time being in force shall be deemed to apply to the Arbitration proceedings under this clause.
- g) The venue of arbitration shall be the place from which the acceptance note is issued or such other place as the Director, IARI at his discretion may determine.
- 11. Please confirm that you have read all the instructions carefully and have complied with accordingly.

Signature of witness		Signature of Tenderer			
1.	Full name	1. Full name			
2.	Address of Witnesses (Block letters)	2. Address of the person signing			
		(In block letters)			
		Whether signing as proprietor / partner			
		/constituted attorney company			

#### **TERMS AND CONDITIONS (TECHNICAL)**

- The tenderers should get him acquainted with scope of work for the operation and routine maintenance work. They are advised to study the same carefully and inspect the site before tendering and they shall be deemed to have fully acquainted themselves with the same. They should note and bear in mind that the IARI shall bear no responsibility for lack of acquaintance of the site and other conditions or any information relating thereto on their part.
- 2. The contractor shall take all precautions to avoid all accident by exhibiting necessary caution boards. He shall be responsible for all damages and accidents caused due to negligence on his part. IARI shall not be responsible for any compensation which may be required to be paid to the workmen of the contractor consequent upon any injury /mishap etc. what-so-ever.
- 3. The contractor shall depute skilled and experienced preferably ITI qualified workforce along with Khallasi one in each shift daily round the year for the contract job. In addition to this at least one Electrician cum Wireman has to be deputed in general shift daily round the year.
- 4. The contractor shall be fully responsible for implementing required labour laws in respect of EPF, ESIC, and Bonus etc. in full and as made applicable and compensate IARI fully in all lapses as ordered. The contractor has to deposit the amount due in respect of the employees employed by them in contract. The institute authorities can verify this.
- 5. The contractor shall indemnify IARI against all loses and claims for injury or damages to any person or any property what so ever which may arise out of or in consequence of the operation and routine maintenance of the work and against all claims, demands, proceedings, damages, costs, charges and expenses what so ever in respect of or in relation thereto; provided always that nothing herein contained shall be deemed to render the contractor liable for or in respect of or to indemnify the IARI against any compensation or damage caused by the excepted risks. IARI shall not be responsible at all for any compensation what-so-ever.
- 6. The contractor shall deposit the amount @ 10% of the contract value as a Performance Guarantee which will be refunded after successful completion of the job and all the defects pointed out during contract execution are rectified to the entire satisfaction of the engineer-in-charge within one month time failing which performance guarantee may be forfeited.
- 7. IARI will deduct income tax / work tax at source from all payments to be made to the contractor in accordance with the provisions of Indian Income-tax Laws as applicable from time to time.
- 8. The payment shall be made on a monthly basis after verification of the work done and deductions, if any, by the Officer of NPF authorized for the purpose. Any bill submitted on conditional payment terms shall not be accepted by the NPF. The contractor shall submit the bills after the last day of the month.
- The contractor shall be responsible for any damage to the equipment, machinery or system on account of negligence/fault of the contractor's authorized staff and the same will have to be made good at his risk and cost.
- 10. All dismantled materials resulting from replacement shall be returned to the engineer-in-charge or the representative appointed by him.
- 11. The contractor shall be responsible to bring to immediate notice of the engineer-in-charge about any abnormal functioning or faulty operation of any equipment and take timely steps to avoid breakdown /disruption.
- 12. The tenderer should be the person / agency to execute the contract. No subcontracting shall be allowed under any circumstances.
- 13. The scope of work shall also include watch & ward of the job premises and the DG sets round the clock. Therefore, the contractor will be responsible to maintain the inventory of the machinery, fixtures,

- equipment & associated mobile & immobile parts of the generating sets authenticated by the Officer of NPF authorized for the purpose at no extra cost.
- 14. All the repairs and replacement of spare parts of the equipment (Motors, Alternator, Engine, ACBs etc) shall be got done through the manufacturers/certified authorized agency of the concerned equipment, which shall be duly recorded and brought to the notice of the IARI authorities. Prior approval form IARI authorities will be necessary before going to other agencies. All parts shall be replaced only with original make and model.
- 15. The Contractor shall be responsible for periodical maintenance of all the equipment including general servicing of the DG Set to avoid any breakdown of the services as and when required or as per directions of the Engineer-in-charge. A fitness certificate will have to be produced from the manufacturer or its authorized dealer for major equipments like DG set, etc at least once in a year.
- 16. The scope of work besides operation of DG Set includes general maintenance of Diesel Engine, Alternator, AMF Panels, Batteries, HT/LT Panels, Synchronization Panel, Changeover panel, Fire Alarm Panel, APFC panel including electrical installations (internal and external) as per annexed details (Annexure-I). The items for routine maintenance of electrical installations, which could not be specified in above details will be covered under this contract.
- 17. The DG sets will have to be run as and when desired by the Officer of NPF authorised for the purpose even without mains supply failure. The DG sets must always be kept on auto-ready to start in the event of mains failure within 2-3 minutes.
- 18. The Contractor shall be responsible to keep the DG sets in perfect working conditions for providing uninterrupted power supply during mains failure and accordingly, is liable to be inspected by NPF authorities time to time. All the petty parts costing upto Rs 5000/- for contingencies to be provided by the contracting firm required for routine maintenance on daily basis.
- 19. The contracted firm shall have to ensure good conduct, behavior and responsible attitude towards work of the staff engaged. In case of any member of the staff being found indulging in any unfair practice, he/she shall be immediately reported to the agency concerned or as deemed fit and the contractor notified. An alternate arrangement will have to be made without any loss of time since the work has to continue without any stoppage. In case the alternate arrangement for the operation as well as maintenance of the equipment is made by the NPF, a recovery of Rs. 1000 per day would be made from the contractor.
- 20. A recovery at the rate of Rs.5000/- per day will be made if the work is found unattended partially or completely and the equipment under contract are found under repair and not functioning due to negligence on the part of the contractor during any of the checks carried out by the Officer of IARI authorized for the purpose. The recovery amount will be limited to 10% of the contract value beyond which the contract shall stand terminated without any further notice and the termination benefits and security deposit will be forfeited.
- 21. The cleanliness of the generator room, DG sets, control panels, etc as well as other electrical installations, rubber flooring/matting, light fitting, exhaust fans, etc is the sole responsibility of the firm. All necessary materials required for such cleaning shall be arranged by the contractor as within the scope of work without extra cost.
- 22. The diesel oil as and when required for running the DG sets shall be arranged and supplied by NPF in 200 lt barrels at site stores, free of cost which will be filled in service tank by the contractor free of charge. It will be the responsibility of the contractor to keep the NPF office informed about the diesel & oil stock position at the end of the working day and to keep sufficient stock in his possession for running the set for at least 12 hours from the end of a normal day and 24 hours on weekends or holidays. The contractor shall bear any loss in the supplied fuel due to negligence or any other reason and shall replenish the quantity. Such a loss at any time will not be used as a reason for not operating the DG sets in the event of the mains power

failure. Any justified unforeseen cause for such a loss will be suitably negotiated /compensated after review by an Officer of NPF authorised for the purpose. The decision by the latter will be final and binding on the contractor.

- 23. The initiatives required for keeping the DG sets and other EIs in operation even under circumstances which are beyond the terms and conditions agreed upon, shall be the prime professional responsibility of the contractor the cost or item factors of which can be sorted out later with the NPF authorities. The contact numbers & addresses of the NPF authorities will be made available for 24 hour contact in the event of any major or minor break down of the systems. In case of any justifiable communication failure, with proper entries in the logbook, pending decision by the NPF authorities, the contractor shall take the responsibility of providing power supply by acting according to the situation. The Officer of NPF shall review any cost of material involved during office hours on the immediately following working day. The decision of the latter shall be final and binding on the contractor. Under all circumstances, the contractor shall take the professional responsibility of keeping the power supply up to the mark at the NPF.
- 24. (a). The schedule checks of generating sets is included in the scope of work. The same shall however be carried out in the presence of the Officer of NPF authorised for the purpose. The required quantity of flushing oil, and lubricating oil will be arranged by NPF free of cost at site stores. Any loss in the supplied oil due to any reason as decided by the Officer of NPF authorised for the purpose shall be replenished and provided by the contractor.
  - (b). It will be the bounden responsibility of the contractor to check the lubricating oil daily and for topping purposes, the lubricating oil for topping up shall be arranged and provided by the contractor.
- 25. The logbook for each DG set and substation shall be provided by the firm free of cost and also shall be maintained on daily basis, the specimen of which has to be approved by an Officer of NPF. The logbook shall clearly show relevant entries of running DG sets and readings of all panels, entries showing receipts of fuel, oil, lubricating oil and issues thereof, to the entire satisfaction of an Officer of NPF authorised for the purpose. Mains power failure duration and the DG operation duration (from to) shall be entered in the logbook. The old logbook shall have to be returned to NPF for records.
- 26. The DG sets shall be run for a period of about five to ten minutes daily for testing the sets and its panels. Entries of such testing shall have to be made in the logbook with the time of testing mentioned. The mains supply shall be uninterrupted power supply to the load during testing of the DG sets.
- 27. The following items shall be provided to the employed staff on duty by the contractor:
  - i) The identity cards to the staff working at site with their photographs mentioning the date of birth authorising the person to execute a specific work.
  - **ii)** The standard tools and equipment required to operate, repair, service, test and maintain the DG sets and all electrical installations duly approved by the Engineer concerned of the NPF will be provided by the contractor free of cost.
- 28. Any information on the maintenance aspects or malfunctioning or unnatural noise, etc., observed on the DG sets, control panels or other equipment shall be recorded by the staff on duty in a register and brought to the notice of the Officer of NPF authorised for the purpose.
- 29. Any loss or damage whether due to negligence or due to pilferage and theft to all or any of the equipment under the charge of the contractor shall be the firm's responsibility. The contractor free of cost will make these good. The decision of the Officer of NPF authorised for the purpose shall be final and binding.
- 30. The lead acid batteries providing power to the DG sets shall be checked once a fortnight towards specific gravity and capacity of the cells. The checks and the data relevant to the tests shall be recorded in the tests register. In case of failure of batteries, as per the terms of warranty, shall be got repaired from the supplier by the contractor bearing all the expenditure incurred. However, after the expiry of the warranty period the maintenance of the same shall be the responsibility of the contractor as recommended by the

manufacturers. Any malfunction detected in the control panel specifically due to negligent maintenance of the batteries will be got repaired by NPF and recovered from the contractor. Further, a value of any loss of experimental material due to ill-maintained battery caused power failure as decided and fixed by the Officer of NPF authorised for the purpose shall be payable by the contractor.

31. The following consumable items shall be provided by the contract-firm at their own cost as required for use at site and shall be stored in a sufficient quantity for emergency use:

Battery acid, distilled water, battery terminals & cables, grease, copper conductor PVC insulated wires, thimbles and ferrules, indicator lamps and holders, HRC Fuses, push buttons, CRC, petroleum jelly, cleaning detergents, and other materials like brooms, dusters, muslin cloth, insulation tape. In addition, other minor/hardware items like screws, nuts, bolts, washers, torch battery, hand lamps accessories, extension wire, incandescent lamp, registers, log books. In case of failure due to non-availability of the above said materials the contractor will be held responsible and necessary recovery will be effective at double the procurement rate. The decision of the Officer of NPF authorised for the purpose shall be final and binding on the contractor.

- 32. Only those major spare parts and accessories for routine job for day to day maintenance of D.G. Sets and other electrical installations (which are not included under scope of work) required for replacement shall be made available to the firm by the NPF for replacement free of charge and nothing extra shall be paid. All the dismantled materials shall be deposited with the NPF. Failure to do so will lead to the recovery made from the contractor at the procurement rate/prevailing market rate which ever is higher. In case the NPF is not able to provide any spares then the firm shall procure the same for the NPF at original price. The payment for such spares and materials so arranged shall be made by the NPF including transportation charges.
- 33. The contractor shall provide and maintain a first aid box with dressing cotton, sticking plaster roll, antiseptic cream, antiseptic lotion like Dettol or Savlon, painkiller tablets, strips, eye cleansing ointment or drops etc at NPF site.
- 34. After the expiry of the contract, the firm shall make to hand over the complete charge to the department in proper working order. All defects and deficiencies shall have to be rectified by the firm to the entire satisfaction of the engineer-in-charge. Failing which the work shall be got carried out at the risk and cost of the firm and the decision of the Officer of NPF authorised for the purpose shall be final and binding on the contractor.
- 35. The installations shall be handed over to the firm as-is-where-is basis and nothing extra shall be paid towards pre-maintenance if the equipment is in the working condition.
- 36. The NPF shall be at the liberty to discontinue the contract if the performance of the firm is found unsatisfactory/and not in accordance with above terms and conditions without assigning any reason thereof. No claim of any sort shall be entertained in this regard. In case the Contractor decides to terminate the contract prematurely for any reason, he/she would give a notice to the effect at least three months in advance.
- 37. Any other practical considerations or points, which come to light during initial operation, may also be mutually effected between NPF and the contracted firm and added to the list, which would be at the discretion of NPF.
- 38. The Contract may be extended upto one more year based on the satisfactory services rendered by the firm. The firm will have to give their consent in writing to continue the work on existing terms and conditions.

#### **SPECIAL TERMS & CONDITIONS**

- 1. The contractor shall ensure the payments of minimum wages to the workers employed by him as provided under law as may be applicable to the site and nature of work.
- 2. The contractor shall be responsible for deducting the contribution towards employees' provident fund to its employees and deposit the same along with its contribution to the concerned RPF Commissioner under the Employees Provident Funds and Pension Scheme, Misc. Act 1952 & ESIC as amended from time to time. The contractor shall have to produce the receipt as a proof before every payment.
- 3. The contractor shall provide prescribed uniform and identity cards to all the workers employed for the work.
- 4. The contractor shall comply with the provision of the Payment of Wages Act 1936, Minimum Wages Act 1948, Workman Compensation Act 1923, Industrial Dispute Act 1947, RPF Act 1970 or any modification thereof, any other law relating thereto and rules made under.

## Annexure-I

## **Specification of D.G. Sets, 11KV Substation & Electrical Installations**

Sr.	Item Description	Qty.
No. 1.	Diesel Generating Set (625 KVA) Cummins make complete with all accessories, exhaust piping, cables, AVM Pads, Bateries-4Nos (25 plates) along with stand, Fuel tank-1000L, Motor 3-ph. 440V AC (C&G make) along with 3-phase Starter and Earthling stations (4No) Engine Model No.: KT 2300-G Sr. No. 25218165 Alternator No.: KEC/625; 4AB 400/4 Sr. No. 9630502	1 Set
2.	Control Panel for 625 KVA DG Set complete with all accessories	1 Set
3.	Diesel Generating Set (320 KVA) Cummins make complete with all accessories, exhaust piping, cables, AVM pads, Bateries-2Nos (25 plates) along with stand, Fuel tank-1000 L and Earthling stations (2No).  Engine Model No.: KT 1150-G Sr. No. 25209699  Alternator Model No.: 4AB 315/D2 Sr. No.: 9520822-29	1 Set
4.	AMF Control Panel for 320 KVA DG Set complete with all accessories.	1 Set
5.	Diesel Generating Set (250 KVA) KOEL make complete with all accessories, exhaust piping, cables, AVM pads, Bateries-1No (25 plates) along with stand, Fuel tank-1000 L and Earthling stations (4No).  Engine Model No.: 6 SL 8800 TA Sr. No. F6 3810/0700275  Alternator No.: GS 3L 107 F 18367 Make:KG284L1	1 Set
6.	<b>11/0.433 KV Substation</b> : Kirloskar make 2-Transformers (2x1600 KVA), 3-panel H.T.VCB board complete with microprocessor based digital metering and protections including DC power pack 24 Volts and all accessories etc.	1 Set
7.	Changeover Switch: On-load type 2000A Havel's make complete with digital VAF meter and other accessories etc.	1 Set
8.	<b>Changeover Panel</b> : On-load changeover switch 400A Havel's make (2-No) complete with 400 A MCCB each including digital VAF meter and other accessories etc.	1 Set
9.	LT Panel with following accessories complete in all respect as required.	1 No.
	➤ 2000 A ACB (GE) 2 Nos.	
	➤ 1000 A ACB(GE) 1 Nos.	
	➤ 600 A MCCB (GE) 4 Nos.	
	➢ 800 A ACCB (GE) 1 No.	
	> 200 A MCCB (GE) 1 No.	
	➤ 100 A MCCB(GE) 1 No.	
	> 2000 A TPN Al. Bus Bar 1 No.	
	> Volt meter with selector switch 2 Set	
	> Ammeter with selector switch 2 Set.	
	> Indicator light. 2 Set.	
	CT's 2 Set.	
	> Realy CDG-31. 2 Set.	
10.	Synchronizing Panel with following accessories complete in all respect as required.	1 No.
	> 1000A ACB (GE) 2 Nos.	1
	➤ 1600 A ACB (GE) 1 No.	-
	Digital Voltmeter (Conzerv make) 2 Set.	
	Digital Ammeter (Conzerv make) 2 Set.	1
	<ul> <li>➢ Digital Frequency meter (Conzerv make)</li> <li>➢ Indicator lights</li> <li>Ź Set.</li> </ul>	
	➤ Indicator lights       2 Set.         ➤ Digital K.W. meter (Conzerv make)       2 Set.	
	Pugital K. vv. Hieter (Conzerv Hake) 2 Set.	
11.	APFC Panel (Capacitor Banks) with following accessories complete in all respect as required.	1 No.
	> 1000 A ACB (GE) 1 No.	1110.
	> 50 KVAR Capacitor Bank 8 Nos.	<del>                                     </del>
	> 25 KVAR Capacitor Bank 2 Nos.	
	> 15 KVAR Capacitor Bank 1Nos.	<u> </u>
	> 10 KVAR Capacitor Bank 1 Nos.	<u> </u>
	> 1000 A TP bus bar Al. 1 No.	
	41101	i

		_	
		Set.	
		Set.	
	5 6 5 7 (5 5 5 7)	Set.	
	, ,	2 Nos.	
	➤ TPN SFU 250 Amp.	2 Nos.	
2.	Sub-Panel (Main Building) with following accessories complete in all respect as required.		1 No.
	➢ 630 A SFU (GE)	No.	
	> 100 A FSU (GE) 3	Nos.	
		3 Nos.	
		Set.	
		Set.	
		Set.	
		Set	
		Set.	
3.	Sub-Panel (Growth Chamber I) with following accessories complete in all respect as required.		1 No.
э.		No.	I NO.
		_	
	(- /	No.	
		l Nos.	
	<u> </u>	Set.	
	<u> </u>	Set.	
		Set.	
4.	Sub-Panel (Growth Chamber II) with following accessories complete in all respect as required.		1 No.
	> 630 A MCCB. (GE)	1 No.	
	> 100 A MCCB. (GE)	L5 Nos.	
	Voltmeter with selector switch.	1 Set.	
	> Ampere meter with selector switch.	l Set.	
	·	l Set.	
5.	Sub-Panel (Green House) with following accessories complete in all respect as required.		1 No.
		L Nos.	
		L2 Nos.	
	, , , , , , , , , , , , , , , , , , ,	L Set.	
	Voluncial With Science Switch.		
	Amnara matar with salactor switch		
	·	L Set.	
6	> Indicator light.	L Set.	1 No.
.6.	<ul> <li>Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> </ul>	L Set. L Set.	1 No.
6.	> Indicator light.  Sub-Panel (Green House) with following accessories complete in all respect as required.  > 400 A MCCB (GE)	L Set. L Set. Nos.	1 No.
6.	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> </ul>	L Set. L Set. Nos. 7Nos.	1 No.
6.	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> </ul>	L Set. L Set. Nos. 7Nos. Set.	1 No.
6.	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> </ul>	Nos. 7Nos. Set. Set.	1 No.
6.	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> </ul>	L Set. L Set. Nos. 7Nos. Set.	1 No.
.6.	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> <li>➢ Indicator light.</li> </ul>	Nos. 7Nos. Set. Set.	1 No.
	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> </ul>	Nos. 7Nos. Set. Set. Set.	1 No.
	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> <li>➢ Indicator light.</li> <li>DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]</li> </ul>	Nos. 7Nos. Set. Set. Set.	
	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> <li>➢ Indicator light.</li> <li>DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]</li> <li>Incomer: 100 A TP MCB.</li> </ul>	Nos. 7Nos. Set. Set. Set.	
	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> <li>➢ Indicator light.</li> <li>DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]</li> <li>Incomer: 100 A TP MCB.</li> <li>Outgoing: 32 A TPN MCB.</li> </ul>	Nos. 7Nos. Set. Set. Set. Nos.	
	<ul> <li>➢ Indicator light.</li> <li>Sub-Panel (Green House) with following accessories complete in all respect as required.</li> <li>➢ 400 A MCCB (GE)</li> <li>➢ 100 A MCCB (GE)</li> <li>➢ Digital Voltmeter with selector s/w.</li> <li>➢ Digital Ampere meter with selector switch.</li> <li>➢ Indicator light.</li> <li>DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]</li> <li>Incomer: 100 A TP MCB.</li> <li>Outgoing: 32 A TPN MCB.</li> <li>4</li> <li>20 A SP MCB.</li> </ul>	Nos. 7Nos. Set. Set. Set. No. Nos.	
7.	➤ Indicator light. 1   Sub-Panel (Green House) with following accessories complete in all respect as required. 1   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]   Incomer: 100 A TP MCB.   Outgoing: 32 A TPN MCB.   20 A SP MCB. 1   06 A MCB. 6	Nos. Place of the state of the	
7.	➤ Indicator light. 1   Sub-Panel (Green House) with following accessories complete in all respect as required. 1   ➤ 400 A MCCB (GE) 0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]	Nos.  Nos.  Nos.  Set.  Set.  Set.  Set.  No.  Nos.  Nos.  Nos.  Nos.	1 No.
7.	➤ Indicator light.1Sub-Panel (Green House) with following accessories complete in all respect as required.➤ 400 A MCCB (GE)1➤ 100 A MCCB (GE)07➤ Digital Voltmeter with selector s/w.1➤ Digital Ampere meter with selector switch.1➤ Indicator light.1DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]Incomer:100 A TP MCB.1Outgoing:32 A TPN MCB.420 A SP MCB.1206 A MCB.6DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]Incomer:32 A TPN MCB.1	Nos. Nos. Set. Set. Set. Set. Set. Sot. No. Nos. Nos. I Nos. Nos.	1 No.
7.	➤ Indicator light. 1   Sub-Panel (Green House) with following accessories complete in all respect as required. 1   ➤ 400 A MCCB (GE) 0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1    DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]  Incomer: 100 A TP MCB.  100 A SP MCB.  20 A SP MCB.  110 Of A MCB.  DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]  Incomer: 32 A TPN MCB.  110 Outgoing: 10 A MCB.  110 Outgoing: 10 A MCB.  50 Outgoing: 10 A MCB.  51 Outgoing: 10 A MCB.  52 Outgoing: 10 A MCB.  53 Outgoing: 10 A MCB.  54 Outgoing: 10 A MCB.  55 Outgoing: 10 A MCB.  56 Outgoing: 10 A MCB.  57 Outgoing: 10 A MCB.  58 Outgoing: 10 A MCB.  59 Outgoing: 10 A MCB.  50 Outgoing: 10 A MCB.	Nos. Nos. Set. Set. Set. Set. Set. No. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	▶ Indicator light. 1   Sub-Panel (Green House) with following accessories complete in all respect as required. 1   ▶ 400 A MCCB (GE) 0   ▶ Digital Voltmeter with selector s/w. 1   ▶ Digital Ampere meter with selector switch. 1   ▶ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] 1   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] 1   Incomer: 32 A TPN MCB. 1   Outgoing: 10 A MCB. 5   20 A SP MCB. 5   20 A SP MCB. 5	Nos. Nos. Set. Set. Set. No. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light.1Sub-Panel (Green House) with following accessories complete in all respect as required.➤ 400 A MCCB (GE)1➤ 100 A MCCB (GE)07➤ Digital Voltmeter with selector s/w.1➤ Digital Ampere meter with selector switch.1➤ Indicator light.1DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]Incomer:100 A TP MCB.1Outgoing:32 A TPN MCB.420 A SP MCB.106 A MCB.6DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]Incomer:32 A TPN MCB.1Outgoing:10 A MCB.520 A SP MCB.520 A SP MCB.706 A. MCB.6	Nos. Nos. Set. Set. No. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3.   Sub-Panel (Green House) with following accessories complete in all respect as required. 1.   ➤ 400 A MCCB (GE) 0.   ➤ Digital Voltmeter with selector s/w. 1.   ➤ Digital Ampere meter with selector switch. 1.   ➤ Indicator light. 1.   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] 1.   Incomer: 100 A TP MCB. 1.   Outgoing: 32 A TPN MCB. 4.   20 A SP MCB. 1.   06 A MCB. 6.   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] 1.   Incomer: 32 A TPN MCB. 1.   Outgoing: 10 A MCB. 5.   20 A SP MCB. 7.   06 A. MCB. 6.   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3.0 Sub-Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 0.0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] 1   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] 1   Incomer: 32 A TPN MCB. 5   20 A SP MCB. 7   06 A. MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3. Sub-Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3.00 Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 0.00   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] 1   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] 1   Incomer: 32 A TPN MCB. 5   20 A SP MCB. 5   20 A SP MCB. 5   20 A SP MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1   Incomer: 32 A TPN MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1   Incomer: 32 A TPN MCB. 6   Outgoing: 20 A SP MCB. 6   Outgoing: 20 A SP MCB. 6   10 A SP MCB. 6	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3.000 Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 0.000 Panel (GE)   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] 1   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] 1   Incomer: 32 A TPN MCB. 1   Outgoing: 10 A MCB. 5   20 A SP MCB. 5   06 A. MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1   Incomer: 32 A TPN MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1   Incomer: 32 A TPN MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] 1   Incomer: 32 A TPN MCB. 6   Outgoing: 20 A SP MCB. 6   10 A SP MCB. 6   004 A MCB. 6	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
7.	➤ Indicator light. 3ub-Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1    DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]  Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]  Incomer: 32 A TPN MCB. 5   00tgoing: 10 A MCB. 5   20 A SP MCB. 5   00 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]  Incomer: 32 A TPN MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]  Incomer: 32 A TPN MCB. 6   Outgoing: 20 A SP MCB. 6   10 A SP MCB. 6   004 A MCB. 6   05 A MCB. 6   06 A MCB. 6   06 A MCB. 6   0B in Lab corridor with following accessories complete in all respect as required. [DB No.4]	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
8.	➤ Indicator light. 3ub-Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 0   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1    DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1]  Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 4   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2]  Incomer: 32 A TPN MCB. 5   00tgoing: 10 A MCB. 5   20 A SP MCB. 5   00 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]  Incomer: 32 A TPN MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3]  Incomer: 32 A TPN MCB. 6   Outgoing: 20 A SP MCB. 6   10 A SP MCB. 6   004 A MCB. 6   05 A MCB. 6   06 A MCB. 6   06 A MCB. 6   0B in Lab corridor with following accessories complete in all respect as required. [DB No.4]	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.
17.	➤ Indicator light. Sub-Panel (Green House) with following accessories complete in all respect as required.   ➤ 400 A MCCB (GE) 1   ➤ 100 A MCCB (GE) 07   ➤ Digital Voltmeter with selector s/w. 1   ➤ Digital Ampere meter with selector switch. 1   ➤ Indicator light. 1   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.1] Incomer: 100 A TP MCB.   Incomer: 100 A TP MCB. 1   Outgoing: 32 A TPN MCB. 1   20 A SP MCB. 1   06 A MCB. 6   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.2] Incomer: 32 A TPN MCB.   Outgoing: 10 A MCB. 5   20 A SP MCB. 7   06 A. MCB. 5   DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] Incomer: 32 A TPN MCB.   0B DB in Workshop corridor with following accessories complete in all respect as required. [DB No.3] Incomer: 32 A TPN MCB.   0Utgoing: 20 A SP MCB. 6   0D A SP MCB. 6   0D B in Lab corridor with following accessories complete in all respect as required. [DB No.4] Incomer: 100 A TPN MCB.	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	1 No.

21.	DB in Lab corridor with following accessories complete in all respect as required. [DB No.4A]	1 No.
	Incomer: 100 A TPN MCB. 1 No.	
	Outgoing: 10 A SP MCB. 4 No.	
	20 A SP MCB. 27 No.	
	16 A SP MCB. 2 No.	
	06 A SP MCB. 9 No.	
2.	DB in Soil Sterilization corridor with following accessories complete in all respect as required. [DB No. 5]	1 No.
	Incomer: 100 A TPN MCB. 1 No.	
	Outgoing: 32 A. TPN MCB. 4 No.	
	20 A. SP MCB. 12 No.	
	10 A SP MCB. 9 No.	
	06 A SP MCB. 9 No.	
3.	DB in Service corridor with following accessories complete in all respect as required. [DB No.6]	1 No.
	Incomer: 40 A TPN MCB. 1 No.	
	Outgoing: 32 A SP MCB. 6 No.	
	10 A SP MCB. 6 No.	
	06 A SP MCB. 6 No.	
4.	DB in Service corridor with following accessories complete in all respect as required. [DB No.6A]	1 No.
	Incomer: 40 A TPN MCB. 1 No.	
	Outgoing: 32 A SP MCB. 6 No.	
	10 A SP MCB. 6 No.	
	06 A SP MCB. 6 No.	
5.	DB in Utility Building (Lighting) with following accessories complete in all respect as required.	1 No.
	Incomer: 32 A TP MCB. 1 No.	2.10
	Outgoing: 20 A SP MCB. 8 No.	
	06 A SP. MCB. 4 No.	
5.	SPN DB in AHUs with following accessories complete as required.	
J	AHU-1	1 No.
	Incomer: 32 A DP MCB. 1 No.	I NO.
	Outgoing: 06 A. SP MCB.         1 No.           20 A SP MCB.         1 No.	
	20 A SP MCB. 1 No. 1 No.	4 No.
		1 No.
	Incomer: 32 A DP MCB. 1 No.	
	Outgoing: 06 A SP MCB. 5 No.	
	20 A SP MCB. 1 No.	
	AHU-3	1 No.
	Incomer: 32 A DP MCB. 1 No.	
	Outgoing: 06 A SP MCB. 1 No.	
	20 A SP MCB. 1 No.	
<b>7</b>	DB in Growth Chamber Hall with following accessories complete as required.	1 No.
	Incomer: 32 A TPN MCB. 1 No.	
	Outgoing: 20 A SP MCB. 7 No.	
	10 A SP MCB. 3 No.	
	06 A. SP MCB. 2 No.	
	06 A. SP MCB.         2 No.           Timer & Contractor         1 No.	
3.	06 A. SP MCB. 2 No.	10 No.
3.	06 A. SP MCB.         2 No.           Timer & Contractor         1 No.	10 No.
3.	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required. Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No.	10 No.
3.	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required. Incomer: 100 A TPN MCCB. 1 No.	10 No.
3.	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required. Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No.	10 No.
3.	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required. Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No.	10 No.
	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No.	10 No.
	06 A. SP MCB.2 No.Timer & Contractor1 No.DB combined Bus Bar in Green House with following accessories complete as required.Incomer:100 A TPN MCCB.Outgoing:6 No.Digital AVF Meter (conzerv make)01 No.Timer (GE) and contactor for 08 MHD lights01 No.Indicator Lights01 set	
).	06 A. SP MCB. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No. Indicator Lights 01 set  SPN Box with DP MCB in Green House Main Door with following accessories complete as required. 20 A DP. MCB. 1 No.	
).	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No. Indicator Lights 01 set  SPN Box with DP MCB in Green House Main Door with following accessories complete as required. 20 A DP. MCB. 1 No. DB in Tissue Culture Labs with following accessories complete as required.	10 No.
<b>)</b> .	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No. Indicator Lights 01 set  SPN Box with DP MCB in Green House Main Door with following accessories complete as required. 20 A DP. MCB. 1 No.  DB in Tissue Culture Labs with following accessories complete as required. Incomer: 100 A PN MCB. 1 No.	10 No.
9.	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No. Indicator Lights 01 set  SPN Box with DP MCB in Green House Main Door with following accessories complete as required. 20 A DP. MCB. 1 No.  DB in Tissue Culture Labs with following accessories complete as required. Incomer: 100 A PN MCB. 1 No. Outgoing: 32 A TPN MCB. 1 No.	10 No.
).	06 A. SP MCB. 2 No. Timer & Contractor 1 No.  DB combined Bus Bar in Green House with following accessories complete as required.  Incomer: 100 A TPN MCCB. 1 No. Outgoing: 63 A TPN MCB. 6 No. Digital AVF Meter (conzerv make) 01 No. Timer (GE) and contactor for 08 MHD lights 01 No. Indicator Lights 01 set  SPN Box with DP MCB in Green House Main Door with following accessories complete as required. 20 A DP. MCB. 1 No.  DB in Tissue Culture Labs with following accessories complete as required. Incomer: 100 A PN MCB. 1 No. Outgoing: 32 A TPN MCB. 1 No.	10 No.

	>	Smoke detectors.	54 Nos.	
	>	Manual call points.	5 Nos.	
	~	Response indicator.	32 Nos.	
	>	Hooter.	4 Nos.	
33.	*LIGHTI	NG FIXTURES.		
	~	Mirror optics fixtures TBS 285/236 complete with all accessories as required.	139 Nos.	
	>	Batten fitting 2x36 W TMC 21/136 complete with all accessories as required.	76 Nos.	
	>	Ceiling light complete with all accessories as required.	19 Nos.	
	>	Flood lighting MHD-250W complete with all accessories as required.	85 Nos.	
	~	12 Volt Halogen (Down light) complete with all accessories as required.	24 Nos.	
	~	3 Phase 32 Amp Metal clad box complete with accessories as required.	10 Nos.	
	~	Bulk headlight complete with all accessories as required.	18 Nos.	
	>	LED light fixture 34W complete with all accessories as required	18 Nos.	
34.	Battery	charger 24 Volt DC (Vinitec make)		1 No
35.	Pump S	et for filling Diesel 220 V AC (Tullu make)		1 No

Actual Qty can differ.

# National Phytotron Facility ICAR-Indian Agricultural Research Institute New Delhi 110012

(PRICE BID)

#### SCHEDULE OF WORK

No.NPF/2018-19/W/DG Sets

Name of work: Job contract for ARMO of Three DG Sets, 11 KV Substation including all electrical installations at National Phytotron Facility, IARI, New Delhi-12

Sr.	Item Description	Qty	*Rate (Rs.)	Amount (Rs.)
No.			(Per Month)	(Per Annum)
1.	PART-A			
	RMO of 11KV/433V, 1600KVA Substation (2No.), HT/LT panels,	One Job		
	APFC panel, fire control panel, all DBs / electrical fittings, security	for 12		
	lights, power points, Exhaust fans, and three DG sets (1x625KVa,	Months		
	1x320 KVA, 1x250 KVA) with AMF panels to feed standby power to			
	NPF building when NDPL supply fails or as & when required in 3			
	shifts round the clock daily including Saturdays / Sundays and all			
	holidays with following workforce:			
	a) Electrician cum Operator – one in each shift			
	b) Helper - one in each shift			
2.	PART-B			
	<b>a.</b> Providing of petty parts costing up to Rs.5, 000/- for maintaining			
	three DG sets, HT/LT Panels, APFC Panel and other electrical			
	installations i/c providing of services as per schedule of B-check for 3 DG Sets at site.	01 Job		
	<b>b.</b> Servicing and Maintenance of <b>8 No</b> . GE make ACBs ( <b>800A</b> -			
	<b>2000A</b> ) through authorized service centre i/c minor spares.	01 Job		
	c. Servicing and Maintenance of HT Panel (630 A, 3-panel VCBs)			_
	including calibration / testing of protection relays, CTs and PTs	01 Job		
	etc for both the substation (11KV/433 V, 1600 KVA) through			
	authorized service centre.			
	<b>d.</b> Dehydration / filtration of transformer oil of HT transformers			
	(2x1600 KVA) including replacement of Silica gel including testing	01 Job	IJ	
	of protection devices and top up of oil (01 drum) etc.			
	TOTAL AMOUNT	•		

Total Amount in Words .....

**Note:** Please go through the Terms & Conditions including Special Conditions of Tender for the requirement of the job contract related to man and material before quoting your rates.

Signature of the Tenderers (With seal)

## Annexure-III

# Details of the experience/work done.

Sl. No.	Name of the Dept. Organization & Name of contact Person with Ph. No.			No. of staff deployed	Remarks
		From	То		

(Authorized Signatory)

#### Annexure-IV

### **Check List**

# Bid will not be considered in absence of these documents:

SI No.	Documents	Yes	No.
1	Scanned copy of Earnest Money Deposit Rs. 50000/- or NSIC certificate for exemption		
2	Scanned copy of the firm registered in CPWD/Other Govt.		
	Organizations for the similar nature work like: Substation, DG sets and Electrical Installations.		
3	Scanned copy of valid electrical contractor license issued from the competent authority of Delhi Govt.		
4	Scanned copies of EPF and ESI Registration Certificate(s) issued by the appropriate authority.		
5	Scanned copy of at least 25 numbers of Staff registered under ESI & EPF.		
6	Scanned copy of terms & conditions duly agreed by firm which should be signed and stamped.		
7	Scanned copies of proofs of work order and satisfactory completion certificate during last three years of the firm in the field of providing services of ARMO of DG sets/substation in Central Govt. establishments/ autonomous bodies/corporations / reputed public or private organizations i.e.three or two or one similar work completion of 40% each or 60% each or 80% of the estimated cost respectively		
8	Scanned copies of Income Tax(PAN) and GST Registration Certificates.		
9	Scanned copy of Audited financial statements for the last three years(copies of Profit & Loss A/c with balance sheet) by the Chartered Accountant. Minimum turnover of the firm not less than Rs.30 Lakhs during the given period.		
10	The firm/agency must enclose a scan copy certificate indicating that there is no criminal legal suit pending or contemplated against it or blacklisted by Central Govt/ State Govt. Or autonomous body on a stamp paper of Rs.100/- value		