



## **BID DOCUMENT**

**OPEN (NON GLOBAL) e-TENDER FOR**

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING Three Nos. (03) HT 11KV, 1250 KVA, 3PHASE, 50Hz DIESEL GENERATOR SET (02 nos at ITI Ltd Rae Bareli and 01 No at ITI ltd Mankapur) (Including Power, Control and synchronizing Panels with Accessories)**

***TENDER NO-. ERW18C1350CL DATED- 28/04/2021***

***DUE DATE: 17/05/2021 up to 15:00Hrs***

***Last date for Bid Clarification by bidders: - up to 07/05/2021***

***Respond to Bid Clarification by ITI: - 11/05/2021***

***Technical Bid Open:- 18/05/2021 @ 15:15 Hrs***

***Chief Manager (PPM)-I***

**ITI LIMITED**

**(A Government of India Undertaking)**

**Sultanpur Road, RAE BARELI-229010 (U.P)**

**Visit us at [www.itilttd.in](http://www.itilttd.in)**

**ITI LIMITED**  
(A GOVT. OF INDIA UNDER TAKING)  
**SULTANPUR ROAD, RAE BARELI -229010 (UP) INDIA**  
Tel.: 0535-2287565, 2287387 FAX: 0535-2702106, 2702454.  
E-mail: [rrpandey\\_rbl@itilttd.co.in](mailto:rrpandey_rbl@itilttd.co.in), [purmpd\\_rbl@itilttd.co.in](mailto:purmpd_rbl@itilttd.co.in)

**TENDER NO. ERW18C1350CL**

(Please quote this in all correspondence)

**TENDER DATE: 28/04/2021**

**DUE DATE : 17/05/2021**

**ON BEHALF OF ITI LIMITED, RAEBARELI, E-TENDERS ARE INVITED FROM THE ELIGIBLE BIDDERS AS PER BID DOCUMENT'S SPECIAL NOTES, TERMS & CONDITIONS AT ANNEXURE- I&II AND ITEM DESCRIPTION, QTY & DELIVERY SCHEDULE AS GIVEN BELOW:**

SN	Item Description	Qty. Reqd.	Delivery Reqd.
1-	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 11KV, 1250KVA, 3 PHASE, 50Hz, 0.8 P.F, DIESEL GENERATOR SET AND CONTROL PANEL WITH ALL ACCESSORIES SELF-EXCITED, SELF REGULATED, BRUSHLESS TYPE, DRIP PROOF CONFORMING TO IS:4722 WITH LATEST AMENDMENTS AS PER TERM CONDITIONS/ SPECIFICATION MENTIONED IN BID DOCUMENT".	03 Nos.	<b>30<sup>th</sup> JUNE-2021</b>

**Special Note:**

**1- E-tendering Instructions to Bidders:**

Submission of Bids shall be only through e-tendering process on <https://itilttd.euniwizarde.com> which is mandatory for this Tender.

**2- Tender Bidding Methodology:**

**Online Bid System-**

Tender Type: Two bids i.e., Technical and Financial Bids shall be submitted by the bidder at the same time on the above mentioned tendering portal.

**Note:**

It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder on your computer before online submission. BOQ (Excel Format) may be downloaded and rates may be filled appropriately. Further you may refer to the "Instructions to Bidders for online participation" document for any portal related issues or contact: 011-49606060, 9355030617 and 9355030630.

**3-** As per Rule 170 of General Financial Rules (GFRs) 2017, Micro and Small Enterprises (MSEs) and the firms registered with concerned Ministries/ Departments are exempted from submission of Bid Security/EMD. Instead bidders have to submit duly signed "Bid Security Declaration" As per attached Format Annexure-III accepting that if they withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender documents.

EMD exempted bidder stands L1 then the respective bidder has to submit the Security Deposit upto the monetary limit for which the firm is registered (certified copy of the monetary limit needs to be enclosed along-with) to ITI before release of firm PO.

- 4- Please quote the basic rate exclusive of GST and other Taxes (i.e. mention basic rate, GST, freight, taxes separately). Also confirm that documents will be issued for claiming CENVAT.
- 5- Any product / item / Machine or equipment found faulty during our manufacturing process / system Testing / installation and commissioning / operation of our equipment in field due to deviation from our specifications shall be replaced by vendor free of cost immediately.
- 6- Bid shall remain valid for 120 days.
- 7- Last date of Clarification: - The last date of seeking any clarification regarding bid is 07/05/2021.
- 8- ***Opening of tenders will be as per E-Tendering process.***
- 9- *The quoted Price for Machines in INR only should be Inclusive of Installation & Commissioning charges as per our Scope of work, uploaded along with tender document.*
- 10- Time is the essence of this order. If the supplier's defined scope of work is not made by the end of delivery period, liquidated damage will be levied @ 0.5 % per week or part thereof subject to a maximum of 10% of value of undelivered stores.

## INDEX

S. No.	Description	Page no.
01.	General Terms and Conditions	05
02	Documents Comprising the Bid	10
03	Bid qualification criteria	14
04.	Technical Scope and Specification	16
05.	Diesel engine with all accessories. Brushless 11 kV alternator with all accessories.	17
06.	Generator monitoring, control, synchronizing & power panel	23
07.	Tests to be carried out.	29
08.	Other Terms and conditions	31
09.	Guaranteed Technical Particulars	33
10.	Technical Compliance statement	34
11.	Price Bid format	35
12.	List of approved makes	36

## **1. General Terms and Conditions**

### **Instruction to Bidders**

- 1.1.1. Bidder shall sign and stamp each of tender document as a token of his acceptance & submit along with his offer. Document shall be scanned and uploaded in e-procurement portal.
- 1.1.2. The proposal shall be completely filled in all respects and shall be submitted together with requisite information. Any offer incomplete in any particulars is liable for rejection.
- 1.1.3. Bidders shall set their quotations in firm figures and without qualifications or variations or additions in the terms of the tender documents. Proposal containing qualifying expressions such as "subject to minimum acceptance" or "subject to prior sale" or any other qualifying expressions or incorporating terms and conditions at variance with the terms and conditions incorporated in the Tender documents are liable to be rejected.
- 1.1.4. Price shall include all costs for complete execution of the entire scope of work envisaged in the document. Price quoted shall be firm and fixed.
- 1.1.5. Price shall be quoted in Indian National Rupee only.
- 1.1.6. Successful Bidder shall submit execution plan and work break down chart, detailing the methodology of execution within 15 days from the date of issue of purchase order.
- 1.1.7. The erection works at our site requires that, the party (successful bidder) shall adhere to good daily housekeeping practices. During erection, the party shall keep all work and storage areas used by them free from accumulation of waste materials. Scrap shall be removed from the site to the satisfaction of the purchaser.
- 1.1.8. Before starting the site work (at ITI Ltd Rae Bareli and ITI LTD Mankapur) the party should have insurance as per Employee compensation act to all his personnel working at site in ITI Ltd Rae Bareli and Mankapur against any accidents. Insurance premium for the same shall be borne by the party.
- 1.1.9. While performing the contractual work, the contractor must ensure compliance with all the existing statutory labour enactment/ regulations under Contract Labour (R & A) Act, 1970 & rules framed there under.
- 1.1.10. Till commissioning of equipment, the safe storing and handling of all equipment is in the scope of supplier.
- 1.1.11. The transfer of title to the Purchaser (ITI Ltd Rae Bareli and Mankapur) will take place only after satisfactory erection, testing and commissioning of the all the equipment by the supplier and full acceptance by the Purchaser (ITI Ltd Rae Bareli and Mankapur).
- 1.1.12. Quote shall be based on F.O.R (02 no at ITI Ltd Rae Bareli & 01 no at ITI Ltd Mankapur)

- 1.1.13. Taxes and duties applicable shall be indicated clearly in quotation.
- 1.1.14. Transportation & Transit Insurance are fully in the scope of supplier and the same shall be borne by the party.
- 1.1.15. **GST:** Supplier has to clearly indicate the percentage of GST applicable along with the offer. Documentary proof for the same shall be submitted along with invoice for final payment.
- 1.1.16. Necessary care shall be taken during erection and commissioning of equipment at our site. Any damage to the property of Department shall be adequately compensated by the Party. Also Loss of any materials at site will not be to the purchaser's account. Hence the party shall safely store the items at site till commissioning and handing over.

#### **Validity of Offer**

- 1.1.17. Bid shall remain valid for acceptance for a **period of four months (minimum)** from the due date of opening of the Bid.
- 1.1.18. The Bidder shall not be entitled during the said period to revoke or cancel his Bid or to vary the Bid except and to the extent required by Department in writing.
- 1.1.19. Bid shall be revalidated for extended period as required by ITI Ltd in writing. In such cases, unless otherwise specified, it is understood that validity is sought and provided without varying either the quoted price or any other terms and conditions of Bid finalized till that time.

#### **Cost of Bidding**

- 1.1.20. All direct and indirect costs associated with the preparation and submission of Bid (including clarification meetings and site visit, if any), shall be to Bidder's account and the ITI Ltd will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bid process.

#### **Arbitration**

- 1.1.21. In the event of any question, dispute of difference arising under these conditions or any conditions contained in the Purchase Order, (except as to any matters the decision of which is specially provided for by these conditions) the same shall be referred to the sole arbitration of the Unit head ITI Ltd Rae Bareli Office or some other person appointed by him, it will be no objection that the arbitrator is a Government Servant that he had to deal with matter to which the contract relates or that in the course of his duties as Government Servant he had expressed views on all or any of the matters in disputes or difference. The award of the arbitrator shall be final and binding on the parties of this contract.

- 1.1.22. If the arbitrator be the head of the purchase office.
- (a) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in office either to proceed with the reference himself, or to appoint another person as arbitrator, or.
  - (b) In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Purchase Office to appoint another person as arbitrator: or
- 1.1.23. If the arbitrator be a person appointed by the Head of the Purchase Office in the event of his dying, neglecting or refusing to act, or resigning or being unable to act, for any reason, it shall be lawful for the Head of the Purchase Office either to proceed with the reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator.
- 1.1.24. Subject as aforesaid, the Indian Arbitration and Conciliation Act, 1996 and the rules there under and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this Clause. The arbitrator shall have the power to the extent with the consent of the Purchaser and the Contractor the time making and publishing the award.
- 1.1.25. The venue of arbitration shall be place as the purchaser in his absolute discretion may determine. Work under the purchase order shall, if reasonably possible, continue during arbitration Proceedings.
- 1.1.26. In case order is concluded on the public Sector Undertakings, the following Arbitration Clause will be applicable.
- (a) In the event of any dispute or differences relating to the interpretation and application of the provisions of contracts, such dispute or difference shall be referred by either party to the Arbitration of one of the Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Bureau of Public Enterprises.
  - (b) The Indian Arbitration and Conciliation Act, 1996 shall not be applicable to the Arbitration under this clause.
  - (c) The award of the arbitrator shall be binding upon the parties to the dispute provided; however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such Additional Secretary when so authorized by the Law Secretary whose decision shall bind the parties finally and conclusively.
  - (d) The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

### **Applicable Law & Jurisdiction**

- 1.1.27. The contracts shall be interpreted in accordance with the laws of the Union of India. Any legal issue or dispute arising out of the contract are within the jurisdiction of Courts of Uttar Pradesh, India only.

### **Performance Bank Guarantee**

- 1.1.28. PBG at 03% of the value of the Purchase Order shall be submitted through bank guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty days beyond the date of completion of warranty period.

### **Liquidated Damage**

- 1.1.29. Time is the essence of this order. If the supplier's defined scope of work is not made by the end of delivery period, liquidated damage will be levied @ 0.5 % per week or part thereof subject to a maximum of 10% of value of undelivered stores.

### **Security Deposit**

- 1.1.30. Party shall submit security deposit, within 10 days of Order Acknowledgement, for 03% of the total order value. Security Deposit shall be obtained through Bank Guarantee or fixed deposit receipt from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty days beyond the date for completion of the Purchase Order.
- 1.1.31. In case the vendor fails to furnish the security deposit within the specified date or extended due date, the Purchase Order/Contract shall be cancelled and in addition, appropriate penal action will be taken.
- 1.1.32. Central PSUs/PSEs/Autonomous Bodies shall be exempted from the payment of Security Deposit, and instead, an Indemnity Bond shall be submitted by them in lieu of the Security Deposit.

### **Force Majeure**

- 1.1.33. Should a part or whole work covered under this agreement be delayed due to reasons of Force Majeure which shall include riots, civil commotion, fire accident, quarantines, epidemic, acts of God and Government, fright embargoes, the completion period for work, plant or equipment referred to in this agreement be extended by a period not in excess of the duration of such Force Majeure. The occurrence shall be notified by either party within reasonable time.



**Guarantee :-**

**1.1.34 Two years** for entire DG set and panels during which maintenance with supply of all consumables like lube oil, coolant, filter etc., as recommended by OEM manual shall be carried out **free of cost.** and **5 years** ( inclusive of the two years ) on critical components of the engine viz., Cylinder Head, Camshaft, Crank shaft, Cylinder block and connecting rod.

**Payment Terms**

**1.1.35 Our preferred payment terms** are as follows:-

- a) 70% of supply part within 30 days on receipt of items at our site with all taxes and transportation costs
- b) Final outstanding or 30 % of supply part as applicable within 30 days after successful, Testing and commissioning and subject to furnishing PBG for covering the warranty period.

**c) Installation and commissioning parts**

Within 30 days after successful, testing and commissioning at our site.

**Delivery**

**1.1.36:-**Delivery schedule is essence for this contract. Party shall adhere to the delivery date mentioned in this tender and same shall be confirmed along with the offer. In case Party is unable to meet the delivery schedule, the offer is liable for rejection.

1.1.37 Delivery schedule shall be as given below: -

**Delivery Schedule**

S NO	Description	Preferred time by Department	Compliance or Revised time as required by supplier
01	Submission of all drawings	Within two weeks from the date of release of PO	
02	Approval of Drawings by Department	Within two weeks from the above task	
03	Manufacturing / Integration	Within 14 weeks from the above task	
04	Intimation of readiness for inspection	<b>Minimum 15 days in advance by supplier</b>	

05	Inspection at works by Department	Within two weeks on receipt of inspection call	
06	Delivery to site	Within two weeks after clearance from inspection team	
07	Site Readiness intimation by ITI Ltd. for Installation	<b>Minimum 15 days in advance by ITI Ltd</b>	
08	Installation	Within four weeks from the date of site readiness intimation / clearance by ITI Ltd.	
09	Testing & Commissioning	Within two weeks after satisfactory installation	
10	<b>Total completion of the order</b>	<b>28 weeks</b>	

**Note:- out of three Dg set 02 nos will be delivered at ITI Ltd Rae bareli and 01 no at ITI Ltd Mankapur.**

The above delivery schedule is the maximum period. Early delivery schedule is preferred. Intermediate milestones as identified mutually after placement of order shall be met with.

### **Packing & Forwarding**

1.1.38 The tenderer will be held responsible for proper packing for transport by rail, road, sea or air, to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expenses of the Contractor.

### **Exclusion of Tenders**

The following tenders shall be summarily rejected from the procurement process

1.1.39Tenders of vendors who have been removed from the vendor list or banned/debarred from having business dealings.

1.1.40The tenders which materially depart from the requirements specified in the tender document or which contain false information.

## **2. Documents Comprising the Bid**

This is e-procurement tender. All the documents need to be scanned and attached to the bid under "documents solicited from Vendor" form.

Offers shall be sent online only using standard digital signature certificate of class III with encryption / decryption. The tenders authorized on or before the open authorization date only will be considered as valid tenders even though the bids are submitted online.

The tenderer must authorize bid opening within the time stipulated in the schedule by ITI Ltd Raebareli. Otherwise the online bid submitted will not be considered for evaluation.

**On-line bids shall consist of the following: -**

**Part - I Technical and Unpriced Commercial**

Technical and un-priced commercial part shall comprise the following documents/information. All the documents shall be scanned and uploaded in the e-procurement portal.

- 2.1.1. Submission of bid letter along with one set of tender document duly signed and stamped as token of acceptance. Scanned copy shall be uploaded in the e-procurement portal.
- 2.1.2. Power of attorney in favour of authorized signatory of the bid/ tender documents.
- 2.1.3. Latest income tax clearance certificate.
- 2.1.4. Latest solvency certificate from a scheduled bank as detailed in bid qualification criteria.
- 2.1.5. List of 11 kV HT DG sets supplied during last five financial year indicating the name of client with contact details and performance appraisal certificates from Govt, sector if any
- 2.1.6. List and make of the bought-out components as well as imported items considered by bidder for this tender.
- 2.1.7. Any other relevant document, bidder desires to submit.
- 2.1.8. Duly filled Delivery schedule as in Page no. 8
- 2.1.9. Duly filled (with supporting documents) bid qualification criteria as in page no.11 &12
- 2.1.10. Copies of type test certificates for alternators for s.no. 2.7 to 2.10 at Page.no 19
- 2.1.11. Duly filled Guaranteed Technical Particulars as in Page no. 30
- 2.1.12. Duly filled Compliance statement as in Page no. 31
- 2.1.13. Party shall submit unpriced price bid format as per page no. 32. Party shall only enter required tax percentages. In place of price columns, party shall mention "QUOTED".

**Note: All the above documents shall be uploaded in the eProcurement**

***portal.***

## **Part - II Priced Commercial Bid**

Priced commercial bid shall contain schedule of prices and shall be filled in e-procurement portal. No deviations, terms and conditions, assumptions, discounts etc. shall be stipulated in price bid. Department will not take cognizance of any such statement and may at their discretion reject such bids.

### **Bid Submission**

- 2.1.14. Bid shall be submitted in two parts
  - Part -1 Technical Bid
  - Part-2 PricedCommercial Bid (excel format attached).
- 2.1.15. Offers should be submitted On-line using standard digital signature of class-3 with encryption/decryption options.
- 2.1.16. Prices shall be mentioned in the space/column provided for such purpose in the e-procurement portal.
- 2.1.17. Prices quoted should be on the basis of Delivery at Place (DAP), ITI Ltd Rae Bareli and ITI Ltd Mankapur.
- 2.1.18. The purchaser will not pay separately for transit insurance and same shall be included in the cost quoted by the Bidder.
- 2.1.19. All risks in transit shall be exclusively borne by the contractor and the purchaser shall pay only for such items as are actually received in good condition in accordance with the purchase order.
- 2.1.20. Bids duly filled in by the Bidder should invariably be submitted as stipulated in the e-procurement portal.
- 2.1.21. Department may open Part - I of the bid on the due date of opening at convenience. Price Bid (Part-II) of the bid of the technically and commercially acceptable bids will be opened at a later date.
- 2.1.22. Department reserves the right to reject any or all the Bids without assigning any reasons thereof.

### **Bid Evaluation**

- 2.1.23. The bidder shall provide all the relevant data / details required for evaluating the bid technical and commercially in the specific formats enclosed with the tender. Apart from this, Bidder is free to add any other relevant information.
- 2.1.24. During evaluation, Department may request Bidder for any clarification on the bid/ additional documents/ information required. Bidder shall submit all clarifications/ additional documents/ information requested in original. If not submitted within the stipulated time department has right to reject such bids.
- 2.1.25. Techno-commercial discussion shall be arranged with Bidder, if needed. Bidder shall depute his authorized representatives for attending discussions.
- 2.1.26. The complete scope of work is defined in the Tender document. Bidders,

who undertake total responsibility for the complete scope of work as defined in the Tender document, will only be considered. As the items are interdependent, combined lowest cost shall only be considered to arrive at L1.

- 2.1.27. In case Bid does not fully comply with the requirement of Tender document and the bidder stipulates deviations to the clauses of the proposal, which are unacceptable to the Department, the Bid will be rejected.
- 2.1.28. Performance of Bidder on similar nature of works executed/ under execution shall be taken into consideration before selecting the Bidder for opening his price bid.
- 2.1.29. The time schedule for completion is given in the Tender document. Bidder is required to confirm the completion period unconditionally.
- 2.1.30. Department shall not be obliged to furnish any information / clarification to unsuccessful bidder as regard non-acceptance of their Bids.

**3.0 BID QUALIFICATION CRITERIA FOR  
SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF HT 11KV, 1250  
KVA, 3PHASE, 50Hz DIESEL GENERATOR SET -3 NOS.**

Bidders who are qualifying / meeting the following Technical and Financial capabilities are eligible to participate in the bid for Supply, Erection & Commissioning of DG sets. Bidder shall furnish all the details with documentary proof and submit the same along with quotation. Bids of the parties which are not meeting the following criteria will not be considered for evaluation and will be rejected without seeking any further clarifications. Bidder shall furnish the details of their resources in factory like manpower, machinery, quality system etc., for department to assess their capability.

Sl.No.	Criteria / Requirement	Reply / Eligibility from M/s....
The bidder should meet the following qualifying requirement		
1.	The complete scope of work is defined in the tender document. Bidders, who undertake total responsibility for the complete scope of work as defined in the tender document, only will be considered.	
<b>Technical Qualification Requirements</b>		
The bidder should also meet the following technical qualification requirements:		
2.	<p>The Bidder should be an organization with previous experience of more than 5 years in having executed supply, installation, testing and commissioning of 11kV HT DG sets. Enclose list of HT DG sets supplied in the last three years.</p> <p>Eligibility Criteria: Supply, Installation, Testing and Commissioning of minimum 01 nos., of 11 kV HT DG sets in the last three years which is running successfully. Documentary evidence shall be provided.</p>	
3.	<p>The Bidder shall have dedicated team for Design/ Engineering, drafting, erection &amp; commissioning teams and service network.</p> <p>Eligibility Criteria: Service network shall be available either at Lucknow / Kanpur / Allahabad / Varanasi to extend service support within 24 Hours The contact details of the service provider shall be mentioned.</p>	

4.	Party shall have qualified engineering team for erection, testing and commissioning	
5.	Bidder should be only either OEM of approved Make of Diesel Engine or Authorized system integrator of OEM of Diesel Engine need to apply directly, any agent / vendor will not be entertained. Mention OEM or Authorized system integrator of OEMs. In case of Authorized system integrator of OEM, necessary certificate from OEM shall be enclosed.	
<b>Financial Qualification Requirements:</b> The bidder should also meet the following financial qualification requirements: <b>Documentary evidence shall be enclosed with tender against each requirement</b>		
6.	The Bidder should have an average annual turnover of not less than a value of Rs Six crores per year for last three financial years.	
7.	Bidder should have executed orders of similar nature i.e., supply, installation, testing and commissioning of 11 kV HT DG sets of values as stipulated below.  a. Single order of value not less than Rs 300 lakhs or b. Two orders each of value not less than Rs 210 lakhs or c. Three orders each of value not less than 140 lakhs	
8.	Bidder should possess a current Solvency Certificate from Nationalized Bank for an amount of not less than Rs.100 Lakh	
9.	IT/ TDS certificate shall be submitted for the previous three financial years (FY19-20, FY18-19, and FY17-18.)	

#### **4.0 TECHNICAL SCOPE AND SPECIFICATIONSSCOPE**

- 4.1 Supply, Installation, Testing and Commissioning of Three nos., of 1250 kVA, 11 kV DG sets including fuel lines, exhaust silence system, cooling system etc., complete as required and as detailed in subsequent sections
- 4.2. Supply, Installation, Testing and Commissioning of Power, Control and synchronizing panels.
- 4.3. The DG sets shall confirm TO IS / IEC 60034, IS 1460. ISO 8528, ISO 3046, IS 13018 and ISO 9001.
- 4.4. List Approved makes shall be strictly adhered to.
- 4.5. The bid shall be submitted in two parts viz., 01.Technical Bid 02.Price bid
- 4.6. Only OEMs or their authorized representatives are eligible to quote.
- 4.7. The installation, testing and commissioning include unloading, unpacking, assembly and interconnecting of all items that are required for the satisfactory operation of the DG set. The material handling support will be arranged by Department on payable basis subject to availability.
- 4.8. The supplier is required to complete the installation /system as per statutory provisions in order to facilitate obtaining of clearance from statutory authorities for energisation of the system. Necessary documents, drawings etc shall be handed over to ITI. HoweverITI will pay the inspection fee and arrange for the inspection of statutory authorities. In case any rectification points are advised by the statutory body as applicable for the system, shall also be executed at no extra cost



## **5.0 DIESEL ENGINE WITH ACCESSORIES**

### **5.1.0 DIESEL ENGINE WITH ALL ACCESSORIES:**

DG set shall consist of the following:

#### **5.1. 1 Diesel Engine:**

The Engine shall be water cooled, turbo charged with after cooler suitable for Generator application, developing necessary mechanical output to drive a load of 11kV, 1250 kVA 0.8 pf load at 1500 RPM, under NTP conditions with an overload capacity of 10% for one hour in any 12 continuous hours of operation. The engine should work in Rae Bareli & Mankapur weather condition which may go down up to 0°C. The engine shall be of latest technology with Electronic Fuel Control (EFC) the engine shall be equipped with the following minimum standard accessories.

The engine shall be suitable for functioning at ambient temperature up to 50°C & RH up to 95 %

#### **5.1.2 Cooling System (Remote Radiator):**

Air cooled fluid coil cooler with remote radiator consisting of finned surface heat transfer coils made of Copper tube, Aluminum fins, Axial flow propeller fans, Fan motors, weather proof electrical junction box with wiring, Expansion tank for the coolant with GI sheet steel casing and Heavy duty base frame suitable for floor/ plinth mounting etc. The Coil cooler shall be suitable for withstanding all weather conditions and shall be installed as an outdoor unit. Remote coil cooler shall be of as same make as that of DG or shall be as approved by DG set OEM. The unit shall have automatic fan controller and shall have noise level as per Pollution Control Board (PCB) norms.

Necessary concrete pedestal for installing the coil cooler is in your scope.

#### **5.1.3 Fuel System:**

Fuel system shall consist of:

- a) Fuel Pump -Shall be of latest version suitable to meet the regulation stipulated even under varying load conditions
- b) Injectors - Heavy duty STC preferred
- c) Fuel Filters-including primary filter
- d) Self-contained piping

#### **5.1.4 Lubricating System:**

Lubricating system shall consists of:

- a) Lube Oil Pump (Engine mounted)

- b) Strainer
- c) Lub oil cooler
- d) Lub oil filter
- e) Lubricating bypass filter
- f) Self-contained piping
- g) Dip stick
- h) Necessary piping with butterfly valves etc and provision for draining engine oil from sump during maintenance of engine shall be provided and the pipe shall be extended suitably (Approx.7 Mtr).

#### **5.1.5 Air Intake system:**

Air Intake System shall consist of:

- a) Dry type filter
- b) Air intake manifold with necessary connections
- c) Turbo Charger with after cooler

#### **5.1.6 Exhaust system:**

5.1.6.1 Exhaust system shall consist of:

- a) Exhaust Manifold
- b) Flexible piping
- c) Exhaust silencer (Residential type) - The type of residential silencer shall be as per the recommendation of Engine manufacturer.

5.1.6.2 The pollutants present in exhaust gas shall be within permissible limits, and as indicated by the pollution control board. Necessary scrubbers, pollutant eliminators shall be included if required. Check point pockets shall be provided for the Silencer in accordance with PCB regulations for inspecting and checking the emissions. Provision (pockets) shall also be provided for monitoring exhaust gas temperature.

5.1.6.3 Fabricated supports for the exhaust pipe, silencers etc. shall be provided as required at site by supplier. Exhaust pipe shall be raised to the height to meet the PCB Norms. The exhaust pipes shall be applied with heat resisting painting after proper surface treatment. The exhaust pipes within the building shall be provided with thermal insulation and cladding. The silencer and exhaust systems shall be installed outside the DG room to minimize the heat dissipation in DG room.

5.1.6.4 The minor works required for supporting the structure over roof/walls by making openings for conveying exhaust pipes, cooling circuit pipe lines, oil drain pipe line, providing routing for supports / brackets on wall /floor/ plinth and suitably finishing to match the existing surroundings are also in the scope of the supplier.

5.1.6.5 Rain water drain facility shall be provided at drain point of each silencer by providing 50 mm dia MS pipe down up to a height of 150 cm (5.0 ft) from the ground level with suitable control valve.

#### **5.1.7 Genset Controller:**

5.1.7.1 The DG set shall include a latest version of Microprocessor based Genset controller with monitoring, metering, protection and control features. The controller shall be SCADA compatible and it shall be possible to monitor all parameters and the set points shall be adjusted through Laptop computer / PC: Necessary software shall be supplied in this regard at free of cost. The controller shall have the following features

- a) Digital governing and voltage regulation.
- b) AC output monitoring.
- c) Monitoring of battery system, critical engine parameters.
- d) Engine Start / Stop
- e) Lube oil pressure indication,
- f) Water Temperature indication,
- g) Running Hour indication
- h) RPM indication,
- i) battery charging healthy / voltage indication
- j) with safety controls for low lubricating oil pressure, High water temperature, Engine over speed.

5.1.7.2 Necessary sensors, gauges and trip switches shall be provided for ensuring the above annunciation and safety controls. The control wiring shall be done by using standard harness / connectors and terminated by using sleeved cable lugs by providing necessary terminal blocks which shall be vibration and heat resistant. Proper identification ferrules and markers for easy identification shall be provided at all terminals.

#### **5.1.8 Governing System:**

Governing system shall consist of Electronic Fuel Control Governor (EFC) with plus or minus 1% or better regulations.

#### **5.1.9 Starting System:**

Starting system shall consists of:

- a) Suitable Self Starter
- b) Battery charging system (generator) with voltage regulator for providing appropriate DC charging power to battery when the DG set is running.

Other Accessories:

- a) High Inertia Fly wheel & Flywheel Housing to suit alternator / Engine
- b) Separate Battery charger static type for charging batteries during idle condition, permanently connected to the batteries. This shall be mounted inside control panel or supplied separately. The separate battery charger system shall be in addition to built in dynamo with battery charger.

#### **5.1.10 Batteries:**

Batteries of suitable capacity to start the engine from cold conditions are to be provided. The batteries shall be supplied in fully initial charged condition housed in a separate stand along with suitable leads and terminals etc. Batteries shall be of reputed makes and as approved by Department, confirming to relevant IS standards.

#### **5.1.11 Base Frame:**

The engine and alternator shall be perfectly aligned and assembled on a sturdily fabricated, adequately machined base frame made out of high quality MS / heavy duty rolled steel channels. The base frame shall be provided with lifting facilities and pre-drilled bolt holes for installation with anti-vibration pad mountings. Providing standard flat concrete bed without pockets for positioning the DG sets is in ITI Ltd Scope.

#### **5.1.12 Fuel Tank:**

- 5.1.12.1 Supply and installation of two nos., ( one for each DG ) of day fuel tanks of 990 liters capacity square / rectangle shape for DG set shall consists of Fuel Inlet, Outlet pipe connections, Control Valves, Filling cap, Drain plug, Air vent, limit switch to cut off power supply to the motor pumping diesel to the day tank, analog flow meter to measure the amount of diesel pumped from the UG tank to the day tank, Level indicator with graduated scale with clear reading arrangement and manual cover suitable for floor mounting.
- 5.1.12.2 Provision of necessary diesel MS pipe lines of 1" dia. between Day Fuel Tank (DFT) and tank and DFT to engine (supply and return lines as recommended by OEM also form part of scope. The item also includes necessary pipe

accessories like motor pump set, valves, bends, coupling, nipple etc.

**Any other accessories that are required for satisfactory operation and performance of DG shall ALSO be supplied, installed and commissioned.**

#### **5.2.0 BRUSHLESS 11 kV ALTERNATOR WITH ALL ACCESSORIES:**

5.2.1 The alternator shall be suitable for continuous operation to give an output of 1000KW / 1250 KVA AT 0.8 P.F at 11kV Volts, 3 Phase, 0.8 PF (lag) suitable for the diesel engine as specified above and run at 1500 RPM. The Alternator shall be of self-excited brush less type.

5.2.2 The AC generator shall be with the exciter field supplied by panel mounted solid state voltage regulators in accordance with IS with latest amendments and Confirming to IS:4722/IEC 60034 specifications.

5.2.3 The voltage regulation shall be +/- 1.0 % or better.

5.2.4 The alternator shall be suitable to supply through our 11kv / 433 v Dyn11 distribution transformers to our system loads such as rectifier, UPS, PLC systems and computer loads without any distortion in output AC voltage wave form.

5.2.5 The transient performance of alternator shall be such that line to line voltage will recover to 97% of the final steady state voltage within one second when a balanced and symmetrical load of rated KVA at low PF (0.3 to 0.4 lag) is impressed on an initially unloaded generator.

5.2.6 Insulation Class of Alternator: The class of insulation for stator, Rotor and exciter windings shall be minimum of class 'F' as per relevant ISS. The winding shall be coated with suitable Gel / appropriate coating that is required for satisfactory and prolonged operation in saline and moist atmosphere.

5.2.7 Wave form distortion shall be limited as : No load < 1.8 % , non-distorting balanced linear load < 5 %

5.2.8 Total harmonic factor better than 2 %

5.2.9 Enclosure: The alternator shall be screen protected, drip proof, ensuring IP: 23 enclosure or better.

**Copies of type test certificates shall be submitted -while quoting**

- 5.2.10 Overload: The alternator shall be able to meet an over load of 10% for a minimum period of 1 hour in every 12 hours.
- 5.2.11 Terminal Arrangement::The alternator terminals shall be suitable for terminating suitable size of HT cable ( 2 runs X 3 Core X 120 sq.mm)
- 5.2.12 Alternator shall be provided with necessary space heaters with control switch and visual indicators.
- 5.2.13 Six Nos. of Winding Temperature Detectors and 2 Nos. of Bearing Temperature Detectors completely wired with suitable scanner mounted in control panel.
- 5.2.14 Earthing: Alternator shall have two numbers of earthing terminals of adequate capacity.
- 5.2.15 AVR shall be installed in alternator frame or with suitable cubicle with required CTs etc

## **6.0 GENERTOR MONITORING, CONTROL, SYNCHRONIZING AND POWER VCB PANELS**

### **6.1 SCOPE**

- 6.1.1 The scope includethreecontrol panels one for each DG (02 no at Rae Bareli and 01 no at Mankapur) and one synchronizing panel (at ITI Ltd Rae Bareli only) and three nos., of 11 kV Vacuum Circuit Breaker panels of adequate rating for each DG set and 01 no 11 kV 800 A VCB each at ITI LTD Rae Bareli and ITI LTD Mankapur for Incoming( total 02 Nos).
- 6.1.2 Parallel operation of the new two DG sets which is under the scope of supply, shall also be necessarily demonstrated.
- 6.1.3 Five nos., of suitable 11kV Vacuum Circuit Breaker with panel for the three DG sets shall also form a part of the scope of the supply, as per 6.1.1.
- 6.1.4 Necessary Control Cabling between the DG Control Panel along with the DG VCB Panel (supplied by bidder) shall also form a part of the scope of the supplier.
- 6.1.4 The Generator control panel shall be complete with all components and wiring and shall consists of the metering, protection, controls and annunciation required for three DG I, DG II& DG Mankapur.

### **6.2 CONSTRUCTION FEATURES:**

- 6.2.1 The control and synchronizing panel shall be fabricated from **2mm thick CRCA sheet** steel and shall be folded and braced to provide rigid support for all components.
- 6.2.2 All joints in sheet shall be seam welded, all slag shall be rounded off and welding pits smoothened.
- 6.2.3 All panels and covers shall be properly fitted. Shall have in built lock and keys.
- 6.2.4 The panel shall be of totally enclosed design and completely dust and vermin proof.
- 6.2.5 All doors and removable covers and metal to metal joints shall be gasketed. Similarly the panel to panel gaps shall also be heavily gasketed to render the joints effectively dust tight. Soft compressible gaskets shall be used between all metal joints, doors and with covers to prevent ingress of dust.

- 6.2.6 Cable entry holes/ other dummy holes shall be provided with grommets to avoid ingress of dust and vermin. The gaps around the cutouts provided for conveying the wiring channels etc, shall be properly covered / closed.
- 6.2.7 Necessary covered wire ducts shall be provided to route the wiring between various elements. LED fitting with lamp wired with door interlock shall be provided. The panels shall be provided with castle type lock & keys
- 6.2.8 All the elements shall be accessible easily from the front. All the relays mounted shall mount on DIN rail.
- 6.2.9 All the elements shall be designated with engraved acrylic name boards fixed by screws to the panels

### **6.3 ELEMENTS REQUIRED IN THE CONTROL PANEL**

#### **6.3.1 Indication lamps**

The control panel shall have the following indication lamps. The indication lamps shall be of size minimum 22 mm of LED type with different colours.

1. Neutral Grounding Resistor ON
2. Over Voltage Trip
3. Under voltage Trip
4. Over current trip
5. Earth fault trip
6. VCB On
7. VCB off
8. DG running
9. Individual Cooling Tower Fans ON
10. Individual Cooling Tower Fans Off
11. Spare - 04 nos.,

#### **6.3.2 Meters**

The control panel shall have the following meters with built in selector switches wherever required of size 96 X 96 mm. The meters shall be of digital type.

The input and output displays shall be programmable at site.

1. Voltmeter to indicate alternator voltage.
2. Ammeter to indicate alternator current
3. Communication (RS 485) Multifunction meter
4. KWH meter
5. Frequency meter
6. Power factor meter
7. Trivector meter



8. Field DC Voltage 0-150 V
9. Field DC Current 0-10 A

### **6.3.3 Switches / push buttons**

The control panel shall have the following switches / push buttons.

#### **6.3.3.1 Switches**

1. Panel space heater on/off
2. CT fan Auto / manual
3. Local / Remote switch for
  - a. Voltage ,
  - b. Speed,
  - c. Breaker on/off
  - d. Alarm annunciator

#### **6.3.3.2 Pushbuttons**

1. Fuel pump On/off
2. Alarm acknowledge
3. Alarm reset
4. Alarm test
5. Individual cooling tower fans On
6. Individual cooling tower fans Off
7. VCB On
8. VCB off
9. Engine start
10. Engine stop
11. Voltage increase
12. Voltage decrease
13. Speed increase
14. Speed decrease
15. Mushroom type lockable Emergency stop

### **6.4. Protective relays**

The control panel shall have the following protective relays either **independently or combined**

1. Field failure relay
2. Differential relay
3. Reverse power relay reactive
4. Reverse power relay active
5. Under Voltage relay
6. Over Voltage relay
7. Over current relay

8. Earth fault relay

**6.5 Alarm annunciator**

The control shall have 16 window different colour alarm annunciator for the following

1. Reverse power trip
2. Reverse kVAR trip
3. Field failure
4. Under voltage
5. Over voltage
6. Differential relay trip
7. Winding temperature high alarm / trip
8. Bearing temp. high alarm / trip
9. Over Current
10. Earth fault
11. Low oil pressure
12. High water temperature
13. CT fan over load
14. Engine stop pressed
15. Engine over speed
16. Engine cooling water temp. high

**6.6 Winding - bearing temperature scanner**

The specifications of winding & bearing temperature scanner is as below

a.	Mounting	: Flush panel Mounting with side clamp
b.	Power supply	: 230V AC +/- 10% or 24V DC 50Hz.
c.	Sensor type	: RTD or as suitable for the sensors at Alternators.
d.	Accuracy	: 0.5 % of FS
e.	Sampling time	: 2 sec.

## 6.7 Elements required in the synchronizing panel at ITI Ltd Rae bareli

### 6.7.1 Indication lamps

- a) Output type : Relay.- 8 nos.,
- b) Function : High/Low alarm.
- c) Display Key board:
  - 01. Number : 4 Digit Display for process value.
  - 02. Colour : 0.56" Red.
  - 03. Display Range : 0- 400 °C
  - 04. Sensor open / break : To be displayed
- d) Functions :
  - 01. Skip channel : Yes.
  - 02. Scanning : Auto/Manual scanning.
  - 03. Scan Time : 2-99sec
- e) Communication/Logging RS-485

- a. DG 1 to DG 2 VCB On
- b. DG 1 to DG 2 VCB Off
- c. Dark lamp systems 1 set

### 6.7.2 Meters

- a. Double voltmeter
- b. Synchroscope
- c. Double frequency meter

### 6.7.3 Push buttons & switches

#### 6.7.3.1 Push buttons

- a. DG 1 to DG 2 VCB Close / on
- b. DG 1 to DG 2 VCB trip /off
- c. DG 1 to 2 Voltage raise
- d. DG 1 to 2 Voltage lower
- e. DG 1 to 2 Speed raise
- f. DG 1 to 2 Speed lower

### 6.7.5 Switches

- a. Auto manual selector switch
- b. Master selector switch to **select either one of two DGs**

- c. Slave selector switch to **select either one of two DGs**
- d. Voltage raise / lower selector switch
- e. Speed raise lower / Selector switch
- f. Solo / parallel selector switch
- g. Synchronizing switch

**6.7.6. Relays either **independently or combined****

- a. Synchronizing relay
- b. Voltage balance relay
- c. Frequency balance relay
- d. Load balancing relay

**6.8** The control cables as required will be in the scope of bidder.

**6.9** Instrument / protection transformers:

Instrument transformers of adequate nos. for realising the total protection and metering requirements shall be provided. All the instrument transformers shall be of resin cast encapsulated type and of Department approved make. The burden and ratios shall be appropriately selected. The accuracy of metering transformers shall be class 0.5. Necessary interconnections from alternator to these transformers and to all panels are in the scope of supplier.

**6.10** Threenos.(02 no for Rae bareli and 01 for Mankapur), of Neutral Grounding Resistors of rating and duty as per standard practice and as recommended by the alternator OEMs shall be provided in IP 23 Enclosure one for each DG with suitable power isolator switches.

**6.11** Supply , laying and termination of HT cables from the alternator to VCB panels

and from alternator to Neutral Grounding Resistors and earth strips of adequate size from alternator, panels, NGRs, VCB panels etc. to the earth pit outside the building is also in the scope of supply.

**6.12** The details above are only indicative. Any other item required for safe and Satisfactory operation of the DG sets shall also form part of the scope.

## **7.0 TESTS TO BE CARRIED OUT**

The tests as described below are required to be carried out as per relevant standards. In case, the acceptance tests does not show satisfactory results, the contractor shall at his own expense rectify and replace the defective components or any part thereof as directed by the authorized representative of the ITI within one week. The installation shall be re-tested after rectification / replacement of the defective components without any extra cost. For such tests the cost of fuel and engine oil shall be borne by the supplier. All tests shall be as per **ISO 8528**

### **7.1 Acceptance test at manufacturer's works:**

The DG set and panels shall undergo the following acceptance tests at the factory / manufacturer's premises of Engine/ alternator / panel.

#### **7.1.1 Engine:**

- a. Fuel Consumption test
- b. Governing test

#### **7.1.2 Alternator:**

- a. Measurement of Resistance
- b. Phase sequence test
- c. Regulation test
- d. Measurement of short circuit characteristics- Type test certificates shall be submitted for review.
- e. Measurement of Open circuit characteristics - - Type test certificates shall be submitted for review.
- f. Measurement of Insulation resistance
- g. High voltage test
- h. Voltage balance test

#### **7.1.3 Control, synchronizing and power (VCB) panel**

- a. Physical inspection - Check for inventory / components as per approved drawings, dimension & sizes.
- b. Electrical Tests - Test for satisfactory operation of all meters, relays, instrument transformers etc, IR test, HV test

Acceptance tests other than above, as applicable to the relevant items shall also be carried out. Necessary Test certificates shall be submitted along with supply.

## **7.2. Acceptance tests at site: phase - I**

On completion of all the installation works, the DG sets and panels shall undergo the following tests at site.

- a) Visual examination of all parts and accessories
- b) Measurement of resistance
- c) Insulation resistance test
- d) Earth continuity
- e) Tests for normal operations of all protective relays and instruments
- f) No load test to check the normal performance of Engine, Alternator, and all other accessories

## **7.3 Acceptance tests at site: phase - II**

a) On satisfactory completion of Phase - I tests, the DG set shall undergo the load test for 12 hours continuously. Necessary loads will be arranged by the department. Fuel required for the above tests will be provided by the ITI at free of cost. The engine should be supplied complete with the first filling of lubricating oil by the supplier.

- b) During the above tests, following parameters shall be checked:
  - 1. Cooling system temperature
  - 2. Lubricating oil temperature
  - 3. Lubricating oil pressure to the engine and turbo charger
  - 4. Fuel oil consumption
  - 5. Speed cum frequency variation on throwing 'ON' and 'OFF' at full load
  - 6. Voltage variations.
  - 7. Transient voltage dip / recovery on applying step loads.
  - 8. Testing of failure conditions by simulation.
- c) Following tests, are also to be conducted at site:
  - 1. Phase sequence test
  - 2. Regulation test
  - 3. Winding & Bearing temperatures while running the DG set
  - 4. Temperature of windings after continuous full load test
  - 5. Testing of all panels including Relays.

## 8.0 OTHER TERMS AND CONDITIONS

- 8.1 The tenderer shall be either the OEM of approved makes of Diesel Engine or their authorized system integrator. **Necessary certificate shall be submitted in case of authorized system integrators failing which their offers will be summarily rejected.** Details of similar orders executed with supporting documents shall be submitted.
- 8.2 All test facilities required shall be provided for the tests prescribed in the schedule by the party without any additional cost at their factory as well as at site for commissioning of transformers
- 8.3 On receipt of Purchase Order the agency shall be submitting the following drawings for approval before manufacturing:
- i) General arrangement and schematic drawings
  - ii) Foundation drawings
  - iii) Control wiring drawings
  - iv) Product catalogues / relevant manuals V) Installation drawings of exhaust system, cooling system, fuel system etc.,
- 8.4** The scope of work shall include all transportation of all items and their accessories to the site of work with utmost care. All loading and unloading arrangements shall form part of the part of the scope and all required man power shall also be provided by the agency for unloading / shifting of the items over the plinth, assembling all accessories and installing in position as required. **Material handling equipment like hydra / fork lift shall be hired by the supplier from outside.** Necessary man power required for the above works shall be the responsibility of the supplier.
- 8.5 The supplier shall be responsible for handling and ensuring safe custody of the  
Transformers and accessories from the time of supply at site till installation, testing and commissioning and handing over the same to the department on satisfactory completion of work.
- 8.6 The supplier shall co-ordinate with other agencies during the course of the installation, testing and commissioning of the DG sets and accessories as applicable and to ensure the safe commissioning of transformers.
- 8.7 The installation work shall be started and completed immediately once the readiness of site is intimated to the agency without any delay.
- 8.8 The works of installation, testing and commissioning of DG sets shall be done by employing qualified competent engineers / supervisors and all instructions of the department shall be strictly followed for the completion of work with good workmanship as required and as per the IE rules and regulations and other

mandatory requirements.

At the time of Testing and Commissioning of DG Sets, the representatives of different agencies who have manufactured / installed their equipment like DG set, HT panel, Control panel etc., shall remain present and it will be essential to coordinate with other agencies as required and as directed by the ITI Ltd.

- 8.9 Any mandatory / statutory requirement specified by the inspection authority (Central Electricity Authority) shall also be carried out at no extra cost.
- 8.10 All necessary safety precautions during transit, installation, testing and commissioning of DG sets shall be strictly adhered by the supplier/agency.
- 8.11 The tenderer shall provide three hard copies of complete sets of operation and maintenance manuals and one soft copy including all test certificates etc..
- 8.12 ITI shall reserve right to accept / reject any part of work, which is not acceptable as healthy engineering practice of carrying out such work as the case may be. In case of any failure to carry out the scope of work in time as per the instruction of department, the work shall be carried out / got done by the department at the cost and risk of the agency and the entire amount with supervision charges shall be recovered from the agency.
- 8.13 **Training** : The supplier shall arrange training for Engineers and Technicians total participants will be 25, on the design features, operation and maintenance of DG sets and control panels for minimum **three days (for 8 hours duration on each day )** with faculties from the OEMs **at ITI Rae Bareli premises**. Necessary training material and logistics cost shall be borne by the supplier. The course content will be finalized mutually by the supplier and the ITI.
- 8.14 The **bid** shall be submitted in **two parts viz.** 01. Technical bid 02. Price bid. Technical bid necessary have duly filled the technical compliance statement. The price bid shall have the split up details as mentioned in the price bid.
- 8.15 Safety items like HT hand gloves - 06sets, Rubber mats of adequate rating, Danger sign boards as per standard practice shall be supplied and installed as required.



**9.0 Guaranteed Technical Particulars (GTP) which shall be necessarily filled and submitted without fail failing which the offers will be summarily rejected**

<b>SI No</b>	<b>DESCRIPTION</b>	<b>Details</b>
1.0	Engine Make Cummins / Caterpillar / Perkins/ Volvo Penta / MTU/YANMAR/Greaves cotton /Baudouin	
2.0	Alternator Make Stamford - AVK / Greaves cotton / Leroy Somer / TDPS/CGL	
3.0	Vacuum Circuit Breaker Panels and Neutral Grounding Resistors	
4.0	Cooling System as Air cooled coil cooler - Remote coil cooler	
5.0	OEM or Authorized system integrator	
6.0	In case of authorized system integrator necessary certificate to be enclosed.	
7.0	Catalogues and specifications sheets to be enclosed.	
9.0	Control cum synchronizing panel make	

**10.0 Compliance statement which shall be necessarily filled and submitted  
without  
fail failing which the offers will be summarily rejected**

SI No	DESCRIPTION	Compliance Yes/ No
	<b>Technical</b>	
1.0	Scope	
2.0	Diesel engine with all accessories. as per tender document	
3.0	Brushless 11 kV alternator with all accessories as per tender document	
4.0	Generator monitoring ,control, synchronizing and power VCB panels as per tender document	
5.0	Tests to be carried out. as per tender document	
6.0	Training as per tender document	
7.0	Guaranteed technical particulars duly filled and submitted as per tender document and uploaded along with the quote	
8.0	Deviations if any from the tender specifications Attach separate sheet if required. Otherwise mention as "NIL"	
9.0	Other Terms and conditions. as per tender document	
	<b>Commercial</b>	
	Bidders qualification criteria as per Annexure 1 duly filled with all particulars and uploaded along with bid	
10.0	Warranty as per tender document	
11.0	Delivery schedule as per tender document	
12.0	<b>Payment terms</b> as per tender document <b>Supply Cost</b> a. 70 % within 30 days on receipt and acceptance of items at our site with all taxes and transportation costs b. 30 % after successful, Testing and commissioning <b>Installation and commissioning Costs</b> Within 30 days after successful, testing and commissioning at our site subject to providing PBG of 10% of Total Value till warranty period	
13.0	Deviations if any from the preferred payment terms. Attach separate sheet if required Otherwise mention as "NIL"	
14.0	Performance Bank Guarantee and Security Deposit as per Tender Document	

### 11.0 Price Bid Format

1. Fill up separately and upload as price bid format. Never indicate the cost in the technical bid. If indicated the bid will be summarily rejected.
2. Fill up indicating as “quoted” and the % of Taxes applicable along with technical bid.

SI No	DESCRIPTION	Qty	Rate / Unit	Total cost
1.0	Cost of DG sets complete as per tender document	03		
2.0	Cost of Control panels with all items as per tender document	03		
3.0	Cost of Synchronizing panel with all items as per tender document	01		
4.0	Cost of Vacuum Circuit Breaker Panels	05		
5.0	Sub total s.no 1.0 to 4.0			
6.0	Taxes at the rate of ____%			
<b>7.0</b>	Subtotal ( s.no. 5.0 and 6.0)			
8.0	a) Installation and commissioning Charges ( inclusive of training ) for the supplied DG sets with the parallel operation.			
	b) Charges towards parallel operation of all the two DG sets			
9.0	Taxes at the rate of ____%			
<b>10.0</b>	Subtotal ( s.no. 8.0 a + b and 9.0)			
11.0	Transportation Charges of all items			
12.0	Taxes at the rate        %			
<b>13.0</b>	Subtotal ( s.no. 11.0 and 12..0)			
<b>14.0</b>	Grand Total ( S.no. 7.0 + 10.0 + 13.0 )			

**12.0. List of approved makes**

<b>S No</b>	<b>Description of items</b>	<b>Approved makes</b>
01	Diesel Engine	Cummins/ Perkins/ Volvo penta/ Caterpillar/ MTU/Yanmar/Greaves Cotton /Baudouin
02	Alternator	Stamford- AVK / TDPS / Leroy somer / Greaves Cotton/Toyo denki /CGL
03	DG set controller for synchronising panel	Woodward / Bernini / DIOF/PCC 3300
04	Vacuum Circuit Breaker Panels	Schneider / L&T/ ABB / Siemens / EasunReyrolle / Andrew Yule / MEI / BHEL / Crompton Greaves
05	Protective relays	C&S, L&T, Alsthom, ABB, Siemens, Reyrolle,
06	Indications lamps LED type	Siemens, L&T
07	Push buttons	Siemens, L&T
08	HRC fuses and carriers	Siemens, L&T
09	Meters	Siemens, L&T, Rishabh, AE, Conserv
10	Temperatures Scanner	Swastik, ABB
11	Switches	Siemens, L&T Salzer
12	Auxiliary contactors	Siemens, L&T
13	Alarm annunciator	Minilec
14	CTs and PTs	Kappa Electricals, A.E, Intrans, Nippen, Neutronics, C&S

## **INTEGRITY PACT**

PURCHASE ORDER No.

THIS Integrity Pact is made on.....day of .....20 .

### **BETWEEN:**

ITI Limited having its Registered & Corporate Office at ITI Bhavan, Dooravaninagar, Bangalore – 560 016 and established under the Ministry of Communications, Government of India (hereinafter called the Principal), which term shall unless excluded by or is repugnant to the context, be deemed to include its Chairman & Managing Director, Directors, Officers or any of them specified by the Chairman & Managing Director in this behalf and shall also include its successors and assigns) ON THE ONE PART

### **AND:**

..... represented by ..... Chief Executive Officer (hereinafter called the Contractor(s), which term shall unless excluded by or is repugnant to the context be deemed to include its heirs, representatives, successors and assigns of the contractor ON THE SECOND PART.

### **Preamble**

WHEREAS the Principal intends to award, under laid down organizational procedures, contract for ..... of ITI Limited. The Principal, values full compliance with all relevant laws of the land, regulations, economic use of resources and of fairness/ transparency in its relations with its Contractor(s).

In order to achieve these goals, the Principal has appointed an Independent External Monitor (IEM), who will **monitor** the tender process and the execution of the contract for compliance with the principles as mentioned herein this agreement.

WHEREAS, to meet the purpose aforesaid, both the parties have agreed to enter into this Integrity Pact the terms and conditions of which shall also be read as integral part and parcel of the Tender Documents and contract between the parties.

### **NOW THEREFORE, IN CONSIDERATION OF MUTUAL COVENANTS STIPULATED IN THIS PACT THE PARTIES HEREBY AGREE AS FOLLOWS AND THIS PACT WITNESSETH AS UNDER:**

#### **SECTION 1 – COMMITMENTS OF THE PRINCIPAL**

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - a. No employee of the Principal, personally or through family members, will in connection with the tender for or the execution of the contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the personal is not legally entitled to.
  - b. The Principal will, during the tender process treat all bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all bidder(s) the same information and will not provide to any bidder(s) confidential/additional information through which the bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - c. The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employee, which is a criminal offence under IPC/PC Actor if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary action as per its internal laid down Rules/ Regulations.

#### **SECTION 2 – COMMITMENTS OF THE BIDDER/CONTRACTOR**

- 2.1 The Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself observe the following principles during the participation in the tender process and during the execution of the contract.
  - a. The contractor(s) will not, directly or through any other person or firm offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain

in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- b. The contractor(s) will not enter with other contractors into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- c. The contractor(s) will not commit any offence under IPC/PC Act, further the contractor(s) will not use improperly, for purposes of competition of personal gain, or pass onto others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Contractor(s) of foreign origin shall disclose the name and address of the agents/representatives in India, if any. Similarly, the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any.
- e. The Contractor(s) will, when presenting the bid, disclose any and all payments made, are committed to or intend to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- f. The Contractor(s) will not bring any outside influence and Govt bodies directly or indirectly on the bidding process in furtherance to his bid.
- g. The Contractor(s) will not instigate third persons to commit offences outlined above or to be an accessory to such offences.

### **SECTION 3 – DISQUALIFICATION FROM TENDER PROCESS & EXCLUSION FROM FUTURE CONTRACTS**

- 3.1 If the Contractor(s), during tender process or before the award of the contract or during execution has committed a transgression in violation of Section 2, above or in any other form such as to put his reliability or credibility in question the Principal is entitled to disqualify Contractor(s) from the tender process.
- 3.2 If the Contractor(s), has committed a transgression through a violation of Section 2 of the above, such as to put his reliability or credibility into question, the Principal shall be entitled exclude including blacklisting for future contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Principal taking into consideration the full facts and circumstances of each case, particularly taking into account the number of transgression, the position of the transgressor within the company hierarchy of the Contractor(s) and the amount of the damage. The exclusion will be imposed for a period of minimum one year.
- 3.3 The Contractor(s) with its free consent and without any influence agrees and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground including the lack of any hearing before the decision to resort to such exclusion is taken. The undertaking is given freely and after obtaining independent legal advice.
- 3.4 A transgression is considered to have occurred if the Principal after due consideration of the available evidence concludes that on the basis of facts available there are no material doubts.
- 3.5 The decision of the Principal to the effect that breach of the provisions of this Integrity Pact has been committed by the Bidder(s)/ Contractor(s) shall be final and binding on the Bidder(s)/ Contractor(s), however the Bidder(s)/ Contractor(s) can approach IEM(s) appointed for the purpose of this Pact.
- 3.6 On occurrence of any sanctions/ disqualifications etc arising out from violation of integrity pact Bidder(s)/ Contractor(s) shall not entitled for any compensation on this account.
- 3.7 subject to full satisfaction of the Principal, the exclusion of the Contractor(s) could be revoked by the Principal if the Contractor(s) can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption preventative system in his organization.

### **SECTION 4 – PREVIOUS TRANSGRESSION**

- 4.1 The Contractor(s) declares that no previous transgression occurred in the last 3 years immediately before signing of this Integrity Pact with any other company in any country conforming to the anti-corruption/ transparency International (TI) approach or with any other Public Sector Enterprises/ Undertaking in India of any Government Department in India that could justify his exclusion from the tender process.
- 4.2 If the Contractor(s) makes incorrect statement on this subject, he can be disqualified from the tender process or action for his exclusion can be taken as mentioned under Section-3 of the above for transgressions of Section-2 of the above and shall be liable for compensation for damages as per Section-5 of this Pact.

### **SECTION 5 – COMPENSATION FOR DAMAGE**

- 5.1 If the Principal has disqualified the Bidder(s)/Contractor(s) from the tender process prior to the award according to Section 3 the Principal is entitled to forfeit the Earnest Money Deposit/Bid Security/ or

demand and recover the damages equitant to Earnest Money Deposit/Bid Security apart from any other legal that may have accrued to the Principal.

- 5.2 In addition to 5.1 above the Principal shall be entitled to take recourse to the relevant provision of the contract related to termination of Contract due to Contractor default. In such case, the Principal shall be entitled to forfeit the Performance Bank Guarantee of the Contractor or demand and recover liquidate and all damages as per the provisions of the contract agreement against termination.

#### **SECTION 6 – EQUAL TREATMENT OF ALL BIDDERS/ CONTRACTORS**

- 6.1 The Principal will enter into Integrity Pact on all identical terms with all bidders and contractors for identical cases.
- 6.2 The Bidder(s)/Contractor(s) undertakes to get this Pact signed by its sub-contractor(s)/sub-vendor(s)/associate(s), if any, and to submit the same to the Principal along with the tender document/contract before signing the contract. The Bidder(s)/Contractor(s) shall be responsible for any violation(s) of the provisions laid down in the Integrity Pact Agreement by any of its sub-contractors/sub-vendors/associates.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this Integrity Pact or violate its provisions.

#### **SECTION 7 – CRIMINAL CHARGES AGAINST VIOLATING BIDDER(S)/ CONTRACTOR(S)**

- 7.1 If the Principal receives any information of conduct of a Contractor(s) or sub-contractor/sub-vendor/associates of the Contractor(s) which constitutes corruption or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer of the Principal for appropriate action.

#### **SECTION 8 – INDEPENDENT EXTERNAL MONITOR(S)**

- 8.1 The Principal appoints competent and credible Independent External Monitor(s) for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.
- 8.2 The Monitor is not subject to any instructions by the representatives of the parties and performs his functions neutrally and independently. He will report to the Chairman and Managing Director of the Principal.
- 8.3 The Contractor(s) accepts that the Monitor has the right to access without restriction to all product documentation of the Principal including that provided by the Contractor(s). The Bidder(s)/Contractor(s) will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The Monitor is under contractual obligation to treat the information and documents Contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the project provided such meeting could have an impact on the contractual relations between the Principal and the Contractor(s). As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in specific manner, refrain from action or tolerate action.
- 8.5 The Monitor will submit a written report to the Chairman & Managing Director of the Principal within a reasonable time from the date of reference or intimation to him by the principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.6 If the Monitor has reported to the Chairman & Managing Director of the Principal a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman & Managing Director of the Principal has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- 8.7 The word ‘**Monitor**’ would include both singular and plural.
- 8.8 Details of the Independent External Monitor appointed by the Principal at present is furnished below: -

ShriJaveed Ahmad, IPS (retd.)  
M-1101, Shalimar Gallant Apartment  
VigyanpuriMahanagar  
LUCKNOW – 226 006

Any changes to the same as required / desired by statutory authorities is applicable.

#### **SECTION 9 – FACILITATION OF INVESTIGATION**

- 9.1 In case of any allegation of violation of any provisions of this Pact or payment of commission, the Principal or its agencies shall be entitled to examine all the documents including the Books of Accounts of the Bidder(s)/Contractor(s) and the Bidder(s)/Contractor(s) shall provide necessary information and

2) ..... 2) .....



**OTHER TERMS & CONDITIONS**

1. The work to be governed by this contract shall be cover designing, manufacturing, supplying, commissioning, transportation till destination, safe custody as site, insurance, erection, testing and commissioning of the work as per work schedule duly supported with specification.
2. The vender should provide complete drawing/ details of civil work to be done by ITI Limited, Rae Bareli & input power requirement, well in advance.
3. ITI representative may conduct pre-delivery inspection at the vendor's works.
4. The vendors shall arrange & provide all consumable items for Installation, testing and commissioning of the 1250 KVA, 11KV HT DG sets at site free of cost. The vendor without any extra cost shall provide any additional item mandatory for installation, testing & commissioning of HT DG Sets but not indicated in BOQ. Any other items apart from BOQ, required for completion of project will be on venders on account.
5. The vendor should give technical details of all parts/ modules of the supplied HT DG set along with their specifications details, drawing and part. No. etc. with technical brochure/ catalogue & addresses of the OEM/ suppliers of spares parts.
6. The vender should assure the availability of spares, consumable & service support to next 10 years for the supplied HT DG sets.
7. The vender will provide operation and maintenance manual, spares parts list etc, of the DG sets as erected at the site and drawing of parts of the plant showing schematic diagram of refrigeration circuit, electrical & electronics circuit in duplicate at the time of supply of the plant.
8. The vendor shall provide a warranty for a minimum period of two year from the date of commissioning for successful/ trouble free running of HT DG Sets. Any breakdown during warranty period shall be attended by the vendor free of cost within 24 hours of informing the complaint and replace the part, if required at his own expenses including suitable spares.

## **Annexure – II**

### **PRE-QUALIFICATION REQUIREMENT**

1. Party's must have executed similar or more capacity and value work in the last three years preferably in PSU, Railway, MES, CPWD and other Government departments.
2. Necessary completion certificates in support of above may be submitted along with the request,
3. Bank solvency certificate for executing work of the order of Rs. 4.0 cr. need to be submitted.

**Annexure-III**

**Bid Securing Declaration Form**

<Letterhead of the bidder>

<Date>

To ITI LIMITED RAEBARELI,  
SULTANPUR ROAD, RAEBARELI-229010

I/We. The undersigned, declare that:

I/We understand that bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you/ MeitY for a period of two years from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity or its extended period, if any; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Bank Guarantee, in accordance with the Instructions to Bidders.

c) If the bidder is found indulging in any corrupt, fraudulent or other malpractice in respect of the bid; or

d) If there is a discrepancy between words and figures quoted by the bidder and the bidder does not accept that the amount in words prevails over amount in figure.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a consortium, the Bid Securing Declaration must be in the name of all partners to the consortium that submits the bid)



Name of Firm

**A> Offer for DG SETS**

[illegible]