

**TENUGHAT VIDYUT NIGAM LIMITED  
(A GOVT. OF JHARKHAND UNDERTAKING)  
HINOO, DORANDA, RANCHI-834002**

**Website: [www.tvnlonline.com](http://www.tvnlonline.com)**

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**NIT No. 46/EM/P/TVNL/RAN/2016-17**



**TENDER DOCUMENT**

**SUBJECT: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 1250 KVA  
SILENT DG SET AT TENUGHAT TPS.**



# Tenughat Vidyut Nigam Limited

(A Govt. of Jharkhand Undertaking)  
Hinoo, Doranda, Ranchi-834002, Jharkhand  
Fax: 0651-2251205

Letter No. 1641/2016-17

Dated 07.02.2017

## NOTICE INVITING TENDER

**NIT NO.46/EM/P/TVNL/RAN/2016-17**

On behalf of Tenughat Vidyut Nigam Limited (TVNL), Ranchi sealed tenders in two parts (Part-I Technical & Commercial Bid, Part-II Price Bid) containing three envelopes A, B & C (Requisite cost of Tender Document & Earnest Money of specific value in envelope 'A', Technical & Commercial Bid in envelope 'B' and Price Bid in envelope 'C') are invited from experienced, reputed and financially sound firms for Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set of reputed make engine at Tenughat TPS, the details of which are as follows:

Description of Item	Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.
Cost of Tender Documents (Non Refundable)	Rs. 15, 000/- (Rupees fifteen thousand) only.
Amount of EM to be deposited in the form of DD/BG	Rs. 2.47 Lakh
Downloading of Tender Paper	From <b>11.02.2017</b>
Last Date & Time for receipt of Tender Paper	<b>07.03.2017</b> , upto 14:00 Hrs.
Date & Time of Opening of Part-I of Tender	<b>07.03.2017</b> , at 16:00 Hrs.
Place of submission of bid documents and address for communication	Electrical Superintending Engineer (C&M), Tenughat Vidyut Nigam Limited, Hinoo, Ranchi-834002.

### 1. The Tenderer should have the following Qualifying Requirements (QR)

- a. The bidders should have status of manufacturer of Silent DG Set of reputed make engine i.e. M/s Cummins, M/s Kirloskar, M/s Mahindra & Mahindra, M/s Ashok Leyland, M/s Eicher, M/s Greaves, M/s Escorts, M/s Perkins etc.) or their authorized Dealer/Channel Partner. In case of authorized Dealer/Channel Partner, the letter of authorization from manufacturer should be Work/Tender specific. The bidder must visit the site before submitting their bid to fulfill technical requirements of Units at TTPS.
- b. The bidder should have experience of having successfully completed similar works during last seven years ending last day of month previous to the one in which applications are invited. The successful completed similar work shall be either of the following :
  - i. Three similar completed works costing not less than Rs. 49.30 Lakh.  
OR
  - ii. Two similar completed works costing not less than Rs. 61.63 Lakh.  
OR
  - iii. One similar completed works costing not less than Rs. 98.61 Lakh.

Similar work means the bidder must have working experience of successfully executing the Supply of Silent DG Set in any Govt. / Semi Govt. / CPSU/SPSU/SEB's/Reputed Private Organization.

- c. The average annual financial turnover of the bidder during the last 03 (three) financial years, ending 31<sup>st</sup> March of the previous financial year, should be at least Rs. 36.98 lakh.

- d. The bidder should submit authenticated copies of Profit & Loss and Balance sheet of last three financial years. In case where audited results for the last financial year are not available, certification of financial statements from a practicing Chartered Accountant shall also be considered acceptable.
2. The tender document is to be downloaded from the TVNL website [www.tvnlonline.com](http://www.tvnlonline.com). The cost of tender document shall be deposited at the time of submission of tender paper in the shape of Bank Draft issued by any Nationalized/Scheduled Bank in favour of "TENUGHAT VIDYUT NIGAM LIMITED" payable at Ranchi. Tender shall not be considered without cost of tender document. Any type of tempering/alteration with tender document shall not be allowed and offer, if submitted so, will be summarily rejected.
3. Tender without Earnest Money shall not be considered. Offers shall be accompanied with the cost of tender document and earnest money deposit (EMD) of requisite value as specified above in a separate envelope 'A' failing which offers are liable for rejection. EMD may be furnished in the form of Demand Draft/ Bank Guarantee from any Indian Nationalized Bank/ Schedule Commercial Bank in favour of "TENUGHAT VIDYUT NIGAM LIMITED" payable at Ranchi. The Bank Guarantee should remain valid for 12 months.
4. The earnest money will be forfeited on revocation of tender before expiry of validity of the tender or on refusal to enter into the contract after the award is made by TVNL to the bidder.
5. Any corrigendum/Addendum/Extension of bid opening date and cancellation of NIT will be published through our website [www.tvnlonline.com](http://www.tvnlonline.com) only and not through newspaper. The bidders are requested to visit our website regularly for any addendum/corrigendum/extension till opening of NIT.
6. The due date of bid opening as mentioned in the tender will remain firm. However, in case of unforeseen circumstances or due to administrative reasons the bids are not opened on the due date, the same shall be opened on the next working day at the same time. In case the last date of submission of bids is declared as holiday, the bids received up to the time of closing of bids on the next working day shall be considered for opening.
7. TVNL reserves the right to reject any / all offer increase/decrease or to distribute the quantity among the bidders without assigning any reason thereof.

(R. Ranjan)  
Electrical Superintending Engineer (C&M)

**TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002**

**NIT No. 46/EM/P/TVNL/RAN/2016-17**

**BILL OF QUANTITY PART- I (TECHNICAL & COMMERCIAL)**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

S.N.	Particulars	Details to be furnished by the Bidder (Enclose separate sheets if required)	Flag No.	Page No.
1.	Name of the Bidder (Enclose Letter Head of firm)		I	
2.	Address of Bidder with Telephone, Fax, E-mail		II	
3.	Status of the Bidder (whether Manufacturers) (Enclose copy of certificate)		III	
4.	Whether the firm are a Govt. Organ./Govt. U/T.		IV	
5.	Whether the firm are registered with NSIC/SSI(Jharkhand)/ DGS&D. (enclose copy of certificate)		V	
6.	Experience of Bidder (Attach copy of purchase order of similar work and its successful completion certificate during last seven years as per Sl. No. 1.c of QR)	Purchase Order No..... Dated..... Completion Certificate Dated..... Purchase Order No..... Dated..... Completion Certificate Dated..... Purchase Order No..... Dated..... Completion Certificate Dated.....	VI	
7.	Financial Credibility/ Capacity (Attach Bank Solvency Certificate)		VII	
8.	Average annual financial turnover of bidder during the last 03 years (Attach audited Balance Sheet & P/L Account for last three years ending 31 <sup>st</sup> March, 2016)	Average annual financial turnover of bidder during the last 03 (three) yearsRs.....  Annual Turnover FY 2015-16: Rs.....  FY 2014-15: Rs.....  FY 2013-14: Rs.....	VIII	
9.	Name & Designation of Authorized Signatory (Attach Power of Attorney if applicable)		IX	

<b>10.</b>	Nature of Firm (Proprietorship/Partnership Ltd./Public Sector) (Attach proof)		<b>X</b>	
<b>11.</b>	Permanent Account Number (PAN) (Attach proof)		<b>XI</b>	
<b>12.</b>	Service Tax Registration Number (Attach proof)		<b>XII</b>	
<b>13.</b>	Sales Tax/Value Added Tax Registration Number / TIN (Attach proof)		<b>XIII</b>	
<b>14.</b>	Particulars of Earnest Money (DD No. /BG No. & Date)		<b>XIV</b>	
<b>15.</b>	Particulars of Cost of Tender Document( BOQ) (BG/DD No. & Date)		<b>XV</b>	
<b>16.</b>	Specification of the material to be supplied :		<b>XVI</b>	
<b>17.</b>	Quantity both in figure & in words :		<b>XVII</b>	
<b>18.</b>	Payment Terms	Whether you are accepting our payment terms clause at Sl.no.10 of PTC? Yes / No	<b>XXII</b>	
<b>19.</b>	Transit Insurance charges	The TVNL have its own marine policy with insurance company.	<b>XXIII</b>	
<b>20.</b>	Delivery period		<b>XXV</b>	
<b>21.</b>	Validity period of the offer (minimum 120 days )		<b>XXVI</b>	
<b>22.</b>	Guarantee period of the material to be supplied		<b>XXVII</b>	
<b>23.</b>	Whether you will deposit Security Money. If not reasons thereof with documentary proof of exemption:		<b>XXVIII</b>	
<b>24.</b>	Whether you will furnish the Performance Guarantee		<b>XXIX</b>	
<b>25.</b>	Inspection		<b>XXX</b>	
<b>26.</b>	Do you fulfill the pre-requisite qualification?		<b>XXXI</b>	
<b>27.</b>	Whether you accept all term & conditions of B.O.Q.		<b>XXXII</b>	
<b>28.</b>	Penalty		<b>XXXIII</b>	
<b>29.</b>	Any extra information		<b>XXXIV</b>	

(Signature & Seal of Bidder)

**TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002**

**NIT NO.46./EM/P/TVNL/RAN/2016-17**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

**INSTRUCTIONS TO BIDDERS**

**Each of these instructions must be read carefully and followed strictly. Failure in complying with any of these would render your offer liable for rejection.**

<b>01</b>	The offer should be in sealed envelope and preferably be sent by Registered Post / Speed Post. Intending bidders are advised to post their offers well in time so as to reach us before bid due date and time. Offers received after the due date and time of submission of bids shall not be accepted.
<b>02</b>	Offer must be preferably typed and submitted in duplicate.
<b>03</b>	The enquiry no., bid due date and details of earnest money deposit (EMD) should be super scribed on the envelope.
<b>04</b>	In case of any change in the name of the company/address viz-a-viz what has been indicated in the tender enquiry, bidders are requested to intimate such changes in advance supported by relevant documents failing which the offer may be treated as unsolicited and run the risk of being not opened.
<b>05</b>	The quoted price must be written in both figures and words in capital letters. Alterations if any should be made clearly by crossing the whole entered rate and last corrections should be attested by the tenderer with their full signature and stamp. In no case there should be overwriting and all tenders with such overwriting shall be liable for rejection. In case of any discrepancy between figures and words, the rates in words shall be considered for the purpose of evaluation.
<b>06</b>	Offers shall be accompanied with earnest money deposit (EMD) of requisite value as specified in a separate envelope failing which offers are liable for rejection. EMD may be furnished in any of the following forms: Through Demand Draft drawn on any Nationalized bank/Schedule commercial bank in favour of "TENUGHAT VIDYUT NIGAM LIMITED" payable at Ranchi. Bank Guarantee from a Nationalized bank/Schedule commercial bank irrevocable & operative till 30 days after the validity of the offer or extended validity of the offer. The earnest money will be forfeited on revocation of tender before expiry of validity of the tender or on refusal to enter into the contract after the award is made by TVNL to the tenderer. Tenders without Earnest Money shall not be considered other than NSIC/SSI registered units. A copy of such registration has to be furnished for claiming exemption from EMD. Exemption from the Earnest Money to NSIC/SSI units will be considered as per Govt. Circulation. SSI units of Jharkhand will be given preference as per Govt. rule.
<b>07</b>	The rates quoted shall be FOR TTPS, Lalpania basis. However, if the vendor quotes on ex-works/ dispatching station basis the freight charges at the rate of 4% shall be loaded on quoted ex - works/dispatching station basic price. Material is to be dispatched through authorized transporter of TVNL on Freight to pay basis. If the vendor quotes on FOR destination/FOR dispatching station/ex-works but freight paid up to destination basis ,packing and forwarding and freight components should be shown separately as ED and ST shall be payable on Ex-works price only and shall not be applicable on freight charges.
<b>08</b>	Offer should be strictly as per specification/drawings/samples as spelt out in the enquiry. Deviations there from, if any, shall be clearly spelt out by the tenderer with reason. In case no such deviations are indicated, it shall be taken for granted that the item has been offered strictly as per requirements given in the enquiry.
<b>09</b>	Tenderer should base his offer as per delivery schedule in the enquiry. In case of any deviation, the tenderer should quote his best, realistic delivery. The same shall be specific and guaranteed. The delivery period shall commence from the date of Letter Of Intent/Purchase Order, whichever is the first intimation of acceptance of vendor's offer. Final dates of delivery shall be the date of dispatch of materials evidenced by the relevant Goods Receipt Note (GR). Wherever stage inspection or Pre-dispatch inspection is involved, the vendor shall take account 21 days notice to TVNL for deputing inspector. The delivery period shall be inclusive of the time taken for such inspection. For delays beyond the contractual delivery period, provisions of TVNL General Purchase Conditions shall apply.
<b>10</b>	TVNL reserves the right to accept or reject any/all offers increase/decrease the tendered quantity or distribute the quantity among the bidders without assigning any reason thereof.
<b>11</b>	In case of non submission of bid, tenderer may sent a regret letter and return all bid documents/drawings etc. if any, enclosed with the bid.
<b>12</b>	Order placed as a result of this enquiry shall be subject to the purchasers General Purchase Conditions, a copy of which enclosed. Tenderer is requested to confirm acceptance in toto in their offer.
<b>13</b>	All tenderer shall submit along with their bid latest valid Income Tax Clearance Certificate or else their bid are liable for rejection.

14	Make/Brand of the item offered shall be specified failing which offers are liable for rejection. One copy of detailed descriptive literature/pamphlets shall be enclosed along with the offer.
15	Our standard terms of payments are 100% payment within 30 days of receipt and acceptance of the materials at our stores.
16	The prices quoted shall be exclusive of Excise duty and sales Tax. The rate and nature of sales tax applicable shall be shown separately. Sales Tax will be paid to the seller at which it is liable to be assessed or has actually been assessed on the date of supply provided the transaction of sale is liable to sales tax. In case quoted goods are subject to Excise duty, the vendor shall have to furnish documentary evidence as proof of having paid the same. Requirement of concessional sales tax form if any may be clearly indicated in the offer. In case of variable excise duty, maximum quantum of excise duty will be loaded for comparison purposes.
17	If the tenderer is on DGS & D Rate contract for enquired items, a copy of the same should be enclosed along with the offers. Units registered with SSI/NSIC shall indicate the registration number and enclosed copy of registration certificate.
18	Test Certificate of Manufacturer/Govt. Test House shall be required to be submitted wherever so stipulated.
19	Tenderers shall certify that the quoted rates are applicable to Govt. Depts./Public Sector Undertakings.
20.	The quoted rates must be firm till the complete execution of the contract.
21	Tenderers are requested to fill in the enclosed proforma for Terms and Conditions and submit the same along with their offer in DUPLICATE.
22	The list of customers to whom tenderer had supplied similar equipment in the past along with the purchase order copy, performance certificate if any, should be furnished.
23	In case the material offered is of ISI mark/tested at any Govt. recognized test house, copies of relevant test certificate should be enclosed with the offer.
24	Tenders will be opened in the presence of bidder or their authorized representative themselves.
25	Bidder should note that printed terms and conditions shall not be considered for evaluation purposes unless otherwise specifically mentioned in the offer itself.
26	Bidders should quote their prices excluding insurance charges as all transit insurance will be covered by TVNL open policy. To this effect loading of 0.15% shall be done on their offer towards insurance charges.
27	In case any clause is not acceptable to the Tenderers', the same should be specifically brought out in the bid with a categorical confirmation that all other clauses are acceptable to the bidder. If no mention is made in this regard, it shall be presumed that all the clauses mentioned herein above are acceptable to bidder
28	The offers should be valid for a minimum period of 120 days from the date of bid opening.

**Note: Bidders are requested to visit work site before submission of bid for assessment of actual work involved.**

**(Signature & Seal of Bidder)**

**TENUGHAT VIDYUT NIGAM LIMITED**  
**HINOO, DORANDA, RANCHI-834002**

**NIT NO.46/EM/P/TVNL/RAN/2016-17**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

<b>GENERAL PURCHASE CONDITIONS</b>	
<b>01</b>	<b>Definition:</b> The following terms and expressions used herein shall have the meaning as indicated therein: <b>Supplier/ Vendor:</b> Shall mean the individual firm, Company or Corporation whether incorporated or otherwise to whom this Purchase Order is addressed and shall include its permitted assigns and successors. <b>Purchaser/ Owner:</b> Shall mean Tenughat Vidyut Nigam Limited, a company incorporated in India under the Companies Act. 1956, having its registered office at Hinoo, Doranda, Ranchi, and shall include its permitted successors and assigns.
<b>02</b>	<b>Reference:</b> The number of this Purchase Order must appear on all correspondence, drawings, invoices, packing and shipping documents and on all documents or papers connected with Purchase Order.
<b>03</b>	<b>Specifications and Drawings:</b> Any information, details etc. called for in the specification and not shown in the drawing and vice versa shall have the same effect and meaning as if called for and shown both in the specification and drawings. In case of conflict between the specifications and drawings, the decision of the Purchaser or his duly authorized representative shall be final and binding.
<b>04</b>	<b>Price Basis:</b> Price mentioned in the Purchase Order shall be firm and not subject to escalation till the execution of the complete order and its subsequent amendments accepted by the vendor even though the completion/ execution of the order may take longer time than the delivery period specified and accepted in the Purchase Order.
<b>05</b>	<b>Taxes, Levies and Duties:</b> Sales Tax, Levies and any other duties payable shall be shown separately in the invoice. This shall be to the account of the Purchaser/ Owner, unless otherwise mentioned in the Purchase Order.
<b>06</b>	<b>Inspection/ Checking testing:</b> As per clause no. 07 of PTC.
<b>07</b>	<b>Access to Vendors Premises:</b> The Owner and/ or his authorized representative shall be provided access to vendors and/ or his sub vendors premises, at any time during the pendency of the Order, for expediting, inspection, checking etc. of work.
<b>08</b>	<b>Removal of Rejected Goods and Replacement:</b> If upon delivery, whether inspected and approved earlier or otherwise, the material/ equipment is not in conformity with the specifications, the same shall be rejected by the Purchaser or his duly authorized representative and notification to this effect will be issued to the vendor normally within 30 days from the date of receipt of the material at the Work Site Office/Stores.
<b>09</b>	<b>Terms of Payment:</b> The payment will be made by the Owner to the vendor on accordance with the terms and conditions specified in the Purchase Order. All payments shall normally be made from the office of the purchaser situated at Hinoo-Doranda-Ranchi:834002
<b>10</b>	<b>Additions/ Alterations/ Modifications:</b> The Owner reserves the right to make additions/ alteration/ modifications to the quantity of the items in the Purchase Order. The vendor shall supply such quantities also at the same rate as originally agreed to and incorporated in the Purchase Order. If however, the additional work is at variance in design, size and specifications and not already covered by the Purchase Order or the amendments therein, the rates for such additional work shall be negotiated and mutually agreed.
<b>11</b>	<b>Delivery Schedule:</b> Time is the essence of this Order and no variation shall be permitted in the delivery time/ delivery schedule mentioned in the Order. Delivery of the equipment/ materials described shall be deemed to constitute acceptance of this Order and terms and conditions by the vendor at the price specified.
<b>12</b>	<b>Liquidated Damages for Delay in Delivery:</b> In case of any delay in the execution of the Order beyond the stipulated date of delivery/ delivery schedule including any extension permitted in writing, the Owner reserves right to recover from the vendor a sum equivalent to 0.5% of the value of the delay materials/ equipment for each week of delay and part thereof subject to a maximum of 5% of the total value of the Order. Alternatively, the Purchaser reserves the right to purchase the material/ equipment from elsewhere at the sole risk and cost of the vendor and recover all such extra cost incurred by the purchaser in procuring the material by the above procedure. Alternatively the purchaser may cancel the Order completely or partly without prejudice to his right under the alternatives mentioned above. In event of recourse to alternative 12.2 and 12.3 above, the Owner will have the right to repurchase the stores, which are ready available to meet the urgency in requirement caused by vendors failure to comply with the schedule delivery irrespective of the fact whether the materials/ equipments are similar or not.
<b>13</b>	<b>Source of Supply:</b> The vendor shall insure that the indigenous capacity is utilized to the fullest extent possible in execution of this Order. Where the imports are unavoidable, all such items be imported by the vendor in good time against his own import license without effecting the contractual delivery schedule.
<b>14</b>	<b>Patent Rights:</b> Royalties and fees from patents covering material/ equipment or processes used in executing the work shall be to the account of the vendor. The vendor shall satisfy all demands that may be made at any time for such



	royalties and fees and he alone shall be liable for damages, infringement and shall keep the purchaser indemnified in that regard in the event of any equipment/ material or part thereof supplied by the vendor is involved in any suit or other proceedings held to constitute infringement and its use is enjoyed, the vendor shall, at his own expenses, either procure for the purchaser the right to continue the use of such equipment/ material replace it with a non infringing material/ equipment or modify it so it become non-infringing.
15	<b>Force Majeure:</b> Vendor shall not be considered in default if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil wars, strikes, fire, frost, floods, riot and acts of unsurpassed power. Only those causes which have duration of more than 7 days shall be considered cause of force majeure. A notification to this effect duly certified by local chamber of commerce/ statutory authorities shall be given by the vendor to the Owner by registered letter. In the event of delay due to such causes, delivery schedule will be extended for a length of time equal to the period of force majeure or at the option of the Owner, the order may be cancelled. Such cancellation, would be without any liability whatsoever on the part of the Owner. In the event of such cancellation, the vendor shall refund any amount advanced or paid to the vendor by the Purchaser and deliver back any materials issued to him by the Purchaser and release facilities, if any provided by the Purchaser.
16	<b>Cancellation:</b> The Owner reserves the right to cancel the Order in the part or in full by giving one week advance notice thereby if: The vendor fails to comply with any of the terms of the order. The vendor becomes bankrupt or goes into liquidation. The vendor makes general assignment for the benefit of the creditors, and any receiver is appointed for the property owned by the vendor.
17	<b>Waiver:</b> Any waiver by the owner of any breach of the terms and conditions of the order shall not be constitute any subsequent breach of the waiver of any other right or conditions.
18	<b>Compliance of Regulations:</b> The vendor shall warrant that all Goods and/ or services covered by this Purchase order shall have been produced, sold, dispatched ,delivered, tested and commissioned in strict compliance with all applicable laws, regulations including industries (development & Regulations) act. 1951 and any amendment there under, labour agreements, working conditions and technical codes and requirement as applicable from time to time. The vendor should execute and deliver such documents as may be needed by the Purchaser in evidence of compliance. All laws, rules and regulations required to be reference. Any liability arising out of contravention of an of the laws on executing this order shall be the sole responsibility of the vendor and the owner shall not be responsible in any manner whatsoever.
19	<b>Sub- Letting &amp; Assignment:</b> The vendor shall not sub-let transfer or assign any part of this Purchase Order, without the prior written consent of the Purchaser. Such assignments or subletting or transfer shall not relieve the vendor from any obligation, duty and responsibility under his Purchase Order. Any assignment, transfer or subletting without the prior written approval of the owner shall be void. The Purchaser shall have the right to cancel the order and to purchase the goods from elsewhere and the supplier shall be liable to the purchaser for any loss or damage which the purchaser may sustain in consequence or arising out of such purchase and the vendor shall indemnify such loss or damage to the owner.
20	<b>Vendors Drawing &amp; Date:</b> All Drawings, data and documentation in respect of the ordered items are an integral part of the Purchase Order. The vendor will furnish all such drawings, data and documentation to the Purchaser. The schedule for submission of these documents by the vendor and the required number of copies shall be specified by Purchaser. The vendor shall ensure strict compliance to this schedule.
21	<b>Information Provided by the Purchaser:</b> All Drawings, data and documentation that are given to the vendor by the Purchaser for the execution of the order shall be the property of the Purchaser and shall be returned by the vendor on demand by the purchaser. The vendor shall not make use of any of the above documents for any purpose at any time except for the purpose of executing the order to the Purchaser. The vendor shall not disclose any of the information given by the Purchaser to any person, firm, body, corporate and/ or authority and shall use all endeavors to ensure that above information is kept confidential. All such information shall also remain the absolute property of the Purchaser.
22	<b>Spare Parts, Oils &amp; Lubricants:</b> Wherever applicable, the vendor shall furnish item wise price list of spare parts required for two years operation of the equipment ordered. The vendor shall also provide the necessary instructions and drawings to identify the spare part numbers and their location as an interchange ability chart. The vendor shall recommend the quality of oils and lubricants required to be used in the operation of the equipment supplied under this Order for a continuous operation for a period of at least one year.
23	<b>Vendor Liability:</b> Vendor hereby accept full responsibility and indemnifies the Purchaser and shall hold the Purchaser harmless from all acts of omissions and commissions on the part of the vendor, his agents, his subcontractors and employees in execution of the Order. The vendor also agrees to defend and hereby undertakes to indemnify the Purchaser and also hold him harmless from any and all claims for injury to or death of any and all persons including but not limited employees and for damage to the property arising out of or in connection with the performance of the work under the Purchase Order.
24.	<b>Splitting of Quantity:</b> The owner reserves the right to splitting of quantity into more than one bidder at the time of placement of order. The distribution of order will be in the ascending order (starting from L <sub>1</sub> ) and the lowest bidder will get the more weightage in distribution of quantity.

(Signature & Seal of Bidder)

**TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002.**

**NIT NO.46/EM/P/TVNL/RAN/2016-17**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

<b>PRINCIPAL TERMS AND CONDITIONS (PTC )</b>	
<b>01</b>	<b>Acceptance of tenders:</b> The purchaser is not bound to accept the lowest tender or to assign any reason for the rejection of the lowest tender. The purchaser reserves the right to extend the due date and to reject any/ all the tenders or to increase / reduce/ distribute the quantity of tender without assigning any reason thereof.
<b>02</b>	<b>Price:</b> Rate should be quoted F.O.R, TTPS (stores), Lalpania.
<b>03</b>	<b>Packing &amp; forwarding:</b> The Tenderer should ensure the materials are securely packed to safeguard against any damage in transit. If the Tenderer wants extra payment for packing & forwarding/ handling etc., the same must be clearly mentioned in the tender without whom the claim for extra amount will not be considered.
<b>04</b>	<b>Excise duty:</b> Central Excise duty if chargeable extra should be specifically quoted, failing which no claim for the same will be entertained and price quoted will be deemed to have included of same. Excise duty if quoted will be paid extra only on production of documentary evidence.
<b>05</b>	<b>Sales tax:</b> Sales tax will be paid extra as admissible under rule at concessional rate against CST/ JST declaration form. The Tenderers are required to indicate their VAT/sales tax registration no. No tender will be considered if this no. is not mentioned.
<b>06</b>	<b>Security deposit:</b> i) The successful Tenderer shall have to deposit security equal to 5% of the order value (including earnest money which will be retained as security) within the date specified in the acceptance of the tender/ purchase order. ii) Security money (balance amount after deduction of earnest money) will be accepted as Bank draft/ Bank Guarantee in the prescribed format not adjustable against running bill. The same will be released after completion of the guarantee period.
<b>07</b>	<b>Inspection:</b> The material will be got inspected by the authorized inspector of TVNL.
<b>08</b>	<b>Rejection of defective materials:</b> Items found defective or inferior in quality and not as per tender specification shall be rejected and replacement will have to be made by the supplier free of cost.
<b>09</b>	<b>Test Certificate:</b> - The certificate of technical specification etc. issued by the authorized inspector of TVNL shall have to be submitted along with the consignment.
<b>10</b>	<b>Payment Terms:</b> 80% payment will be made by cheque / RTGS on receipt of materials in good condition in our stores along with inspection report. Balance 20% payment of supply part along with 100% payment of Erection & Commissioning will be released after successful Erection & Commissioning. Payment shall be made by the paying authority on receipt of bill in triplicate duly verified by the consignee along with SRV provided Performance Guarantee and Security Deposit etc. have been furnished by the firm against supply items.
<b>11</b>	<b>Guarantee:</b> The material supplied shall be guaranteed against manufacturing defects, bad workmanship and unsatisfactory service for a period of 18 months from the date of dispatch or 12 months from the date of materials being put in service whichever is earlier. In the event of any manufacturing defect or bad workmanship and unsatisfactory service, the materials supplied will have to be replaced forthwith free of cost to TVNL.
<b>12</b>	<b>Performance Guarantee:</b> The supplier shall furnish a Bank Guarantee of 5% (five percent) of the order value in the prescribed Form of TVNL towards the Performance guarantee. The Bank Guarantee from any Nationalized Bank shall be furnished in this office within 25 days from the issue of this order and shall be valid up to guarantee period not to be adjusted against running bills.
<b>13</b>	<b>Delivery Period:</b> The items against this order should be delivered in good condition to the consignee within six months. However an early delivery will be highly appreciated.
<b>14</b>	<b>Penalty:</b> If materials are not supplied within delivery period, a penalty @ 0.5% per week maximum up to 5% of the total undelivered quantity of material will be imposed except under force majeure.
<b>15</b>	<b>Validity of Offers:</b> The tenders should remain open for acceptance for a Period of 120 days from the date of opening of Part-I unless otherwise specified.
<b>16</b>	<b>Paying Authority:</b> - The Accounts Officer, TVNL, Ranchi will be the Paying Authority.
<b>17</b>	<b>Late Receipt of the Tender:</b> Special attention of the bidder is invited about the receipt of the tender in time. Tenders received after the stipulated date and time due to any reason, whatsoever, shall not be considered. Bidders are requested to see that the tenders are delivered in the office before the prescribed date and time.
<b>18</b>	<b>Consignee:</b> EEE (Stores), TTPS, Lalpania, Bokaro will be the consignee of the items.
<b>19</b>	<b>Transit Insurance:</b> The consignment shall be insured before dispatch. The TVNL have its own marine policy with insurance company. The consignee must be informed and asked for the details of Insurance Company through which it would be insured before dispatch.
<b>20</b>	<b>Execution of Agreement:</b> The firm and his legally authorized representative having Power of Attorney will have to

	execute agreement with the undersigned within 25days of issue of order in the event of placement of order on them. The agreement will have to be prepared on a non-judicial stamp paper of Rs.50/- only on Nigam's format. Bank Guarantee against Security Deposit, Performance Guarantee etc. as per order will have to be furnished well before execution of agreement. Payment against supply will be made only after execution of agreement.
<b>21</b>	Jurisdiction of Court: - Any dispute between the purchaser and the Tenderer shall be settled in the civil court, Ranchi.
<b>22</b>	In case the terms and conditions of the bidder are found different from our BOQ, their price part may not be entertained.
<b>23</b>	These terms and conditions shall form a part of the contract.

**(Signature & Seal of Bidder)**

**TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002.**

**NIT NO.46/EM/P/TVNL/RAN/2016-17**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

**TECHNICAL SPECIFICATION FOR 1250KVA DG SET**

**DIESEL ENGINE.**

Diesel engine developing 1470 BHP at 1500 RPM under NTP conditions water cooled, four stroke. 16 cylinder, electric start, conforming to BS: 5514 with capacity of 10% over loading for one hour in twelve hours duration having the following technical specifications:-

**AIR INTAKE SYSTEM.**

- Air intake manifold.
- Dry type air cleaner.
- Vacuum indicator.

**EXHAUST SYSTEM.**

- Holset Turbocharger.
- S.S. flexible connection.
- Pulse Tuned Exhaust manifold.
- Residential silencer.

**COOLANT SYSTEM.**

- Engine water Pump.
- Radiator.
- Coolant additive concentrate.
- By pass thermostat.

**LUBRICATING SYSTEM.**

- Oil pan.
- Engine mounted lube oil pump.
- Full flow lube oil filter.
- Lube oil by pass filter.
- Plate type lube oil cooler.

**FUEL SYSEM.**

- PT fuel pump.
- STC injector.
- 24V DC solenoid coil.
- Replaceable fuel filter.

**STARTING SYSTEM.**

- 24V DC electric starter.
- 24V DC buttery charging alternator.

**INTEGRATED DG SET CONTROLLER.**

Microprocessor-based generator set monitoring metering and control system. The control provides an operator interface to the Genset, digital voltage regulation, digital governing and generator set protective functions. The integration of all the functions into a single control system provided enhanced reliability and performance compared to conventional control systems.

CONTROL	<ul style="list-style-type: none"> <li>• Run/Off/ Auto switch</li> <li>• Emergency stop</li> <li>• Manual Run/Stop Control switch</li> <li>• Idle/Run mode control</li> </ul>
METERINGINGINT.	<ul style="list-style-type: none"> <li>• Starting Battery Voltage</li> <li>• Lube Oil Pressure.</li> <li>• Engine Coolant Temperature.</li> <li>• Coolant Pressure.</li> <li>• Engine Rpm.</li> <li>• Operating Hours.</li> <li>• Number of Starts.</li> </ul>
	<ul style="list-style-type: none"> <li>• Current</li> </ul>

ELECTRICAL	<ul style="list-style-type: none"> <li>• Voltage</li> <li>• Frequency</li> <li>• KW</li> <li>• PI</li> <li>• KVA</li> </ul>
PROTECTION/WARNING ENGINE	<ul style="list-style-type: none"> <li>• Over Speed Shutdown</li> <li>• Low Lube Oil Pressure Warning/Shutdown</li> <li>• High Coolant Temperature Warning/Shutdown</li> <li>• Low Coolant Temperature Warning</li> <li>• Low Coolant Level Warning/Shutdown</li> <li>• Low And High Battery Voltage Warning</li> <li>• Weak Battery Warning</li> <li>• Over Crank Shutdown</li> <li>• Fail to Crank shutdown</li> </ul>
ALTERNATOR	<ul style="list-style-type: none"> <li>• Over Current</li> <li>• High Voltage</li> <li>• Low Voltage</li> <li>• Under/ Over Frequency</li> <li>• Revere Power (KVA &amp;KVAr)</li> <li>• Phase Sequence.</li> </ul>

SPECIAL FEATURE	<ul style="list-style-type: none"> <li>• Digital AVR</li> <li>• Amp Sentry Protection</li> <li>• Sensor Failure Indication</li> <li>• Programmable Idle Speed control</li> <li>• Digital Synchronizing function</li> <li>• Sync Check</li> <li>• Synchronoscope</li> <li>• Auto Load Sharing</li> <li>• Compatibility to Remote Monitoring.</li> <li>• Smart Starting.</li> </ul>
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**ALTERNATOR:-**

Synchronous alternator of 1250 VKVA, suitable for continuous operation at 1500 RPM generating 415 V at 0.8 p.f (lag) 50 Hz. 3 phase, 4- wire system. The alternator shall be Brushless type, separately excited & self-regulated through an AVR. The alternator will be suitable for tropical climate and shall generally conform to IS: 4722. The salient features of the alternator are:-

- $\pm 0.5\%$  voltage regulation in static conditions.
- IP: 23 protections with class 'H' insulation & temperature limited to class 'H' insulation limited.
- Permanent lubricated sealed bearing
- Permissible overload of 10% for one hour in 12 hours of operation.

**BASE FRAME:-**

Engine and alternator are mounted through AVM pads, on a common channel iron fabricated Base Frame.

**FUEL TANK:-**

Fuel tank 990 Ltrs fabricated from sheet metal complete with drain valve, air vent and inlet and outlet connection. The fuel tank shall be floor mounting type placed outside the acoustic enclosure.

**BATTERIES:-**

Maintenance free batteries of 12V-160 AH (2 No's).

**DOCUMENTATIONS:**

1 set of following documents shall be provided with each set:-

- Test Certificate of diesel engine
- Test certificate of Alternator.
- Test Certificate of .G. Set.

## ANNEXURE I

### TECHNICAL SPECIFICATION OF AMF CONTROL PANEL

TYPE	:	Free Standing Floor Mounting, Indoor, Cubicle, Compartmentalized, Bolted Construction, Dust & Vermin Proof.		
SYSTEM	:	i)	Rated Voltage	: 415 Volts, 3 Phase, 4 wire, 50 Hz.
		ii)	Insulation Voltage	: 2750 Volts for 60 Seconds.
FEBRICATION	:	i)	Base Frame	: 3mm thick Mild Steel Sheet.
		ii)	Main Frame	: 2 mm thick C.R.C.A. Mild Steel Sheet.
		iii)	Covers & Doors	: 1.6 mm thick C.R.C.A. Mild Steel Sheet.
DEGREE OF PROTETION	:	Enclosure designed for IP: 52 degree of protection as per BIS		
PRE-TREATMENT	:	Fabricated Parts are Pre-treated or Degreasing, Pickling, Phosphate and Passivation through '9 Tank Process' before painting.		
PAINING	:	Powder Coating. Thickness 50 microns (minimum). Paint Shade : RAL 7035		
BUS BARS	:	Electrolytic grade Aluminum Bus Bars insulated witcolored Heat Shrinkable PVC Sleeves & duly supported on SMC/DMC molded supports with Ant tracking barriers.		
WIRING	:	(i)A.C. Voltage Circuit 1.5 Sq mm. Cu. Flexible Wire (colored). (ii)D.C. Voltage Circuit 2.5 Sq.mm. Cu. Flexible Wire (grey). (iii)Current Circuit (C.T.sec.)2.5 Sqmm. Cu. Flexible Wire (colored).		

The control panel body will be fabrication out of CRCA Sheet. Panel will be suitable for floor mounting, indoor installation, dust and vermin proof control cables are ferruled for proper maintenance. Checking / wiring of panel. Detachable gland plates are provided.

Control Panel shall comprise details as per attached BOM.

## ANNEXURE-II

### TECHNICAL SPECIFICATION OF ACOUSTIC ENCLOSURE.

- Silent DG Set container shall be of modular construction with the provision tassemble and dismantle easily at site.
- The enclosure is fabricated out of CRCA sheet of 16 SWG.
- The sheet metal components are hot dipped in NINE TANKS pretreated before powder coating.
- Enclosure is powder coated (inside as well outside) with a special pure polyester based powder. All Nuts and bolt/ external hardware are made from stainless steel.
- The doors are gasketed with high quality EPOM gaskets to avoid leakage of sound.
- The door handles are lockable type.
- Sound proofing of enclosure is done with Rockwool/mineral wool.
- Specially designed attenuators are provided to control sound at air entry to the container and exit from the container.
- There is provision for emergency push stop button from outside the acoustic enclosure.
- Adequate ventilation is provided to meet air requirement for combustion and heat removal.
- As per CPCB norms with acoustic enclosure the noise insertion loss shall be 25 dBA at one meter under free field condition.

TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002.

**BILL OF QUANTITY**

**PART – II (PRICE PART)**

**NIT NO.46/EM/P/TVNL/RAN/2016-17**

**Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.**

<b>S. N</b>	<b>Description</b>	<b>Quantity</b>	<b>Rate (Rs.)</b>	<b>Amount (Rs.)</b>
1.	Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS comprising of following Technical Specification:  Diesel Engine -1470 BHP, Synchronous Alternator - 1250 KVA, 415V, 50 Hz, 4-wire system conforming to IS:4722 With AMF Control Panel for 1250 KVA double breaker complete with all accessories of Exhaust System, Fuel System Power Cabling, Control Cable, Earthing System etc.	<b>01</b>		
2.	Packing & Forwarding charges			
3.	Excise Duty			
4.	Sales Tax			
5.	Transportation Charges			
6.	Service Tax			
7.	AMC for 2 years after expiry of warranty period along with supply of mandatory Spares			
			<b>G.TOTAL</b>	

**(Signature & Seal of Bidder)**

**Note: Bidders are requested to visit work site before submission of bid for assessment of actual work involved.**

**TENUGHAT VIDYUT NIGAM LIMITED  
HINOO, DORANDA, RANCHI-834002.**

NIT NO.46/EM/P/TVNL/RAN/2016-17

Sub: Supply, Installation, Testing & Commissioning of 1250 KVA Silent DG Set at Tenughat TPS.

**PRICE BREAK UP FOR SUPPLY OF 1 X 1250 KVA DG SET FOR BILLING PURPOSE**

Sl.no.	DESCRIPTION	UNIT	QTY.	Unit Rate supply	Amount supply	Unit Rate Installation	Amount Installation
1.	Supply of 1250 KVA Silent DG set developing 1470 BHP coupled to 1250KVA, 415V alternator mounted a common base frame complete with.	set	1				
	(a) Fuel tank 990 Ltrs. (Outside Enclosure)						
	(b) Batteries & leads						
	(c) AVM pads						
	(d) Silencer						
	(e) First fill of lube oil						
	(f) Radiator	Set	1				
2.	AMF control panel for 1250 KVA with double breaker	set	1				
<b>EXHUAUST SYSTEM</b>							
3.a.	10" MS Black pipe class B complete with Bends & flanges(Horizontal)	Mtrs	12				
b.	14" MS 5.20mm thick vertical Exhaust pipe complete with bends and flanges	mtrs	30				
c.	Thermal insulation on horizontal pipe with mineral wool 50mm thick wire mesh and 26 gauge aluminum cladding (10")	Mtrs.	12				
d.	Thermal insulation on horizontal pipe with mineral wool 50mm thick wire mesh and 26 gauge aluminum cladding (14")	Mtrs.	30				
e.	MS self support structure.	Kg	7500				
f.	Aluminum cladding of residential silencers.	No.	2				
g.	SS flexible Bellows.	No.	2				
h.	Y-bend.	No.	1				
i.	Lightening Arrestors.	No.	1				
j	Aviation lightening with office UPS backup.	No.	1				
<b>FUEL SYSTEM</b>							
4.a.	Supply and installation of MS class C pipe 25mm ID with Bends,	Mtrs.	12				



	Flanges packing as required (Considering DG set to be placed at a Distance of 5-6 mtrs.)							
b.	Supply and fixing of set of fuel pipe fittings like valves, tee, elbows etc.	Lot	1					
POWER Cabling								
5.a.	3.5Cx400sqmm,5runs,PVC insulated XLPE, 1.1KV grade aluminum Armored type Cable (considering panel placed at a distance of 20mtrs.)	Mtrs.	150					
b.	Cable termination kit for 3.5C x400sqmm power cable.	No.	10					
c.	Adopter Box with extended Bus Bar(load side).	No.	1					
d.	Adopter Box with extended Bus Bar(neutral side).	No.	1					
CONTROL CABLE.								
Control cable (XLPE, 1.1KV grade, PVC insulated copper armored cable.								
6.a.	4C x 2.5sqmm.	Mtrs.	30					
b.	24C x 2.5sq.mm.	Mtrs.	30					
c.	2C x 2.5sq.mm.	Mtrs.	30					
d.	2C x 4 sq.mm.	Mtrs.	30					
e.	Termination for the above cables.	No.	8					
f.	Ladder type cable tray 600mm x 75mm x 2mm thick.	Mtrs.	30					
g.	Performed type cable tray 300mm x 50mm x 1.6mm thick.	Mtrs.	50					
ERTHING.								
7.a.	GI MS flat size 50 x 6mm	Mtrs.	25					
b.	GI plate earthing stations 600x600x6mm for body	No.	2					
c.	Cu flat size 50 x 6mm	Mtrs.	25					
d.	Copper plate earthing stations 600x600x3mm for neutral.	No.	2					
Total (INR)								
Grand Total (INR)								
Note:					1. The erection material quantities are assumed tentative. However the bill shall be raised on actual quantities consumed at site against measurement after actual. 2. Any kind of civil work, erection power. Approval, cable tray trenches shall be in customer's scope			