Additional Terms and Conditions

Information to Bidder (ITB) for the "Supply, installation, testing, and commissioning of 50KVA, 25KVA and 15 KVA as per SOR at RailTel, Karnataka region" and "125 kVA CPCB IV+ compliant diesel generator set complete with engine, alternator, acoustic canopy, AMF control panel, starting battery, and static charger (Duly dismantling existing 50KVA Dg set) at Ernakulam RailTel Pop"

GEM Bid No: GEM/2026/B/7407651 dated 01-04-2026

1. The item/items in this bid should be quoted as per the technical specifications.
2. The bidder should be either OEM or his authorized dealer/distributor.
   a. In case of the authorized distributor/partner certificate from the OEM to this effect should be submitted. The firm shall submit MAF as per FORM-III.
   b. If OEM is quoting, then OEM should submit the certificate.
3. Bidders are required to submit duly filled and signed technical compliance for the Technical Specifications.
4. The bidder shall upload the compliance of this ATC along with GEM Bid.
5. Bidder should not have been banned/blacklisted by any Govt./Semi Govt./PSU/State Govt./Any Telecom entity in India for the supply of the material. An undertaking to this effect signed by the authorized signatory to be submitted by the Bidder.

1. Eligibility Criteria

1. Technical Eligibility Criteria:

(i) The Bidder / OEM {themselves or through reseller(s), should have executed projects for supply and installation / commissioning of same or similar category products during preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid, as per following criteria:

- Single Order of at least 35% (i.e., Rs. 19,54,430/-) of estimated bid value; or
- Two Orders of at least 20% (i.e., Rs.11,16,820/-) each of estimated bid value; or
- Three Orders of at least 15% (i.e., Rs. 8,37,610/-) each of estimated bid value.

Satisfactory performance certificate issued by respective Buyer Organization for the above Order should be uploaded with bid. In case of bunch bids, the Category related to primary product having highest bid value should meet this criterion.

Offers not accompanied by copies of POs and work completion certificate (user certificate in the format of Form no.1) may be rejected.

(Note: Separate completed works of minimum required values for each component shall also be considered for fulfilment of technical eligibility criteria).

(ii) In such cases, what constitutes a component in a composite work shall be clearly pre- defined with estimated tender cost of it, as part of the tender documents without any ambiguity.

(iii) To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be executed by tenderer himself.

(Note: Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, PSU or any reputed TELCO, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

iv) In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate).

Note:

- RailTel may discharge the tender at any stage without assigning any reason.
- RailTel reserves the right to decline offer of product which has been deployed in RailTel in past and have poor performance.

Similar Work: Supply and installation of DG sets in any Government/State Government/PSU/Reputed Telco.

2. Financial Eligibility Criteria:

The tenderer must have received contractual payments in the previous three financial years and the current financial year up to the date of inviting of tender, at least 150% (i.e., 83,76,140/-) of the advertised value of the tender. The tenderers shall submit Certificates to this effect which may be an attested Certificate from the concerned department / client or Audited Balance Sheet duly certified by the Chartered Accountant/Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

(Note: Client certificate from other than Govt. Organization should be duly supported by Form 16A/26AS generated through TRACES of Income Tax Department of India).The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of Access Point and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Centre Supports for at least past three years in the country from where the proposed item are planned to be supplied. In case OEM is located outside India, it should have training repair and service centre facilities in India also. The certificates/Undertaking for the same will have to be submitted offline.

(The bidder will have to submit the proof of establishment for the facility).

3. Earnest Money Deposit (EMD): Rs. 1,11,700/- through payment online through RTGS / internet banking in Beneficiary name RailTel Corporation of India Limited Account No. 33946516594, IFSC Code SBIN0020299, Bank Name: State Bank of India, Branch address: Veer Chambers, Ranga Reddy District, Begumpet – 500016. **The Bid received without EMD will be summarily rejected**.

EMD/Bid security to be submitted by all tenderers, subject to the following exemptions:

a. Tender cases of value up to Rs. 5 Lakhs.
b. Micro and Small Enterprises (MSEs) registered under UDYAM Registration.
c. Startups recognized by Department of Promotion of Industry and Internal Trade (DPIIT).

Note 1: In case the tenderer falls in these categories, the bidder should furnish a certified copy of its valid registration details and Bid Security Declaration (as per Form VI)

Note 2: Firms registered with UDYAM certification or Startups as recognized by Department of Industrial Policy & Promotion (DIPP) is exempted from submission of EMD. Firms claiming for the above exemptions under UDYAM certification or Startup have to submit supporting documents.

UDYAM Certificate with category as Traders are not eligible for EMD exemption.

4. Eligibility/Evaluation/Qualification Criteria:

1. OEM Authorization:
   - Bidder must be the OEM or an authorized channel partner of the OEM.
   - Valid authorization certificate from OEM must be submitted.
2. Branded OEM Requirement
   - Engine, alternator, canopy, AMF control panel, starting battery, and static charger must be manufactured and branded by the OEM.
   - Assemblers, traders, or non-OEM integrators will not be considered.
3. Service Network
   - OEM must have a nationwide service network with service centers in at least 10 states including Kerala.
   - Proof of service network (addresses, contact details) must be submitted.
4. Experience & Credentials
   - OEM must have supplied at least 50 DG sets of similar rating in India in the last 5 years.

- Documentary evidence (purchase orders, completion certificates) must be furnished.

5. Compliance & Certification
   - DG set must be CPCB IV+ compliant with valid type approval certificate.
   - ISO 9001/14001/45001 certification of OEM manufacturing facility is mandatory.

5. Warranty:

- **The materials are to be warranted for 36 months from date of Installation.**
- Minimum 24 months comprehensive warranty covering engine, alternator, canopy, AMF panel, battery, and charger.
- OEM must ensure availability of spares for at least 10 years post-supply.
- Remote monitoring facility must be enabled and demonstrated during commissioning.

6. Completion Period of Work:

- The DG set must be delivered, installed, and commissioned within 8 weeks from the date of Purchase Order.
- Delay beyond the stipulated period will attract penalties as per clause follows in tender document.

7. Consignee Details: Annexure -A

8. Compliance & Certification

- DG set must be CPCB IV+ compliant with valid type approval certificate.
- OEM manufacturing facility must be ISO 9001/14001/45001 certified.
- All supplied components (engine, alternator, canopy, AMF panel, battery, charger) must be branded OEM products.

9. Exclusion of Traders

- Bids from traders, assemblers, or non-OEM integrators will be summarily rejected.
- Only OEMs or their authorized channel partners with valid authorization certificates are eligible.

10. Documentation & Training

- OEM must provide operation & maintenance manuals, test certificates, and warranty documents at the time of commissioning.
- OEM shall conduct one-day training for buyer's staff on operation, routine maintenance, and safety procedures.

11. Schedule of Requirement (SOR):

S/N	Description	Unit	Qty	Base Rate (All inclusive of loading/ unloading & freight (in Rs.)	Amount	GST@18%	Total Amount
1	**Product Scope (A)**					-	
1.1	Supply, installation, testing, and commissioning of **125 kVA CPCB IV+ compliant diesel generator set** complete with engine, alternator, acoustic canopy, AMF control panel, starting battery, and static charger etc as per the technical Specification attached (Duly dismantling the existing 50KVA DG set)	Nos	1				
2	**Balance of Plant (BOP) (B)**						
2.1	Supply & laying of 3.5 x 150 sqmm aluminium armoured cable with glands & termination	Mtr	45				
2.2	Supply & laying of 3.5 x 95 sqmm aluminium armoured Cable with glands & termination	Mtr	30				
2.3	Earth pit with earth chamber, 2x2 copper plate with 1.5 inch Dia with 2mtr long GI pipe (B class) and suitable size of Trench, compound, Termination.	Nos	3				
2.4	Supply & laying of 1.5 x 4 core UG cable for using ATS function	Mtr	45				
2.5	25x3 SWG copper strip for using earth conductor	Mtr	40				
2.6	GSB (Generator switch board) with 200 A MCCB as incomer and 2nos 125A MCCB as out going with suitable size of busbar and enclosure	Nos	1				
2.7	Double compression gland	Lum	1				
2.8	16 sq.mm copper wire	Mtr	24				
2.9	16 mm, 4 inch exhaust pipe extension with MS pipe	Mtr	8				
2.1	Removal of existing AMF panel and fixing of 2nos ATS panel	Lum	1				
2.11	Supply of 100 amps ATS Panel	Nos	2				
2.12	Existing DG foundation extension work	Lum	1				
2.13	Electrical inspectorate scheme preparation, site inspection fee, meter & CT testing fee, Electrical inspectorate scheme preparation, site inspection fee, meter & CT testing fee, scheme approval & final sanction	Lum	1				
3	Supply of **15KVA Diesel Generator** 3 Phase I/O, including transportation, loading and unloading	No.	1				
4	Supply of **25KVA Diesel Generator** 3 Phase I/O, including transportation, loading and unloading	No.	4				
5	Supply of **50 KVA Diesel Generator** 3 Phase I/O, including transportation, loading and unloading	No.	1				
6	Supply of materials for provision of concrete foundation for DG Set (as per Site requirement)	Lum	6				
7	Installation of concrete foundation for DG Set (as per Site requirement)	Lum	6				
8	Installation of DG set on the foundation for DG Set	No.	6				

S/N	Description	Unit	Qty	Base Rate (All inclusive of loading/ unloading & freight (in Rs.)	Amount	GST@18%	Total Amount
9	Supply and Termination of power cable on AMF Panel, DG sets and AC Main Distribution Panel for DG Set including trenching and laying as per Site requirement	Lum	6				
10	Supplying and installation of earthing material for three pits for DG Set	Lum	6				

12. Security Deposit/Performance Bank Guarantee:

The successful tenderer is required to submit a Performance Security within 30 days of the issue of LOA/Purchase order for a total value of 10% of the value of issued LOA/PO, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO. This performance security should cover warranty period plus three months (39 Months).

All performance security up to Rs. 5 Lakhs will be accepted only through Bank transfer.

In case, performance security is in the form of Bank Guarantee, it shall be issued by a scheduled commercial bank (either private or PSU) but not from any co-operative Bank or NBFC, in the prescribed format at Form-V.

As per RBI Guidelines, Bank Guarantee above Rs. 50,000/- should be signed by two bank officials.

The minimum gap between BG expiry date and BG claim date should be 12 months.

If required, Bank Guarantee to be extended at least 90 days before its expiry; failure to do so will result in the encashment of the BG.

BG issuing bank must be SFMS enabled. Under SFMS system, a separate advice of the BG (via SFMS IFN 760COV) to be sent to the advising bank (RailTel) through SFMS by the issuing Bank (Applicant). Similar process to be followed for bank guarantee amendment also and separate advice (via SFMS IFN 767COV) is sent to the advising bank (RailTel).

BG advising message – IFN 760COV/ IFN 767COV via SFMS

- To mandatorily send the Cover message at the time of BG issuance.
- IFSC Code of Union Bank to be used (UBIN0805050).
- Mention the unique reference (RAILTEL6103) in field 7037

The security deposit/Performance Bank Guarantee shall be released after successful completion of Contract obligations under the contract, duly adjusting any dues recoverable from the successful tenderer. Payment of Security Deposit in the form of Pay Order/Demand Draft should be made in favor of "RailTel Corporation of India Ltd" payable at concerned region. This PBG would be released after satisfactory completion of contract including warranty period.

No interest shall be paid on the amount of Performance Security held by RailTel, at any stage.

RailTel Bank Details for Performance Guarantee:

Name: RailTel Corporation of India Limited
Account No: 327301010373007
IFSC Code: UBIN0805050
Bank Name: Union Bank of India
Branch address: Union Bank of India, RP Road Branch, Bungalow no 109,
New No 1-7-252 to 254 Oxford Street, SD Road,
Near ParkLane Center, Secunderabad – 500003.

13. In case, if any contradiction between GeM Bid and Additional Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions will prevail.

14. Payment Terms: Payment will be done after submission of the following documents:

i. Invoice.
ii. Delivery Challan/E-way bill
iii. Contractor's certificate of dispatch
iv. Undertaking against Fall Clause
v. Inspection Certificate
vi. Consignee's receipt
vii. Warranty guarantee certificate of OEM
viii. Performance Bank Guarantee
ix. Insurance Certificate valid till installation of material
x. OEM certificate for the ordered quantity/ material supplied as per specification.

a) 80% of the value of the part supply of Equipment on receipt by the consignee at site duly inspected and accompanied with above mentioned documents.
b) Balance 20% value of the part supply and 100% of part installation on successful installation & commissioning at site. Bidder has to install and commission the equipment within 30 days from the communication by RailTel EIC (Engineer in charge) in this regard. In case installation and commissioning is delayed due to any reason beyond the control of the Contractor then 20% payment can be released after submission of a bank Guarantee of equal amount valid for a period of one year.

Note:

- Payment will be released only after successful delivery, installation, commissioning, and submission of OEM test certificates.
- No advance payment will be made.

15. Bill Passing & Paying Authority:

Bill passing Authority is GM/TM/ERS and bill paying Authority is Sr. DGM/Fin/SR/SC. Bills to be submitted to GM/TM/ERS for payment.

16. Notarized Affidavit: (Form-VI)

The tenderer shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified, and all their statement/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed as **Form-VI. Non submission of an affidavit by the bidder shall result in summarily rejection of his/their bid**. And it shall be mandatorily incumbent upon the tenderer to identify state and submit the supporting **documents duly self-attested** by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.

The RailTel (RCIL) reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the RailTel (RCIL), make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification by the RailTel (RCIL) shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the Railtel/Railway there under.

In case of any wrong information submitted by tenderer, the contract shall be terminated. Performance Guarantee (PG) of contract forfeited and agency barred for doing business on RailTel (RCIL)for 3years.

17. Online Submissions: The bidder is required to upload and submit the following documents on line before due date & time of bid. The due date & time for closing of the bid as per GeM Bid and the bid will be opened as per GeM Bid.

(i) EMD.
(ii) Clause wise compliance along with all mentioned documents/Forms for all clauses of GeM Bid and ATC (Information to bidder) documents.
(iii) Data Sheet of offered item/equipment
(iv) Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
(v) Technical Compliance of all Specification of items as per ATC documents.
(vi) Proof of document required against Eligibility criteria of OEM (or) Authorized bidder of OEM.
(vii) Statement of deviation as per Form-II
(viii)MAF/OEM Authorization as per Form-III
(ix) Notarized affidavit on a non-judicial stamp paper as per Form-VI.
(x) Notarized Power of Attorney in name of authorized signatory

18. **Offline documents:** Original copy of documents shall be submitted by tenderer offline at RailTel Corporation of India Ltd., 6A, 6th Floor, Gumidelli Towers, Opp: Shoppers Stop, Begumpet – 500016 at any point of time whenever asked for verification.

19. **Make in India:**

The provisions of the Public Procurement (Preference to Make in India) Order 2017 dated June 15, 2017 (or subsequent revisions, if any) by Department of Industrial Policy and Promotion, GoI shall apply to this tender to the extent feasible. Minimum Local Content for SOR Items shall be 50% for purchase preference as per the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications, Ministry of Communications or as per the latest notification. Bidder shall be required to give a self-certification in his bid that the item offered meets the local content and shall give details of the location(s) at which the local value addition is made. Further the bidder shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

In case of any false declaration, action shall be taken in line with the provisions of the PPP-MIII order.

20. **Pre-Dispatch Inspection:**

i. The supplier/manufacturer shall send inspection call letter when the material is ready to be supplied and ready for inspection. The Inspection shall be carried out at supplier's/Manufacturer's premises by the Inspecting Authority.
ii. The supplier/manufacturer shall submit along with inspection call the details of test procedures, test programs, test parameters together with permitted values, etc., and their Quality Assurance Plan.
iii. In case material/equipment fails during inspection, the fresh lot of same material/ equipment shall be offered without any extra cost, by the manufacturer/supplier. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be born by manufacturer's / supplier's account/cost.
iv. Inspection of the material including that of raw material if deemed required shall be conducted by approved Govt. inspecting authority/RailTel at the firm's premises/Govt. approved Test labs. The inspection shall be conducted by the inspection authority as per required test procedures/ test plan for ensuring that the material offered meets the required specifications.
v. The Inspection shall be carried out as per the specifications at OEM premises. The supplier shall make available for inspection all types of equipment's in sufficient number so as to create test set up for carrying out various tests as per the approved test plan and test set up. Travelling, lodging and boarding expenses of RailTel representative and charges for third party inspection if any shall be borne by RailTel, but necessary facilities to carry out test /witness inspection shall be provided by the manufacturer/supplier, free of cost.
vi. The manufacturer shall maintain stock register (receipt, issue and balance) and defect records for the raw material. The defect records shall be in standard formats and it shall be complied on a daily/ weekly/ monthly basis and it shall be analysed. "NIL" Report shall be segregated from the accepted material. First-in First-out concept shall be implemented in fool proof manner. The batches of the raw material shall be identified and traceable. All relevant documents necessary to ensure trace-ability shall be maintained. The raw material shall be protected from direct exposure to sunlight, moisture, water ingress and heat etc.
vii. Finished products shall be tested 100% by the factory QC personnel before being offered to RailTel for acceptance to ensure that it meets all quality requirements as per the relevant specifications. Duly filled in test formats indicating the results of such tests shall be submitted along with material offered for inspection to RailTel.
viii. RailTel reserves the right to cancel pre dispatch inspection and opt for consignee inspection after receipt of material.
ix. **Final Inspection:** at the consignee end

21. **Insurance:**

i. The Contractor shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the contractor or the Purchaser. The contractor shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such material are provisionally handed over to RailTel. The contractor should ensure the stores brought to site, against risks as required under the Emergency Risk (Goods) Insurance Act in force from time to time up to contract value.

ii. It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favour of RailTel. The contractor shall keep the policy/policies current till the item/equipment are handed over to the purchaser and I&C of the same.

22. Constitution of Firm and Power of Attorney:

22.1 Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing: -

(a) As sole proprietor of the concern or as attorney of the sole Proprietor.
(b) As partner or partners of the firm.
(c) As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by Board of Directors or in pursuance of the authority conferred by Memorandum of Association.

22.2 In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

22.3 The RailTel will not be bound by Power of Attorney granted by the tenderer or by the changes in the composition of the firm made subsequent to the execution of the contract agreement.

22.4 In case where Power of Attorney partnership deed has not been executed in English, the true and authenticated of copies of the translation of the same by Advocate, authorized translators of Courts and licensed Petition Writers should be supplied by the contractor(s), while tendering of the work.

22.5 The duly notarized Power of Attorney shall be submitted in original at the time of bid submission as per clause above.

Note:

1) The bidder is required to give acceptance of all the clauses of GeM bid, ATC and RailTel's Bid Specific ATC document. Any deviation / non-acceptance may lead to rejection of the bid.
2) Information to Bidder viz. corrigendum /addendum/ amendments etc. for this bid shall be posted on www.railtelindia.com and GeM only.
3) This bid is governed by the Specific Additional Terms & Conditions and General Terms & Conditions laid down by the GeM against GeM Bid No: GEM/2026/B/7407651
4) After opening of the technical bid no correspondence/submission of document made at the initiative of the bidder will be entertained. However, the purchaser can, if required, ask for clarifications which need to be submitted before a target date. The clarifications submitted as required by the purchaser before the target date will be considered. In case, if any contradiction between GeM Bid, Additional Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions and General Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions will prevail.

23. Bill Tracking System (BTS) Clause: Vendors are advised to submit their bills through bill tracking system (https://bts.rcil.gov.in/Home) of RailTel for their payment.

24. Trade Receivables Discount System (TReDS):

TReDS feature available	Yes, on m1xchange portal. (Url: http://www.m1xchange.com)

1. RailTel is registered with m1xchange TReDS Platform having Buyer registration Number "BUYER00001496". The URL for m1xchange platform is http://www.m1xchange.com. MSE suppliers/vendors are required to register themselves on m1change platform for availing the facility of bill discounting on TReDs portal. The bidder is mandatorily required to submit its TReDS registration number (as provided by M1xchange portal) and GRN (Goods/Service Receipt Note) Number (as provided by RailTel on delivery of Goods/Service) while submitting the invoices if requires to avail TReDS facility.

2. MSE vendors will bear all costs relating to availing the facility of discounting on TreDS platform including but not limited to registration chargers, Transaction chargers for financing, discounting chargers, interest on financing, or any other chargers known by any name shall be borne by MSE vendor.
3. MSE vendor hereby agree to indemnify, hold harmless and keep RailTel and its affiliates, Directors, officers, representatives, agents and employees indemnified, from any and all damages, losses, claims and liabilities (including legal costs) which may arise from sellers submission, posting or display, participation, in any manner, on the TReDS platform or from the use of services or from the buyer's breach of any of the terms and conditions of the usage Terms or of this Agreement and any applicable Law on a full indemnity basis.
4. RailTel shall not be liable for any special, indirect, punitive, incidental or consequential damages whatsoever (including but not limited to damages for loss of profits or savings, business interruption, loss of information), whether in contract, tort, equity or otherwise or any other damage resulting from using TReDS platform for discounting their (MSE vendor's) invoices.

25. Bidders sharing a land border with India : Office Memorandum F. No. 6/18/2019-PPD dated 23.07.2020 by Ministry of Finance, Department of Expenditure, Public Procurement Division shall also apply to this tender. A certificate, shall be submitted by all the bidders regarding their compliance with this order. If such certificates are given by a bidder whose bid is accepted is

found to be false, this would be ground for immediate termination and further legal action in accordance with law. Registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order.

26. Quantity Variation: The Purchaser reserves the right to increase or decrease the quantity to be ordered by 30 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 30% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

27. Liquidated damages:

- 0.5% of the contract value per week of delay, subject to a maximum of 10% of the contract value.
- Performance Penalty: If the DG set fails to meet CPCB IV+ emission norms or noise level requirements during inspection, the supply will be rejected at supplier's cost.
- Service Penalty: Failure to attend breakdown calls during warranty period within 48 hours will attract a penalty of ₹5,000 per day of delay.

28. Denial Clause: Supplier will not be entitled to any benefit of upward statutory variations in GST rates Announced after expiry of the original Delivery Period as per purchase order & in Case of reduction in GST rates if any, benefit will be passed on to RailTel at any stage of the contract.

TECHNICAL SPECIFICATION FOR 125 KVA Diesel Generator Set

Technical Specifications

1 Prime Power Rating

- Capacity: 125 kVA (100 kW) at 0.8 PF, 3-phase, 415 V, 50 Hz.
- Prime Power: Unlimited hours with 10% overload permissible for 1 hour in 12 hours.
- Standby Power: As per ISO 8528, limited to 200 hours/year.

2 Engine (OEM Branded)

- 4-cylinder, turbocharged, after-cooled, CRDi diesel engine.
- Rated Output: ~114.7 kW (156 HP) at 1500 RPM.
- Aspiration: Turbocharged with intercooler.
- Fuel System: Common Rail Direct Injection (CRDi).
- Emission Control: DOC + SCR system, DEF tank capacity ~25 liters.
- Lubrication: Oil sump capacity ~14 liters, oil change interval 500 hours.
- Cooling: Radiator-cooled, coolant capacity ~17.7 liters.
- Starting System: 12V DC electrical start with OEM battery.

3 Alternator (OEM Branded)

- Brushless, single bearing, 4-pole alternator.
- Insulation Class: H.
- Efficiency: ≥ 91% at full load, 0.8 PF lag.
- Voltage Regulation: Digital AVR, voltage dip < 20% at full load.
- Protection: IP23 enclosure

4 Acoustic Enclosure / Canopy (OEM Branded)

- Noise Level: ≤ 75 dBA at 1 meter under free field conditions.
- Construction: Powder-coated, weatherproof, corrosion-resistant steel.
- Compact footprint as per CPCB norms.

5 AMF Control Panel (OEM Branded)

- Microprocessor-based controller with graphical LCD display.
- Monitoring: Voltage, current, frequency, kVA, kW, kWh, PF, lube oil pressure, coolant temperature, RPM, run hours, fuel level, battery condition.
- Diagnostics: Over/under voltage, over/under speed, over current, phase sequence/missing, low fuel, low lube oil pressure, high engine temperature, battery faults.
- Optional: Modbus communication, AMF compatibility.

6 Starting Battery & Static Charger (OEM Branded)

- Heavy-duty OEM battery, 12V DC.
- Static battery charger with automatic boost/float charging modes.

7 Fuel System

- Tank Capacity: ~230 liters.
- Fuel Type: HSD conforming to IS:1460.
- DEF System: Optimized DEF tank size with dosing control unit (DCU).

8 Dimensions & Weight

- Length: ~3200 mm
- Width: ~1350 mm
- Height: ~1796 mm
- Weight: ~2200 kg (dry), ~2260 kg (wet without fuel).

9 . BATTERY

12 V/24V DC SMF battery assembly of suitable capacity complete with all necessary connecting leads and terminals of AMCO/Exide/Amron/Amararaja make should provide equivalent.

10. BASE FRAME

The base frame should be formed base plate providing common bed for engine andalternator directly coupled together. The base plate with cross member would form the part of sheet metal canopy. The Base frame should have provision of grouting on foundation bolts. Provision should also be made on the base frame for lifting arrangement of the complete DG Set with Canopy.

11. FUEL TANK

Fuel Tank (minimum capacity 230 liters) should be fabricated out of 14SWG CRCA MS sheet and is part of base frame. It should be duly painted and fitted with inlet and outlet connections, air vent etc. complete with:

- Fuel Level Indicator (Electrical)
- Filler Cap with lock.
- Drain Valve Plugged
- Spill return
- Feed connection to engine valve
- Braided pipe for fuel connections
- Metal Funnel should be provided along with DG set.

12. AVM Pads

Adequate nos. of KOEL/CORI make AVMs between engine / alternator and the base plate, shouldbe provided.

Note: Any materials/modifications required for satisfactory commissioning of DG set to be borne by the tenderer.
Installation And Commissioning of Dg Set:

The responsibility for installing and commissioning of DG set shall be that of the firm. The firm shallcomplete installation within completion period of receipt of DG set by the consignee.

The scope of installation and commissioning shall be as follows:

1. Foundation:

Foundation shall be of PCC type with the ratio of 4:2:1. The length and breadth of the foundationshall be 300 mm more from the respective length and breadth of the DG set. The height of the foundation shall be 600 mm i.e. 300 mm below and 300 mm above the ground level.

2. Earthing:
Building suitable earthling station and necessary connections shall be done by firm. For 3 phase DG set, the total number of earthling pits/stations shall be 6 i.e. 3 for neutral and 3 for body-earthling.

3. Installation of Fuel tank, battery charging, and battery connection.
4. Unloading and placement of DG set on foundation.
5. First fill of lube oil and all filters shall be provided by the firm. The firm shall also provide 50 liters ofDiesel for DG set during initial testing and commissioning.
7. The consumables provided by the firm cover the trial run of DG set as well. The firm shall conduct trialrun of the DG set with the available electrical load at site. The trial run shall be for ONE hour. The available electrical load shall be less than or equal to the rated capacity of the DG set.
8. Exhaust piping, extra civil work, distribution board shall be provided by the tender.

TECHNICAL SPECIFICATION FOR 50 KVA Generator (Diesel)

1. Purpose

The purpose of this document is to provide specifications for Supply, Installation, Testing and Commissioning of 50 KVA Generator (Diesel) with associated equipment's for RailTel Corporation of India ltd., Chennai Territory.

2. Technical Specifications

i. Prime Power Rating

- Capacity: 50 kVA (50 kW) at 0.8 PF, 3-phase, 415 V, 50 Hz.
- Prime Power: Unlimited hours with 10% overload permissible for 1 hour in 12 hours.
- Standby Power: As per ISO 8528, limited to 200 hours/year.

ii. Engine

- 4-cylinder, turbocharged/naturally aspirated, after-cooled diesel engine.
- Rated Output: ~48–55 kW (65–74 HP) at 1500 RPM.
- Aspiration: Turbocharged (preferred) or naturally aspirated.
- Fuel System: Common Rail Direct Injection (CRDi) / Mechanical (OEM specific).
- Emission Control: CPCB II / CPCB IV+ (DOC system; SCR optional depending on model).
- Lubrication: Oil sump capacity ~8–10 liters, oil change interval 400–500 hours.
- Cooling: Radiator-cooled, coolant capacity ~10–12 liters.
- Starting System: 12V DC electrical start with OEM battery.

iii. Alternator

- Brushless, single bearing, 4-pole alternator.
- Insulation Class: H.
- Efficiency: ≥ 90% at full load, 0.8 PF lag.
- Voltage Regulation: Digital AVR, voltage dip < 20% at full load.
- Protection: IP23 enclosure

iv. Acoustic Enclosure / Canopy

- Noise Level: ≤ 75 dBA at 1 meter under free field conditions.
- Construction: Powder-coated, weatherproof, corrosion-resistant steel.
- Compact footprint as per CPCB norms.

v. AMF Control Panel

- Microprocessor-based controller with graphical LCD display.
- Monitoring: Voltage, current, frequency, kVA, kW, kWh, PF, lube oil pressure, coolant temperature, RPM, run hours, fuel level, battery condition.
- Diagnostics: Over/under voltage, over/under speed, over current, phase sequence/missing, low fuel, low lube oil pressure, high engine temperature, battery faults.
- Optional: Modbus communication, AMF compatibility.

vi. Starting Battery & Static Charger

- Heavy-duty OEM battery, 12V DC.
- Static battery charger with automatic boost/float charging modes.

vii. Fuel System

- Tank Capacity: ~120–150 liters.
- Fuel Type: HSD conforming to IS:1460.
- DEF System: Not mandatory for CPCB II; for CPCB IV+ small DEF tank (~10–15 liters) if SCR-equipped.

ix. Dimensions & Weight

- Length: ~2200–2500 mm
- Width: ~1000–1100 mm
- Height: ~1400–1600 mm
- Weight: ~1200–1400 kg (dry), ~1250–1450 kg (wet without fuel).

3 . BATTERY

12 V/24V DC SMF battery assembly of suitable capacity complete with all necessary connecting leads and terminals of AMCO/Exide/Amron/Amararaja make should provide equivalent.

4. BASE FRAME

The base frame should be formed base plate providing common bed for engine and alternator directly coupled together. The base plate with cross member would form the part of sheet metal canopy. The Base frame should have provision of grouting on foundation bolts. Provision should also be made on the base frame for lifting arrangement of the complete DG Set with Canopy.

5. FUEL TANK

Fuel Tank (minimum capacity 150 liters) should be fabricated out of 14SWG CRCA MS sheet and is part of base frame. It should be duly painted and fitted with inlet and outlet connections, air vent etc. complete with:

- Fuel Level Indicator (Electrical)
- Filler Cap with lock.
- Drain Valve Plugged
- Spill return
- Feed connection to engine valve
- Braided pipe for fuel connections
- Metal Funnel should be provided along with DG set.

6. AVM Pads

Adequate nos. of KOEL/CORI make AVMs between engine / alternator and the base plate, shouldbe provided.

Note: Any materials/modifications required for satisfactory commissioning of DG set to be borne by the tenderer.
INSTALLATION AND COMMISSIONING OF DG SETS:

The responsibility for installing and commissioning of DG set shall be that of the firm. The firm shallcomplete installation within 2 months of receipt of DG set by the consignee.

The scope of installation and commissioning shall be as follows:

1. Foundation:

Foundation shall be of PCC type with the ratio of 4:2:1. The length and breadth of the foundationshall be 300 mm more from the respective length and breadth of the DG set. The height of the foundation shall be 600 mm i.e. 300 mm below and 300 mm above the ground level.

2. Cable:

Armored PVC sheathed Aluminum cable and its necessary laying and termination shall be done by firm. For 3-phase DG set, 3.5 core or higher core cables shall be used. The current rating of the cables shall be as per table below. Total length of the 3.5 core power cable shall be 100 meters/site (approximately) for DG set with AMF control panel its depending upon the requirement

DG set rating	Phase	Sqmm	Core
50KVA	3	50	4

3. Earthing:

Building suitable earthling station and necessary connections shall be done by firm. For 3 phase DG set, the total number of earthling pits/stations shall be 6 i.e. 3 for neutral and 3 for body-earthling.

4. Installation of Fuel tank, battery charging, and battery connection.

5. Unloading and placement of DG set on foundation.

6. First fill of lube oil and all filters shall be provided by the firm. The firm shall also provide 50 liters of Diesel for DG set during initial testing and commissioning.

7. The consumables provided by the firm cover the trial run of DG set as well. The firm shall conduct trial run of the DG set with the available electrical load at site. The trial run shall be for ONE hour. The available electrical load shall be less than or equal to the rated capacity of the DG set.

8. Exhaust piping, extra civil work, distribution board shall be provided by the tender.

Technical Specification For 15 Kva Generator (Diesel)

Specification For 15 Kva Single Phase Water-Cooled/Air-Cooled Diesel Generator (Silent Type) For Optical Fiber Equipment

1.1 Purpose

The purpose of this document is to provide specification for 15 KVA single-phase Water- cooled/Air-cooled diesel generator set (silent type) as an alternate power supply, proposed to be used for RailTel's STM-16/64 broadband unmanned telecommunication network installation.

1.2 Structure

The Diesel Generator set complete shall comprise of Diesel engine, Alternator and AMF Panel conforming to specifications for 15 KVA ratings as given below. Diesel engine and Alternator shall be close coupled or provided with flexible coupling and mounted on a base plate of robust construction. DG sets shall meet the requirements of environmental (protection) rules 1986 as laid down by Ministry of Environment & Forests read with GSR 371 (E) dated 17.02.02, GSR 520 (E) dated 01.07.03 and G.S.R. 215 (E), dated 15thMarch, 2011 under the Environment (Protection) Act, 1986) (as amended from time to time) in respect of emission norms for the Engine and in respect of noise level for the DG sets. All engines will generally confirm to IS 10000/BS649/BS5514.

1.2.1 The tenderer should submit a copy of type approval certificate from CPCB / MOE&F / Authorized Agency approved by CPCB or MOE&F for emission norms as quoted above.

1.3. Make of the components:

Diesel Generator comprising of Diesel Engines & Alternators should be from the following manufacturers:

1.3 Diesel Generators:

Kirloskar/ Greeves/ Ashok Leyland/ Cummins / Mahindra & Mahindra/Eicher

1.3.1 Alternators:

KIRLOSKAR / CROMPTON/ IEC/ STAMFORD/ ELECTRODYNE

1.3.2 Make of component to be used in AMF panel

MCCB:	L& T/GE/C&S/HAVELLS/ABB/SCHNEIDER
CONTACTORS:	L& T/GE/C&S/HAVELLS/ABB/SCHNEIDER.
MCB:	GE/HAGER/MDS/Standard/HAVELLS/INDOKUP/ SCHNEIDER .
CT's:	KAPPA/KALPA/RR Electrotech
Volt & Amp. Meters :	L&T/MECO/ENERCON/CADEL
Push Buttons:	RASS/TECHNIQUE.
Switches:	SALZAR/SWITRON/SWITCH-ON/KAYCEE.
Fuses Base :	INDO ASIAN/GE/C&S/KAYCEE.
Wires & cables:	POLYCAB/RR CABLES/FINOLEX.
KWH meters:	ECE/HAVELLS/L&T.
Relays:	ALSTOM/AVKSEGC/EASUN/NAGOBA/MINILEC/BERNENI/ EC2/JEEWAN.
Auxiliary Relays:	PLA/OEN/GILLARD.

1.4 Specification for Alternator, Diesel Engine and AMF Control panel.

1.4.1 Alternator:

The alternator shall be brush less type self excited and self regulated of 15 KVA rating in Single phase at 230 V, 50 Hz, 1500 RPM and shall conform to IS: 13364 (Part 1) 1992. The alternators shall be screen-protected drip proof with IP 21 degree of protection as per IS: 4691/85.

1.4.2 Diesel Engine:

The Diesel engine shall be Water-cooled, electric start developing required BHP at 1500 RPM with **Class A-2 governing** for alternator to deliver 15 KVA output continuously at NTP conditions. The Diesel engine should be capable of providing 10% overload for one hour for every 11 hours continuous running at full load. The diesel engine shall conform to IS: 10000 / BS 649 or BS5514 series standards as applicable.

The diesel engine shall be complete with the following accessories:

a). Fuel tank with capacity for 24 hrs continuous running at full load.
b). Safety controls to shut down the engine in the event of Low lube oil pressure or high cylinder head temperature.
c). Exhaust silencer.
d). 12V Starting system complete with charging alternator and cutout.
e) Maintenance free batteries with suitable rating with connecting cables. The batteries shall be supplied in fully charged condition and shall conform to relevant IS.
f). Standard set of Tools and spares for maintenance.
g). The tenderer shall specify the fuel tank capacity, hourly consumption and minimum fuel level to be maintained.

1.5 AMF CONTROL PANEL (Micro Processor Based)

1.5.1 The panel provides automatic control for starting the generator set when a mains failure occurs.
1.5.2 It should be of sheet metal mounted on the frame and fitted in front of the door.

1.5.3 Control panel should be provided with the following Instruments:

- Voltmeter
- Ammeter
- Frequency meter

- Hour meter
- Pressure gauge
- HWT/HCT
- Battery Voltmeter

1.5.4 AMF control panel should be provided with the following Indication Lamps.

- Failure to start
- Low lubricating oil pressure.
- High cylinder head temperature alarm
- Over speed.
- Fuel Level low in main tank.
- Generator emergency alarm.

1.5.5. AMF control should have the following Operational features: -

- Engine fault auto-shutdown and reset.
- Mains sensing for over voltage and under voltage.
- Generator set operating.
- Load on generator
- Load on Mains
- Static Battery charger
- Horn

1.5.6 AMF should also have following features: -

- It should be able to select the generators operating mode: Off- Automatic- Manual and Test modes.
- It should be able connect the generator's voltmeter across single phase & neutral.
- It should be able to connect the frequency meter to check the diesel generator frequency.

1.5.7 AMF should contain Pushbuttons for the following features: -

- Emergency shutdown --Red Button.
- MCB to protect Alternator and Mains supply.

1.5.8 Following equipment will be fitted inside the AMF cabinet:

- 10A rated current static battery charger for automatic static battery recharge.
- Voltage relay to control the mains line; the voltage threshold should be adjustable.
- Device for Automatic Generator Start up when AC Mains supply falls below a preset level. The starter circuit allows no. of start, when motor is locked in the fail to start mode.
- Two electrically and mechanically combined relays for diverting the load from mains to generator and vice versa. During the generator starting sequence, the load is connected to the generator only after the generator voltage is stabilized at the rated setting.
- In case of AC main supply failure continues for more than four hours, and then DG set shall be switched off automatically. If AC main failure continues for a further period of 2 hours, the DG set will restart again.

1.6.0 Device for automatic shutdown of the generator if the following fault occurs & give audible alarms.

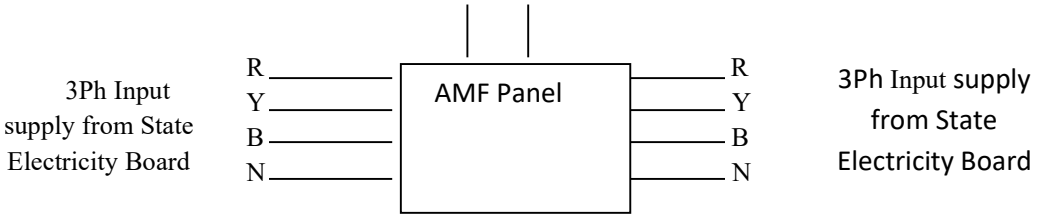
- Lube Oil pressure low.
- High Cylinder Temperature.
- Over speed.
- Fuel level below minimum specified level in main tank.

1.6.1. Each of the above emergency situations triggers a visual alarm and keeps the diesel generator out of service until the control circuit is re-established manually.

- Current transformer connected to phase of the unit's line.
- The panel should have outputs for remote contacts for the following signals:
- Mains voltage out of limits.
- Failure to start
- Low lube oil pressure.
- High cylinder head temperature.
- Over speed.
- Fuel level low in main tank.

1.6.3 The panel should be fixed with input and output terminals. For identification – non-insulating stickers will be provided.

Note: DG set is 15KVA single phase and Wiring should be for 3Phase



Technical Specifications For Acoustic Enclosure

1.0 **Introduction**

1.1 The acoustic enclosure shall be of modular construction with provision to assemble and dismantle easily. The proposed enclosure offered should have the approval of the Diesel engine manufacturer. The complete enclosure along with DG set should have the statuary approval of CPCB / MOE&F. A copy of the same should be enclosed. It should have the following features:-

2.0 Exhaust System

2.1 The exhaust gas should be taken out through a suitable flexible pipe to prevent any back pressure on the engine.

2.2 The residential silencer should be mounted inside the canopy.

2.3 The exhaust system should include exhaust pipe suitably supported.

2.4 Thermal insulation

2.4.1 The exhaust system and noise suppressor should be provided with thermal insulation to prevent excess heat radiation on the engine and safe for operator.

3.0 Noise Suppressor (Silencer)

3.1 Absorption type Non Resistance Residential Silencer should be provided to suppress exhaust noise from the engine.

4.0 Surface Treatment – Painting

4.1 The enclosure surface should be suitably treated for Degreasing, Derusting and phosphating. High quality powder quoting coating process as prevalent in the Industrial Practice shall be ensured.

5.0 Vibration insulation

5.1 The engine and alternator shall be mounted on Anti-Vibration mounting pads to eliminate engine vibration.

6.0 Dimensions (LxBxH) should be suitable to house the AMF panel inside the enclosure.

7.0 All other requirements that are essential to make the DG set compliant to CPCB norms for noise reduction shall form part of the technical requirement. A copy of approval from CPCB for the acoustic enclosure should be enclosed.

8.0 Construction Details

8.1 The structure should be fabricated using CRCA sheets 1.6 mm thick outer skins and steel members.

8.2 Base:

8.2.1 The enclosure integral with base frame should be of direct mountable type on the foundation.

8.3 Doors:

8.3.1 Doors should be fabricated from MS CRCA 1.6 mm thick. Air tight with neoprene rubber gasket and heavy-duty spring loaded locks.

8.4 Grouting:

8.4.1 Acoustic enclosure should be designed in such a way that no grouting is required on the ground, only level surface capable of withstanding the load may be provided.

8.5 Acoustic Insulation:

8.5.1 Insulation material properly clamped should be provided on all doors, roof and sides to absorb noise.

8.5.2 Sound attenuators / downstream silencers (Side louvers) should be provided at all openings for air inlet / outlet to facilitate free airflow but to absorb sound resulting in extreme low noise level.

8.5.3 Detachable partitions, if required, are provided inside the enclosure to attain further noise attenuation of the engine..

8.5.4 The acoustic insulation should achieve reduction in noise levels as per latest CPCB norms. A copy of approval from CPCB for the acoustic enclosure should be enclosed.

8.6 Inspection window:

8.6.1 A suitable glass window sealed with rubber gasket should be provided for viewing the metering the parameter of AMF Control Panel.

8.7 Ventilation:

8.7.1 To provide a suitable forced air circulation and ventilation system to maintain safe operating temperatures inside the enclosure, requisite air circulation for engine aspiration combustion and cooling should be provided for, in the design of the enclosure.

9.0 Battery:

12VDC battery assembly of suitable capacity complete with all necessary connecting leads and terminals of AMCO/Exide make should provide equivalent.

10.0 BASE FRAME:

The base frame should be formed base plate providing common bed for engine and alternator directly coupled together. The base plate with cross member would form the part of sheet metal canopy. The Base frame should have provision of grouting on foundation bolts. Provision should also be made on the base frame for lifting arrangement of the complete DG Set with Canopy.

11.0 FUEL TANK:

11.1 Fuel Tank should be fabricated out of 14SWG CRCA MS sheet and is part of base frame. It should be duly painted and fitted with inlet and outlet connections, air vent etc. complete with:

- Fuel Level Indicator (Electrical)
- Filler Cap with lock.
- Drain Valve Plugged
- Spill return
- Feed connection to engine valve
- Braided pipe for fuel connections

AVM Pads

Adequate nos. of KOEL makes AVMs between engines / alternator and the base plate should be provided.

Note: Any materials/modifications required for satisfactory commissioning of DG set to be borne by contractor.

TECHNICAL SPECIFICATION FOR 25 KVA Generator (Diesel)

25 KVA DG Set Specifications	
Rating KVA/Kw	25/20
Output voltage	415V
frequency	50 Hz
Fuel Tank capacity	75 Ltr
Power Factor	0.8 (Lagging)
RPM	1500
Required Certified Power for Rated kVA (hp)	41.2
No. of cylinders	3, In-line
Performance class of generator set	ISO 8528-5 G2
Total coolant capacity (litre)	10.2
Length X Width X Height (Coolpac) (mm)	702 x 705 x 895
Exhaust Temperature (°C)	410
Enclosure	IP 23
Voltage regulation (Max.)	±1%
Insulation Class	H Class

Alternator:

The alternator shall be brushless type, Screen protected, Revolving field, Self-excited alternator of 25KVA rating in 3 phase at 415 V, 50 Hz, 1500 RPM and shall conform to conforming to IS/IEC 60034-1.

Acoustic Enclosure:

- Specially designed to meet stringent MoEF/ CPCB norms of 75 dBA@1mtr at 75% load under free field conditions.
- The acoustic enclosure is made CRCA sheets in Munsell green shade and a structural/sheet metal base frame painted in black
- High quality noise absorbent and fire-retardant grade acoustic Insulation material (Foam) complying to IS 8183
- Two-point top lifting for easy handling at customer site
- Designed to have optimum serviceability
- Air inlet louvers specially designed to operate at rated load
- 11 tank pretreatment process and UV resistant powder
- coating of all parts to withstand extreme environment
- Use of special hardware for longer life
- Fluid drains for lube oil and fuel
- External Fuel filling arrangement outside the enclosure

Control Panel:

- Type: Manual control panel with features for monitoring and control.
- AMF Functionality: Automatic Mains Failure functionality included.
- Display: LED backlit graphic display for easy monitoring.

Cooling and Lubrication:

- Cooling System: Air-cooled with fan assistance.
- Lubrication System: Forced lubrication with a sump capacity of approximately 9.5 liters.

Noise Level:

- Typically, less than 75 dB, ensuring quieter operation suitable for various environments.

Safety Features:

- Engine protection against low oil pressure, high/low coolant temperature, and battery voltage issues.
- Alternator protection against over/under voltage and frequency.

3. Technical specification of <u>concrete foundation</u> for DG set

3.1. Introduction

Foundation is one of the important factors affecting the successful operation of a Diesel Generating set. Improper foundation may result in alignment and vibration problems which may subsequently lead to failure of coupling, instruments of engine / alternator components. There are basically three functions of foundation.

i. To support the weight of the entire generator set.
ii. Maintain correct alignment between the engine and generator.
iii. Absorb the vibration produced by the rotating and reciprocating masses.

3.2. Guidelines for designing and fabrication of base plates.

- The base frame should be rigid enough for the selected engine/ alternator combinations so that it will deflect during handling / operation of the set.
- The welded structure should be stress relived after welding.
- The pad provided on base frame for engine / alternator resting should have plain machined surface.
- The machining should be done after complete fabrication /welding to avoid surface distortion. This is necessary to get good clamping of engine and alternator to avoid vibration on the base frame and to facilitate easy alignment.

- Provision should be made in the base frame for lifting of the set. Taper pads should be provided on the channel used for base frame.
- The foundation length and width should exceed the length and width of the generator set by a minimum of 1ft (0.305M).
- The foundation depth should be sufficient to attain a minimum weight equal to the generator set's weight. To calculate the necessary foundation depth, the following formula: -

$$\text{Foundation Depth (ft)} = \frac{W}{150 \times B \times L}$$

$$(m) = \frac{W}{2400 \times B \times L}$$

Where W = Total net weight of generator (pound-kg).

150 = Density of Concrete (pounds per cubic foot)

2400 = Density of concrete (kilogram per cubic meter)

B =Foundation width (feet)-meters)
L = Foundation length (feet)-(meters).

- When vibration isolation equipment is used, the floor depth required is that needed for structural support of the static load. If isolators are used, dynamic loads will be transmitted to the facility floor and the floor must be designed to support 125% of the generator set weight.

3.3 **Guidelines for concrete foundation**

While mounting the set on a concrete foundation, the bearing strength of the soil at the proposed site of installation should be determined. The table given below gives approximate safe bearing capacity of various materials. The foundation area must be large enough to support the weight of engine and foundation.

S. No	**Nature of Load Bearing Material**	**Safe Bearing capacity kg./ sqm**
1	Hard Rock granite	2,44,100-9,76,400
2	Medium rock shell etc.	97,900-1,46,400
3	Hard pan	78,100-97,900
4	Soft rock	48,800-58,900
5	Hard clay	39,000-48,800
6	Gravel and coarse sand	39,000-48,800
7	Loose medium coarse & compacted fine sand	29,300-39,000
8	Medium clay	19,500-39,000
9	Loose fine sand	9,750-39,500
10	Soft clay	9,750

- It is recommended that concrete foundation used for supporting the generator set base frame should be raised above the ground level by 30 cm. Approx. to facilitate easy servicing. For fixing the generator set base frame tom the concrete foundation anchor bolts should be used. The threaded length of anchor bolt should protrude out of concrete by atleast 35 mm to accommodate base frame and nut. The position of and nos. of anchor bolts is decided by the size of the DG set.

3.4. The proposed foundation design based on the above broad parameters may be submitted along with the offer.

3.5. Not with standing the above, actual foundation would be provided on site conditions/requirements.

Inspection of DG set.

4.1. Inspection of the DG set will be conducted as per clause no. 21 of ATC and also includes the following: -

(i) The DG set will be checked for alignment before subjecting it to load tests.
(ii) Voltage regulation test.
(iii) Full load test for 3 hrs. at rated KVA, at UPF.
(iv) 10% overload test for 1 hrs. after the full load test at UPF.
(v) High Voltage test to be done as per IS 4722 i.e. 1.5 KV for 1 minute for single phase. In case these tests are to be repeated the same will be at 80% of the voltage as per IS 4722.
(vi) Insulation resistance tests- the insulation resistance shall be measured with a DC Voltage of about 500V applied for a sufficient time for the reading of the indicator to become steady. The insulation resistance will be not less than 1 mega ohm if measured after the application of high voltage test.
(vii) Checking for the trouble free starting and oil leakages.
(viii) The sets do not vibrate during the load running test with the base kept free, the base not bolted to any structure of foundation.
(ix) High voltage and insulation resistance test should be conducted on alternator as well as control panel after the load tests.
(x) The control panel will be checked for functional requirement and completeness as per detailed specifications.
(xi) The tenders shall show the performance of the DG sets with the load available with the consignee during final inspection at the consignees end.

4.2. Inspection schedule should be submitted taking in to account the above broad parameters.

4.3 Either of the following types of TTC shall be acceptable:

i) Type Test Certificate issued by recognized Government Lab.
ii) Type Test Certificate issued by recognized Government Lab irrespective of whether engines and alternators were tested at firm's lab or some other lab, but witnessed by Government representative.
iii) Type Test Certificate issued by BIS, irrespective of engines and alternators were tested at firm's lab orsome other lab, but witnessed by BIS/ Government representative.
iv) Type Test Certificate issued by DQA on basis of test conducted at manufacturer's lab in presence ofDQA officers.

4. Testing shall be done at continuous power output for each rating.

5. Necessary gauge/meters shall be fitted to indicate

(a) the quantity of fuel left in the fuel tank, and
(b) hours of DG set operation.

6. DG Sets shall be provided with integrated acoustic enclosure which shall conform to latest normsof Central Pollution Control Board (CPCB).

7. The accoustic enclosure offered shall conform to the drawings type approved by Govt lab, forconformity to noise norms. This aspect shall also be verified at the time of inspection.

8. DG sets shall meet the requirements of Environmental (Protection) Rules 1986 as laid down byMin. of Environment & Forests read with GSR 371 (E) dated17.5.2002,GSR 520(E)dated 01.7.2003 , No.448 (E)dated 12.07.2004 , GSR 771(E)dated 11.12.2013& GSR 232(E)dated 31.03.2014 in respect of noise and emission norms. The latest amendments to above GSRs shall be applicable as and when amended by Ministry of Environment and Forest. DG sets shall alsomeet all other statutory requirements as notified by Govt. from time to time.

9. Supplier shall furnish following documents issued by a Govt authorized agency at the time of registration and **pre-dispatch inspection (at OEM premises):**

a. Type approval certificate (TAC) for emission norms for EACH model/family of engine.
b. TAC from for noise level norms EACH model of DG set.
c. COP for EACH model of DG set and engine used in DG set.

10. A copy of formal agreement between the DG set/Engine supplier and alternator manufacturer for continuous supply of alternators, during the warranty period of the tender, should be submitted to RailTel at the time of submission of tender documents (incase if DG Set supplier is not the manufacturer of engines).

11. Tenderers shall furnish list of authorized service centers throughout the country with complete address, phone number, fax & email etc.

12. DG set manufacturers shall provide a list of inventories being supplied with the DG set, to enablethe consignees to verify them, at the time of delivery. The inventory list shall be attached along with the Inspection Notes.

B. Technical specifications for provision of Earth

1. Introduction:

The Earthing arrangement is required to provide one earth for DG set & other earth for ACsupply. The earth resistance should be less than 1 (one) ohm.

2.Earthing arrangement.

i) Excavation in hard soil for minimum 3.5 Meter depth or till the wet soil isreached.

ii) Watering pipe of 3/4" GI A class pipe with funnel.

iii) 25mm x 3 mm copper strip up to ground level.

iv) 300mm x 300mm x 3 mm copper plate type earthing.

Laying of copper earthing strips for interconnecting the earth station panels, DistributionBoard Switch in built up trench on walls /buried in ground as specified & shown on the drawing complete with

a. Fixing accessories.

b. Corrosion protection of buried conductor with bituminous coating and covered with PVC tapping.

FORM-I

QUALIFYING CRITERIA USER's CERTIFICATE

Name of the Firm Contract No. & date

Scope of Work
Contract Amount (in Indian Rupees)
Completion Period as per contract Data of Commencement
Actual date of Successful Completion
Quality of work : Satisfactory / unsatisfactory
(Please specify)

Name:
Dated:
Designation:
E-mail id:
Contact No:

FORM-II

PROFORMA FOR STATEMENT OF DEVIATIONS

(1) The following are the particulars of deviations from the requirements of the tender specification.

Clause	Deviation	Remarks (including justification)

(2) The following are the particulars of deviations from the requirements of the instructions to Tenderers, General and Special Conditions of contract-

Clause	Deviation	Remarks (including justification)

Signature and seal of the Tenderer

Note: Where there is no deviation, the statement should be returned duly signed with an endorsement indicating “No Deviations".

FORM III

Manufacturer Authorization form (MAF)

ED/SR, **Dated: …….**

RailTel Corporation of India Ltd.

……

……....

……....

Subject: Manufacturer Authorization form (MAF) to M/s …… for ……

Ref: GeM Bid No. …….

Dear Sir,

We, M/s……, are established and reputed manufacturer and service provider of …….(Product details), having our registered office at ……..

We hereby authorize M/s …….. (bidder name), Office ……. to participate in bid and subsequently upon award of the bid to execute the supply of our range of products against your above said bid.

We further extend our warranty for …… years for our range of products offered by M/s …….against the above-said bid.

Thanking you,

Best regards,

Authorized Signatory

FORM-IV

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT

(Not applicable for this tender)

ED/SR Dated: …….

RailTel Corporation of India Ltd.

……

……....

……....

Applicable for OEM directly participating in the Bid.

I / We ……. hereby confirm that we have read specifications & conditions of GeM Bid No……..and accept that the requirement of Long Term Maintenance Support as per Clause 17 shall be met by us directly or through our subsidiary in India as per rates quoted in the Price Bid. I / We shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of tender document.

Or

Applicable for Authorized Distributor/Partner of OEM

I / We ……. hereby confirm that we have read specifications & conditions of GeM Bid No. ……..and accept that the requirement of Long Term Maintenance Support as per Clause 17 shall be met by Authorized Distributor/Partner of OEM. However, if Authorized Distributor/Partner fails to fulfil the support obligation due to any un-foreseen circumstances, the same shall be provided by us directly or through our subsidiary in India for the mentioned/remaining period at the quoted prices by the bidder. I/We have gone through the requirement mentioned in the Bid Document and shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of Bid document.

(Signature of Firm's Authorized Officer)

Seal Signature of witness:

……

…….

Note: Please Strike out whichever is not applicable

FORM - V

Guarantee Bond for Performance Guarantee

(On Stamp Paper of requisite value)

(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited, Registered office at Plate-A, 6th Floor, Office Block, Tower-2, East Kidwai Nagar, New Delhi-110023 and Regional office at RailTel Corporation of India Ltd, 6A, 6th Floor, Gumidelli Towers, Begumpet, Hyderabad-50016 (hereinafter called "the RailTel") having agreed to exempt ……. **(Name and address of the Company/ Contractor both Registered and Regional office address)** (hereinafter called "the said Contractor(s)") from the demand, under the terms and conditions of an L.O.A No.…… Dated…….. [L.O.A Date] made between ……. and RailTel Corporation of India Limited, for ….……...…… [Name of Work/Supply of Materials] (hereinafter called "the said Agreement") of **Performance Guarantee** for the due fulfilment by the said contractor's) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs…….…….. (Rs. …….. Only). We, …….. (indicate the name of the Bank and address) hereinafter referred to as " the Bank") at the request of. M/s.…….. Contractor(s) do hereby undertake to pay the **RailTel** an amount not exceeding Rs. ……. Against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

2.We, ……. Bank (indicate the name of the Bank and address) do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely on demand from the **RailTel** stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the **RailTel b**y reason of breach by the said Contractor(s) of any of terms or conditions contained in the said.

Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ……

3. We, …….. Bank (indicate the name of the Bank and address) undertake to pay to the **RailTel** any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

The Payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.

4. We, ……. Bank (indicate the name of the Bank and address) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till **RailTel** certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the ……..…….. We shall be discharged from all liability under this Guarantee thereafter.

5. We, ……(indicate the name of the Bank and address) further agree with the **RailTel** that the **RailTel** shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the **RailTel** against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of **RailTel** or any indulgence by the **RailTel** to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

6. This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).

7. We, …… (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the **RailTel** in writing.

8. Notwithstanding anything contained herein,

1. Our liability under the Bank guarantee shall not exceed Rs. …….. (In Rupees)

2. This Bank Guarantee shall be valid up to ……and

3. We are liable to pay the guaranteed and or any part thereof under this Bank Guarantee only and only if you serve upon is a written claims or demand or before

……. (date of expiry of guarantee).

Dated the day of 2026 for ……..

(Indicate the name of the Bank) Witness:

1. Signature Name
2. Signature Name

Form- VI

FORMAT FOR AFFIDAVIT TO BE SUBMITTED BY TENDERER ALONG WITH THE TENDER BID DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/-. The paper has to be in the name of the tenderer)

I .....(Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents), M/s _____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____ as per the tender No. _____ of (RailTel), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/we the tenderer (s), am/are signing this document after carefully reading the contents.

2. I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.

3. I/we hereby declare that I/we have downloaded the tender conditions from RailTel website www.railtelindia.com/ **https://www.GeM.gov.in**. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to the content of the tender conditions. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.

4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.

5. **I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us**.

6. **I/we declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.**

7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender BID SECURITY DECLARATION besides banning of business for five years on entire RailTel. Further, I/we (insert name of the tenderer)** _____ and all my/our constituents understand that my/our constituents understand that my/our offer shall be **summarily rejected**.

8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of BID SECURITY DECLARATION/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT

SEAL AND SIGNATUREOF THE TENDERER
VERIFICATION

I/we above named tender do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

SEAL AND SIGNATUREOF THE TENDERER
Place:
Date:

**The contents in Italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public.

Annexure -A

SN	POP Name / Consignee Location	State	DG SET	GST	Consignee details (ship to Address)	Bill to Address	Field Engineer Contact Details	Section Manager Contact Details
1	Hassan	karnataka	50 KVA	29AABCR7176C1Z9	Mallappa P R Railtel Corporation of India ltd,Hassan Railway station Junction,Platform1,Shankaripuram, Hassan Pin:573201 Mob:9611685909	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar, Bengaluru, Karnataka 560001	Mallappa P R GE/O&M/HAS 96116 85909	Suresh OA Ch.Mgr/O&M/MYS mob-97467 69888
2	Asikere	Karnataka	25 KVA	29AABCR7176C1Z9	Railtel Corporation of India ltd JE/TELE/Exchange office/ASK Station Road, Arsikere Arsikere, KARNATAKA 573103 India .phone no. 7708123768	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar, Bengaluru, Karnataka 560001	Aravinthan.V GE/O&M/ASK 7708123768	Suresh OA Ch.Mgr/O&M/MYS mob-97467 69888
3	Chikjajur	karnataka	25 KVA	29AABCR7176C1Z9	Chikjajur railway station Chikjajur Holalkere taluka Chitradurga district Karnataka 577523 mob-84314 93698	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar, Bengaluru, Karnataka 560001	Syed Shahid ITI/RW/JRU 84314 93698	Zameer Khan Dy.Mgr/O&M/DVG 94813 44686
4	Belgavi	karnataka	25 KVA	29AABCR7176C1Z9	Railtel CORPORATION OF IND LTD, Shastri Nagar, shahapur, BGM Railway station, Belagavi -Karnataka - 590001, MOB-9008311038	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar, Bengaluru, Karnataka 560001	Abhijit patil GE/O&M/BGM 9008311038, 8884292312.	Natraj B Kambli CE/O&M/UBL 90080 95412
5	Bellary	karnataka	25 KVA	29AABCR7176C1Z9	RailTel Corporation of India Ltd., C/O SSE/Tele, Opp New Running Room, Near Railway Station, Bellary-583101.	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar ,Bengaluru, Karnataka 560001	Mr.Sathish GE/O&M/HPT Ph: 8147272024	M K Swami AE/O&M/GDG 81472 72024
6	Londa	karnataka	15 KVA	29AABCR7176C1Z9	RailTel Corporation of India Limited, Microwave Exchange (OFC Room), Near new station master building, Londa Railway Station, Londa, pin:591301.	RailTel Corporation of India Limited. 6, 1, 12th Main Rd, Vasanth Nagar, Bengaluru, Karnataka 560001	Sidram Koravi GE/O&M/LD 7483566588/ 96864 90706.	Natraj B Kambli CE/O&M/UBL 90080 95412
7	Ernakulam	Kerala	125 KVA	32AABCR7176C1ZM	RailTel Corporation of India Ltd, First Floor, Eastern Entry Tower, Ernakulam Junction Railway Station, Karshaka Road, Ernakulam, Kerala, PIN-682016.	RailTel Corporation of India Ltd, First Floor, Eastern Entry Tower, Ernakulam Junction Railway Station, Karshaka Road, Ernakulam, Kerala, PIN-682016.	NA	Contact: 97464 71399 (Shri Ranjith TV, AGM/Tech/ERS)