

NOTICE FOR PRE NIT MEETING

A Pre NIT meeting is scheduled for finalization of Technical Specifications / Terms and conditions for the upcoming Tender for 02 nos of Battery-Operated Electric Rear Dumper of 60T payload capacity on Trial Basis.

Qty: 2 Nos (Detailed quantity and scope of work as per BOQ attached in Draft NIT)

Date and Time of Pre NIT Meeting: 11:30am on 21-09-2026

Venue: Office of General Manager (MM), WCL, Hqrs, Coal Estate, Civil Lines, Nagpur

Alternatively prospective bidders may join through Video Conferencing by below link

<https://westerncoalfields.webex.com/westerncoalfields/j.php?MTID=mb8ce594fe710f6093da7a50cb2ec2dad>

Monday, September 21, 2026 11:30 AM | 3 hours 30 minutes | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Meeting number: 2511 103 2467

Password: PJpCznpr482

Join by video system

Dial 25111032467@westerncoalfields.webex.com

You can also dial 210.4.202.4 and enter your meeting number.

A draft NIT indicating the Scope of supply, Technical specifications, technical terms and conditions, eligibility, provenness criteria and commercial terms and conditions is attached herewith.

The interested bidders may attend the meeting on scheduled date / time

For any queries please contact: Mrunal Mehta, Senior Manager (MM)

Phone no:- 9470595257, email: mrunal.mehta@coalindia.in

Draft NIT

for Procurement of

**02 nos of Battery-Operated
Electric Rear Dumper of 60T
payload capacity on Trial Basis**

SECTION – V
SCHEDULE OF REQUIREMENTS

SI NO	ITEM DESCRIPTION	QTY IN SETS
1	Design, manufacture, testing, supply, delivery, on-site erection, installation, commissioning and performance testing of Electric, Self-Propelled, Wheeled, Off-Highway Rear Dumper with 60 Ton Payload Capacity (54.42 Tonne) Rock Body, complete with Energy Storage System, Charging equipment and all associated systems, assemblies, sub-assemblies, accessories and software required for safe, reliable and efficient operation along with standard accessories, standard tools, diagnostic tools, special maintenance tools, spare parts and consumables for the initial 12 months warranty period from the date of commissioning of the equipment and thereafter spares and consumables for a further period of 48 months beyond the warranty period, as specified in the NIT.	02 Nos

SPECIAL TECHNICAL TERMS AND CONDITIONS OF NIT

Introduction

These Technical Specifications identify the technical requirements of the Goods and Services which are the subject of this Tender.

The Technical Specifications are presented in four parts as follows:

- A. Scope of Supply
- B. Specific Site Requirements
- C. General Requirements
 - 1. Geography and Climatic Conditions
 - 2. Goods (Equipment and Machinery)
 - 3. Services
 - 4. Standards
 - 5. Supplier's Responsibility
 - 6. Spares Parts Provision
 - 7. Availability provisions
 - 8. Deemed Breakdown
 - 9. Composite Warranty / Guarantee
 - 10. Quality Assurance
- D. Equipment Specification

Technical response

Bidders shall provide a Clause-by-Clause commentary demonstrating compliance with the Purchaser's Technical Specifications, together with full supporting technical literature and data sheets.

Wherever graphical representation of data (e. g. load, power, performance curves) is required, the grid axis and data shall be properly and clearly labelled for ready comprehension by the bidders.

Additionally, Bidders shall provide the information specifically requested in the Attachment to the Technical Specifications.

Failure to demonstrate compliance in all respects with the requirements of the Technical Specification may render the bid non-responsive.

Failure to provide any information requested in any part of this specification may deem the bid non-responsive.

Site Visits

The Bidder prior to making any Bid calculation and as part of the preparation of it's Bid, shall be deemed to have visited and inspected the Site(s), made all enquiries and collected all information documentary or otherwise, including climatic conditions, as considered necessary by the Bidder for the proper and accurate preparation of it's bid.

The bidder may visit the site(s) by prior appointment with the purchaser. The number of bidder's representatives permitted to make visits to the sites(s) shall be limited to a maximum of two.

Bidders wishing to make appointments for site visit should do so in writing or by facsimile directly with WCL and concerned officer as detailed in the following schedule. Copies of all communications to be sent to:

General Manager (MM)/HOD
Western Coalfields Limited
Coal Estate, Civil Lines,
Nagpur- 440001 (Maharashtra)

Area Name : Subsidiary Company	Project
Western Coalfields Limited Coal Estate, Civil Lines, Nagpur- 440001 (Maharashtra) Atten : General Manager (Excavation)/HOD	Gondegaon, OCM, Nagpur Area

PART A

A.1 Equipment Package.

The Supplier shall provide a complete package for the design, manufacture, factory testing, supply, delivery, installation, commissioning and performance testing of Electric, Self-Propelled, Wheeled, Off-Highway Rear Dumper of 60 Ton (54.42 Tonne) rated payload capacity with suitable rock body for deployment in the opencast coal mines of WCL, Nagpur, in accordance with the Technical Specifications contained in Part–D.

The equipment shall be supplied complete in all respects with Energy Storage System, Charging Equipment and all associated systems, assemblies, sub-assemblies, accessories, software, documentation, standard tools, special maintenance tools, diagnostic equipment and training required for safe, reliable and efficient operation and maintenance of the equipment.

The scope of supply shall include supply, installation, testing and commissioning of the Charging Equipment together with all associated equipment, accessories and interfaces required for safe and reliable charging of the supplied Electric Rear Dumpers. The Supplier shall be solely responsible for ensuring the technical compatibility, functional integration and safe operation of the Charging Equipment with the supplied Electric Rear Dumpers.

The Scope of Supply shall include all materials, equipment, hardware, software, firmware, services and incidental items required to satisfy the guaranteed performance, safety, reliability, availability and statutory compliance requirements, whether specifically mentioned in this Specification or not, that are necessary for the complete, safe, reliable and satisfactory operation of the supplied Equipment.

The Supplier shall provide a structured training and skill development programme for the Purchaser's operating and maintenance personnel covering operation, inspection, preventive maintenance, troubleshooting, safe handling of the Energy Storage System (ESS), Charging Equipment, high-voltage systems, diagnostic tools and emergency response procedures. The detailed training requirements shall be as specified under Clause A.5 of this Specification.

The Supplier shall provide all recommended spares and consumables required during the 12 (Twelve) months warranty period from the date of commissioning of the equipment. The Supplier shall also furnish the list of recommended spares and consumables required for operation and maintenance of the equipment for a further period of four (4) years (48 months) beyond the warranty period.

The scope and phasing of supply shall be as specified in the Schedule of Requirements.

A.2 Supplementary Items

The equipment shall be supplied with a comprehensive toolkit comprising all standard tools, special tools, test equipment, diagnostic equipment, software, accessories and safety equipment required for erection, installation, commissioning, operation, inspection, testing, maintenance and repair of the equipment.

The Supplier shall provide all tools, equipment and safety accessories necessary for safe maintenance and handling of the Energy Storage System, Charging Equipment and associated high-voltage systems. The Supplier shall also provide all lifting fixtures, handling devices, transportation stands and other special equipment, if required, for the safe removal, handling, storage, transportation and installation of the Energy Storage System or any of its major replaceable modules.

The Supplier shall provide all special tools, test equipment, personal protective equipment (PPE), lock-out/tag-out devices and safety accessories necessary for safe operation, isolation, inspection, testing and maintenance of the high-voltage systems.

The Supplier shall provide the first fill of all lubricants, hydraulic fluids, coolants, thermal management fluids and other consumables required for factory testing (where applicable), installation, commissioning and initial operation of the equipment.

A.3 Information & Drawings & Manuals

At least one (1) month before the scheduled date of installation, the Supplier shall provide the following:

(a) Operating, Repair and Maintenance Manuals

Suitably illustrated copies of the Operating, Repair and Maintenance Manuals for each type/model of the Equipment, Charging Equipment and associated systems, written in the English language and substantially bound in book form:

Three (3) copies to each Project Site; and

One (1) copy each, along with a soft copy, to the concerned Project In-charge, Area Manager, Staff Officer (Excavation), General Manager (Excavation)/HOD at Subsidiary Headquarters and General Manager (MM)/HOD at Subsidiary Headquarters.

(b) Spare Parts Manuals

Suitably illustrated copies of detailed Spare Parts Manuals for each type/model of the Equipment, Charging Equipment and associated systems, written in the English language and substantially bound in book form:

Three (3) copies to each Project Site; and

One (1) copy each, along with a soft copy, to the concerned Project In-charge, Area Manager, Staff Officer (Excavation), General Manager (Excavation)/HOD at Subsidiary Headquarters and General Manager (MM)/HOD at Subsidiary Headquarters.

(c) Drawings and Technical Documentation

The Supplier shall provide all drawings, layouts, diagrams, technical documentation and other information necessary for installation, erection, commissioning, operation, inspection, maintenance, troubleshooting, repair and safe operation of the Equipment and Charging Equipment.

The documentation shall include all civil, mechanical, electrical, electronic, communication interface and installation requirements, together with all necessary drawings, schematics, layouts, wiring diagrams, configuration details and other information required for safe installation, operation and maintenance of the supplied equipment.

The complete site-specific details, drawings and technical documentation pertaining to civil construction and electrical supply requirements for the Charging Infrastructure shall be submitted by the Supplier within fifteen (15) days from the date of placement of the order.

The Supplier shall also provide all software, firmware, licences, diagnostic utilities and other digital tools, wherever applicable, required for operation, monitoring, diagnostics, troubleshooting and maintenance of the supplied equipment during the warranty period and GPCC period.

The Supplier shall provide all administrative passwords, access rights and user privileges necessary for operation, diagnostics and maintenance of the supplied equipment to the extent required under this Contract.

The Supplier shall provide complete documentation of all software versions, firmware versions, communication protocols, configuration settings and revision history applicable to the supplied Equipment at the time of supply and shall update the Purchaser whenever any approved revision is implemented during the Warranty and GPCC period.

The above documents shall be supplied in the same number of hard copies specified above together with soft copies.

The Supplier shall also provide the latest revisions of all manuals, drawings, software documentation and technical bulletins issued during the Warranty and GPCC period without additional cost.

A.4 Erection/Assembly, commissioning and Performance Testing:

The Supplier shall provide the services of Specialist Technicians (Refer Part–C.3) together with the required skilled, semi-skilled and unskilled manpower for carrying out the installation, erection, assembly, commissioning and performance testing & monitoring of the Electric Rear Dumper, Charging Equipment and associated systems supplied under the Contract.

The Supplier shall station a dedicated EV Specialist Service Engineer at site throughout the Trial Period of twelve (12) months from the date of commissioning of the Equipment. The Service Engineer shall provide technical support for commissioning, performance testing, operation, troubleshooting, diagnostics, preventive and corrective maintenance, and other technical requirements related to the Electric Rear Dumper and associated Charging Equipment during the Trial Period.

The Purchaser shall assist in providing necessary facilities such as erection tools and tackles (supplied along with the equipment), cranes with operator and electrical power required during erection and commissioning.

The Supplier shall carry out complete commissioning and demonstrate the safe, reliable and satisfactory operation of the supplied Electric Rear Dumper and Charging Equipment, including compliance with the performance requirements specified in the Contract.

Commissioning shall include functional verification of all mechanical, electrical, electronic, software, communication, protection, monitoring, safety interlock and charging systems to demonstrate compliance with the requirements of this Specification.

The Supplier's technicians shall remain at site after commissioning until the Purchaser's personnel are adequately trained and fully conversant with the operation, maintenance, inspection and safe handling of the supplied equipment.

The commissioning shall be deemed complete only after successful demonstration of all contractual performance parameters of the equipment under the specified operating conditions and acceptance by the Purchaser.

All statutory approvals, inspections and certifications, if required for commissioning of the supplied equipment, shall be arranged by the Supplier.

Following successful commissioning and performance demonstration, the Supplier shall submit all commissioning records, calibration records, test reports, training completion records, inspection certificates and other documents necessary to demonstrate that the Equipment has been installed, tested and commissioned in accordance with the

Contract. The Purchaser's Acceptance Certificate shall be issued only after satisfactory completion of commissioning and submission of the required documentation.

The Supplier shall also submit the final commissioning records, configuration details and calibration records applicable to the supplied Equipment.

A.5 Training

I. Mandatory Training During Warranty Period

The Supplier, in consultation with the Project In-charge/ HOD (Excavation) of the respective site, shall make available experienced personnel to conduct training for engineers, supervisors, technicians and operating personnel for the periods specified in the Schedule of Requirement of Services, commencing from the date of issue of the Acceptance Certificate of the equipment.

In addition to the mandatory training specified herein, the Supplier shall make available qualified Service Engineer(s)/experienced technical personnel at site to provide hands-on training and technical guidance to engineers, supervisors, technicians and operating personnel for a minimum period of three (3) months or 1,000 operating hours of the Equipment, whichever is later, from the date of commissioning.

The training shall include, as applicable, operation, diagnostics, preventive and corrective maintenance, troubleshooting, Energy Storage System (ESS), Electric Drive System, High Voltage (HV) system, Charging Equipment, safety procedures and use of diagnostic tools and software.

The training programme shall, as a minimum, cover the following:

- a. Simulator-based operator training, wherever applicable, at the Supplier's works, suitable location in India or at an end-user location.
- b. Safe operation of the Equipment under normal and abnormal operating conditions.
- c. Inspection, operation, preventive maintenance and routine servicing of the Equipment and Charging Equipment.
- d. Safe handling, charging, isolation and maintenance of the Energy Storage System and associated high-voltage systems.
- e. Equipment safety features, hazard identification, risk assessment, emergency response procedures and safe work practices.
- f. Fault diagnosis, troubleshooting and rectification procedures covering all mechanical, electrical, electronic, hydraulic, pneumatic and associated systems of the supplied equipment.
- g. Use of diagnostic tools, software and condition monitoring systems supplied with the equipment.

- h. Where major bought-out systems are supplied by specialized manufacturers, the Supplier shall ensure that appropriate technical training is provided by the respective manufacturer or by personnel duly authorized by such manufacturer.
- i. Operation and monitoring of the Vehicle Health Monitoring System (VHMS), telematics system, charging management system and diagnostic software, including interpretation of operational, safety and energy consumption data. Suitable training shall also be provided to the Purchaser's personnel for effective utilization of the system

Comprehensive training manuals with clear illustrations shall be provided to each participant in the English language. The training shall be conducted in both English and Hindi.

The training shall be conducted in batches within the warranty period from the date of commissioning of the first equipment at the respective project.

II. Additional Training During Contract Period

- a. The Bidder shall confirm in its bid that additional training can be imparted to CIL personnel, beyond the mandatory training, at any time during the contract period after expiry of the warranty period.
- b. The scope of such training shall be based on the Purchaser's requirements and may cover any aspect relating to the operation, inspection, maintenance, troubleshooting, safety and efficient utilization of the supplied equipment.
- c. Such additional training shall be on a chargeable basis, and payment shall be made at the rates quoted by the Bidder for the mandatory training.

PART – “B”

SPECIFIC SITE REQUIREMENTS

B.1 Project Specific Requirements

The Electric, Self-Propelled, Wheeled Off-Highway Rear Dumper of 60 Ton (54.42 Tonne) rated payload capacity, together with the associated Charging Equipment, shall be suitable for deployment and operation in the opencast coal mines of Western Coalfields Limited (WCL) under the environmental, geological and operating conditions specified herein.

The offered equipment shall be capable of operating safely, reliably and efficiently under the dusty, hot, humid, rainy, muddy, waterlogged and rough mining conditions, including the severe operating conditions normally encountered during the monsoon season in

Indian opencast coal mines, without compromising the specified performance, safety or reliability requirements.

The equipment shall be designed and manufactured for continuous heavy-duty mining applications and shall demonstrate compliance with the performance requirements specified in this Tender throughout the contract period.

The site conditions specified in this Part are representative in nature and are intended to assist the Bidder in understanding the operating environment. The Bidder shall satisfy itself regarding the prevailing site conditions and shall ensure that the offered equipment is suitable for achieving the specified performance requirements under such conditions.

B.1.1 Gondegaon Ghatrohan Opencast Project

The proposed deployment location is Gondegaon Ghatrohan Opencast Project, owned by Western Coalfields Limited (WCL), a subsidiary of Coal India Limited (CIL).

The project is located in Nagpur District, Maharashtra, approximately 35 km from Nagpur Railway Station.

Consignee:

Depot Officer
Regional Store
Nagpur Area

The supplied Electric Rear Dumper and Charging Equipment shall be suitable for operation under the representative site and operating conditions prevailing at the project.

The Bidder may visit the project site, with prior approval of WCL, to familiarize itself with the site conditions, haul roads, operating practices and other factors that may influence the design and performance of the offered equipment.

PART- 'C'

C. GENERAL REQUIREMENTS.

C.1 Geography and Climatic Conditions

The **Electric Rear Dumper and Charging Equipment** shall be suitable for safe, reliable and efficient operation under the geographical, climatic and environmental conditions specified below:

Parameter	Site Condition
Elevation	100 m to 1,000 m above mean sea level
Climate	Sub-tropical to tropical, with hot, humid and dusty conditions
Ambient Temperature	0°C to 50°C
Relative Humidity	Up to 98%
Rainfall	Mean annual rainfall of approximately 1,000 mm, with about 90–95% occurring during the monsoon period from June to October
Wind	Predominantly south to south-westerly from April to September and north-westerly from October to March; average speed approximately 8 km/h and maximum up to 100 km/h
Ground/Underfoot Conditions	Slushy, muddy, waterlogged and highly abrasive mining conditions
Dust Conditions	Heavy dust conditions normally encountered in opencast coal mines

The offered equipment shall be capable of meeting the specified performance requirements under the above climatic and environmental conditions without compromising safety, reliability or intended service life.

C.2 Goods (Equipment & Machinery)

Detailed specifications of the equipment to be supplied are given in **Part–D** of this Section.

In general, all items shall be:

- New, unused, of the current design incorporating latest proven features, (wherever available) and not likely to be discontinued or become obsolete during the lifetime of the equipment.
- Designed and constructed to operate continuously under the specified duty cycle, operating hours and performance requirements.
- Designed to facilitate safe access, inspection, cleaning, operation, maintenance and repair.
- Designed to facilitate replacement of consumables and routine maintenance with minimum downtime.

The supplier shall ensure that the offered equipment incorporates technology suitable for the intended mining application and shall not be discontinued during the life time of the equipment. However, if technical upgradation or replacement of any component, system or sub-system becomes unavoidable, the Supplier may incorporate such changes only with the prior approval of the Purchaser. Such upgradation shall not adversely affect the performance, reliability, safety, maintainability, interchangeability or lifecycle support of the equipment.

The Supplier shall not seek any technical modification or upgradation at the Purchaser's cost during the Warranty and Guaranteed Availability/GPCC period.

In case any modification is required to comply with statutory requirements issued by the Government of India, DGMS or other competent regulatory authorities, the cost of such modification shall be borne by the Supplier during the Trial Period and shall be shared equally between the Supplier and the Purchaser after completion of the Trial Period of twelve (12) months till the validity of the contract.

The component parts of all items shall, wherever practicable, be selected from the standard product ranges of reputable manufacturers.

The Equipment and accessories shall be physically robust and, where necessary, capable of dismantling for transportation and reassembly using standard tools. All equipment supplied shall be fully compatible with the overall Scope of Supply.

All workmanship and materials shall be of first-class quality.

All parts and surfaces exposed to corrosive, abrasive or adverse environmental conditions shall be suitably protected against corrosion, erosion and premature deterioration and shall be suitable for the intended service life of the Equipment.

The offered equipment shall be specifically designed and manufactured for continuous heavy-duty mining applications and shall be capable of meeting the performance, reliability, safety and service life requirements specified in this Tender under the prevailing site and operating conditions.

The equipment shall incorporate all systems, features and protective measures necessary to comply with the safety, performance and statutory requirements specified elsewhere in the Tender

C.3 Services

The Supplier shall be responsible for the complete erection, installation, commissioning, testing and performance demonstration in actual field operation of the supplied equipment at site.

The Supplier shall depute qualified and competent engineers and specialist technicians, at no additional cost to the Purchaser, to supervise and carry out the assembly, installation, commissioning, testing and successful performance demonstration of the equipment ~~for the duration~~ specified in the Schedule of Requirement of Services and, where necessary, until completion of the aforesaid activities.

The Supplier shall ensure that the supplied **Electric Rear Dumper, Charging Equipment** and all associated systems are installed, commissioned and demonstrated as a complete and fully functional package in accordance with the requirements of this Tender.

Commissioning shall include all inspections, functional checks, testing, calibration, adjustments and actual field operation necessary to establish that the equipment complies with the specified technical and performance requirements.

Commissioning shall be deemed complete only after successful performance demonstration detailed above and acceptance of the equipment by the Purchaser.

C.4 Standards

The design, manufacture, supply, installation, testing and commissioning of all equipment and associated systems under this Contract shall comply in all respects with the requirements of this Specification and the latest editions of the applicable Indian Standards (IS), Bureau of Indian Standards (BIS) specifications, International Organization for Standardization (ISO) standards, International Electrotechnical Commission (IEC) standards, or other internationally recognized equivalent standards applicable to the offered equipment.

Where equivalent international standards are offered in lieu of the specified Indian or ISO standards, and such substitution is not prohibited by applicable statutory or regulatory requirements the Bidder shall furnish documentary evidence demonstrating that such standards are technically equivalent to or more stringent than the corresponding specified standards.

The equipment shall comply with all prevailing and latest applicable statutory requirements, rules and regulations of the Government of India and the respective State Government, including the requirements of the **Director General of Mines Safety (DGMS)** and any other statutory authority having jurisdiction over the equipment, during its supply, installation and operation.

The equipment shall also comply with all applicable standards relating to electrical systems, functional safety, electromagnetic compatibility, environmental protection and occupational safety relevant to the offered equipment.

The system of units for all measurements shall be the **International System of Units (SI Units)**.

C.5 Supplier's Responsibility

C.5.1

The Purchaser requires that the Supplier shall accept responsibility for the provision of complete, operable and compatible Equipment and systems within the Scope of Supply. This Specification identifies only the major items required, and the Supplier shall ensure that the total supply includes all necessary equipment, systems, components, accessories and other items required for the Equipment to function safely, reliably and effectively. Any additional items necessary to ensure compliance with the requirements of the Contract shall be identified and included in the Scope of Supply by the Supplier.

If the Supplier observes that the Specification documents contain any anomalies, ambiguities, flaws, errors or omissions, the Supplier shall immediately bring the same to the attention of the Purchaser in the Pre-NIT /Pre-Bid Conference.

The Supplier shall be responsible for the erection, testing, commissioning and performance demonstration of the Equipment and shall ensure that it meets the requirements specified in the Contract. The commissioning and setting to work of the complete Equipment Package shall be carried out under the supervision of the Supplier in conjunction with the Purchaser's nominated personnel.

The Supplier shall accept complete responsibility for the integration, compatibility, performance and safe operation of the Electric Rear Dumper, Charging Equipment and all associated systems supplied under the Contract.

The Supplier shall ensure complete compatibility and safe interfacing between the Electric Rear Dumper and Charging Equipment and shall be responsible for the satisfactory performance of the complete integrated Equipment Package.

Any inspection, testing, witnessing, review or acceptance carried out by the Purchaser or its authorized representative shall not relieve the Supplier of its responsibility for the design, manufacture, integration, quality, safety, performance, reliability or compliance of the Equipment with the Contract.

C.5.2

The Supplier shall be responsible for the safety and safe functioning of the Electric Rear Dumper, Energy Storage System, Charging Equipment and all associated systems, assemblies, sub-assemblies, components and software supplied under the Contract.

In the event of any accident, fire, electric shock, thermal event or other hazardous incident arising from any defect, malfunction, failure, inadequate design, improper integration or deficiency in the Equipment or any item supplied under the Contract, the Supplier shall be responsible for the consequences to the extent attributable to such defect, malfunction, failure, inadequate design, improper integration or deficiency. In such events, the Purchaser, its representative or its maintenance personnel shall not be held responsible to the extent that the incident is attributable to such defect, malfunction, failure, inadequate design, improper integration or deficiency.

The Supplier shall, at its own cost, promptly undertake necessary investigation, root-cause analysis, rectification, replacement of defective components and corrective measures to restore the Equipment to safe operating condition and prevent recurrence.

The Supplier shall remain responsible for the safety, compatibility and performance of all bought-out systems and components incorporated in the Equipment, irrespective of their manufacturer or source of supply.

C.6 Spares Parts Provision:

C.6.1.a. Availability of Spare Parts

All items and equipment proposed shall be of current design and manufacture. The Supplier shall warrant that sufficient Spare Parts and servicing facilities shall be available to maintain the Equipment in use throughout its specified working life.

The Supplier shall ensure availability of all Spare Parts, components, sub-assemblies, Consumables and associated software/firmware, wherever applicable, required for operation, maintenance and repair of the Equipment throughout its specified working life.

The Supplier shall ensure timely availability of critical Spare Parts and adequate service support so as to minimize equipment downtime and meet the availability and performance requirements specified in the Contract.

C.6.1.b Bought-out Assemblies, Sub-assemblies and Spares

The Supplier shall furnish a complete list of all bought-out assemblies, sub-assemblies and spares applicable to the offered model, as required under the Technical Specification against "Information to be Provided by the Bidder."

The details furnished shall include the name of the item/assembly, make, model, manufacturer's name, country of origin and other relevant details, wherever applicable.

The bought-out items of the following categories, wherever applicable to the offered model, shall be included in the information furnished by the Bidder:

Energy Storage System, Electric Traction Motor(s), Power Electronic Equipment, Charging Equipment, Automatic Gearbox, Transmission, Transmission Pump, Suspension System, Air-Conditioning System and Spares, AC/DC Motors and Generators, Auto-Electrical Items, Universal Joint Assemblies, Drive Lines including Transmission/Reduction Gear Assembly, PTO Assembly, Differential Assembly, Final Drive Assembly and associated spares, Hydraulic Pumps, Hydraulic Motors, Hydraulic Cylinders, Brake Parts, Brake Systems, Feed and Propel Chains (if applicable), Auto-Lubrication System, Automatic Fire Detection and Suppression System, Tyre Inflation System and Parts, Instruments and Gauges, Air Compressor, Hydraulic Control Valves, Travel Device Assembly, Electrical Control Panels, Monitoring and Diagnostic Systems, and other Safety Devices/Sensors, as applicable.

The above list is indicative and not exhaustive. The Supplier shall disclose all bought-out assemblies, sub-assemblies and spares incorporated in the offered Equipment and Charging Equipment, whether or not specifically included in the above indicative list.

The Supplier shall remain fully responsible for the performance, reliability, compatibility, availability of spares and lifecycle support of all bought-out assemblies, sub-assemblies and spares incorporated in the Equipment and Charging Equipment, irrespective of their source of manufacture.

The Supplier shall submit an undertaking confirming that the list furnished includes all bought-out assemblies, sub-assemblies and spares applicable to the offered Equipment and Charging Equipment, and that all spares not included in the furnished list shall be considered proprietary to the Supplier/OEM

C.6.2 Provision of spare parts:

C.6.2.1 Within the Contract Price, the Purchaser shall agree to purchase all Operational, Maintenance and standby/ contingency Spare Parts, consumable items, Wear Materials, maintenance tools and special tools (herein after collectively referred to as "**Spare Parts**" unless the context specifies otherwise), in accordance with the supplier's recommendations for **60 (Sixty) Months** from the accepted date of issue of Commissioning certificate.

Similarly, within the contract price, the purchaser shall also agree to purchase consumable items (hereinafter referred to as "**Consumables**" unless the context specifies otherwise), in accordance with the supplier's recommendations for **60 (Sixty) Months** from the date of issue of Commissioning certificate. The schedule of supply of spares and consumables shall as indicate in the schedule of requirements. In addition, the supplier shall provide **Spares parts and Consumables** for commissioning.

Consumables shall include items such as Oils, Lubricants, Grease, fluids and coolants also. Tyres are not included in the consumables.

The supplier shall submit Five (5) separate schedules showing spare parts and consumables proposed to be supplied by them in each 12 (twelve) months period from the date of commissioning of equipment project-wise in order to comply with the provisions herein contained.

C.6.2.2

In the event that the Spare Parts and Consumables, as maintained by the Supplier, in any way fall short of actual requirements during the period for which they are said to be adequate, the supplier shall provide such additional spare parts and consumables as are necessary at final destination. Such additional spare parts and consumables shall be provided by the supplier to the Purchaser, **free of all costs** and shall be transported to Site by air freight internationally and by air, rail or fast road transport within India.

C.6.2.3

In the event that the spares parts, Insurance items, and consumables, as recommended by the Supplier, are in excess of actual requirement, the Purchaser may at its option:

- a) Retain such excess spares parts and consumables as, in its discretion, it may elect to do so ; or
- b) Require the supplier to reprocess or repatriate or otherwise dispose of such excess spares parts and consumables in exchange of payment to the Purchaser of the contract Price of spare parts and Consumables concerned.

The purchaser shall notify the Supplier, in writing of its requirements under this clause within thirty (30) days of completion of the period referred to in Clause C.6.2.1 hereof.

C.6.2.4

In the event that the operation of the plant is inhibited or frustrated as a direct result of lack of Spare parts and Consumables pursuant to clause C.6.2.2 hereof, then the period

referred to in clause 'C.6.2.1' hereof shall be extended by a period of not less than the period during which operation as aforesaid was inhibited or frustrated.

C.6.2.5

The supplier shall not be liable for the supply of additional Spare parts and Consumable, nor to extend the period referred to in Clause C.6.2.1 hereof, if and to the extent that, additional Spare Parts and consumables are required by reasons of unforeseen accidents, negligence or misuse on the part of the purchaser.

C.6.2.6.

The assessment of the supplier of the Spare parts & Consumable requirements shall be based upon the expected working hours per year **i.e. 4000 (four thousand)**, as defined in the individual Equipment Specifications included in the technical specification.

C.6.3 Emergency Spare parts.

C.6.3.1

Emergency spare parts required by the purchaser to repair breakdowns shall be dispatched to the site by the supplier by the fastest, practicable means as directed from time to time by the purchaser.

C.6.3.2

For the purpose of Clause no C.6.2.6, "Emergency spare parts" shall mean those spare parts or components required by the purchaser to repair any item of Plant supplied pursuant to the contract in the event of a breakdown not attributable to a failure covered by guarantee or a failure of the supplier to provide adequate Spare Parts or consumables.

C.6.3.3.

payment in respect of supply and delivery of such Emergency spare parts shall be made promptly, retrospectively, by the purchaser, in a manner consistent with the terms of payment described in the contract.

C.6.3.4 Lifetime Spare Parts.

The Supplier undertakes and guarantees to produce, procure and maintain availability, for purchase by the Purchaser under separate agreements, of all Spare Parts,

Consumables and associated software/firmware support, wherever applicable, as may be required for maintenance and repair of the Equipment throughout its working life.

In the event that the Supplier intends to discontinue the manufacture, supply or support of any such item, the Supplier shall:

- a. Give not less than six (6) months' prior written notice of its intention to discontinue such item, in order to permit the Purchaser reasonable time to procure the anticipated requirements;
- b. Following such discontinuation, provide to the Purchaser, at no cost and to the extent legally permissible, relevant manufacturing drawings, material specifications, technical documentation and necessary permissions to facilitate manufacture, procurement or support from alternative sources;
- c. Inform the HOD (Excavation), HOD (MM) of the Subsidiary Headquarters and the concerned Project Site of any change in Part Number, superseded Part Number or replacement item, along with relevant interchangeability details wherever the equipment is operating; and
- d. In the event of obsolescence or discontinuation of any item, provide a suitable equivalent, superseding or upgraded replacement solution that is compatible with the supplied Equipment and does not adversely affect its safety, performance, reliability or functionality.

During the warranty period, GPCC period during which the Supplier is contractually responsible, any replacement required due to obsolescence or discontinuation shall be provided free of all cost to the purchaser.

In any event, the Supplier shall ensure continued availability or support of Spare Parts, Consumables and associated software/firmware for a period of not less than **15 (Fifteen) years from the date of taking over of the Equipment or for the working life of the Equipment, whichever is later.**

C.6.4 Oils, Lubricants and Fluids

The Supplier shall provide to the Purchaser a comprehensive schedule of all oils, lubricants and fluids required for the operation, inspection and maintenance of the Equipment throughout its service life.

The schedule shall include, as applicable:

- Lubricants
- Hydraulic fluids
- Coolants
- Thermal management fluids for the Energy Storage System, Electric Drive System and other equipment, wherever applicable
- Any other fluids required for the safe and reliable operation of the Equipment

For each item, the Supplier shall furnish:

- Recommended grade and specification
- Applicable international or national standard (where available)
- Manufacturer's product designation
- Equivalent products readily available in India, considered to be acceptable by the supplier
- Estimated annual consumption under the specified operating conditions
- Recommended replacement or service interval

~~C.6.5 General :-~~

~~-~~

~~C.6.5.1 Nothing in this clause C.6 shall relieve the supplier of any guarantee, Availability, performance or other obligations or liabilities under the contract.~~

C7 Guaranteed Availability

The guaranteed availability shall be as per **Clause 9 – Performance Guarantee** and the applicable provisions of GPCC for the Electric Rear Dumper, as below:

Contract year	Guaranteed availability
1st year / Trial period	85%
2nd year	85%
3rd year	85%
4th year	80%
5th year	80%

Note: The period of Trial shall be for 1 (One) year.

For the purpose of availability assessment, scheduled charging carried out in accordance with the charging arrangement and charging schedule specified in this Tender shall not be treated as downtime. The scheduled charging time shall not exceed two (2) hours for charging the Energy Storage System (ESS) from the minimum operating SOC to the normal full-charge SOC.

Any failure or deficiency attributable to the Equipment, charging equipment, control system, software or any other item supplied under the Contract, which prevents the Equipment from performing its intended function in accordance with the Contract, shall be treated as downtime for the purpose of availability assessment.

The Supplier shall guarantee that the complete Equipment package, including the Energy Storage System, charging equipment and charging arrangement, is capable of

achieving the Guaranteed Availability and the performance requirements specified in Part D under the specified duty cycle and mine operating conditions throughout the Contract Period.

Any increase in charging time beyond that committed by the Supplier due to any deficiency in the Equipment or any item supplied under the Contract shall be treated as downtime.

C.7.1 Introduction

C.7.1.1

The Supplier shall guarantee that the Equipment supplied pursuant to this Contract shall be available for use by the Purchaser and shall meet the performance criteria specifications at the level and in accordance with the terms and conditions of the Availability Guarantee herein contained.

C.7.1.2

Where Equipment supplied under the Contract fails to meet the criteria of the Availability Guarantee, the Supplier shall, at its own cost, provide suitably qualified and experienced personnel at Site to demonstrate to the Purchaser's satisfaction that the required level of availability can be achieved and maintained.

C.7.1.3

The Supplier shall provide the Services of such personnel at Site within seven (7) days of notification by the Purchaser that the availability criteria have not been met in any one (1) month.

C.7.2 Guarantee

C.7.2.1

The Supplier shall guarantee that the Equipment supplied pursuant to the Contract shall be available to the Purchaser at the level hereinafter defined to perform to criteria of not less than that defined in the Technical Specifications incorporated in the Contract.

C.7.2.2

The Supplier shall guarantee that the Equipment shall be available to perform its duty to minimum criteria and to the minimum availability percentage level as defined in the individual

Equipment specifications included in the Technical Specifications.

The method of assessment applied shall be as follows:

Method of Assessment:

The following calculation shall determine the availability of the Equipment:

$$\% \text{Availability} = \frac{\text{Scheduled Available Time} - \text{Downtime}}{\text{Scheduled Available Time}} \times 100$$

Scheduled Available Time shall be calculated as 24 hours per day minus the total scheduled charging time, subject to a maximum scheduled charging time of two (2) hours per Shift.

Scheduled charging carried out in accordance with the charging philosophy and charging time (maximum up to 02 hours per Shift) shall not be treated as downtime.

Any increase in charging time attributable to any deficiency in the Electric Rear Dumper, Charging Equipment, Energy Storage System, or any other item supplied under the Contract shall be treated as downtime.

Downtime:-

Downtime shall mean all hours of work lost due to mechanical, electrical or other failure, including:

- a. routine servicing and maintenance in accordance with the manufacturer's published recommendations, including: changing oils, oil filters and air filters; lubrication; changing identified consumable or wear parts.
- b. planned preventative maintenance programs;

It shall not however include:

- i. damage due to abusive use or incorrect operation methods by the purchaser;
- ii. accidents;
- iii. strikes or stoppage of work by the Purchaser's personnel;
- iv. natural disaster;
- v. lack of Spare Parts not attributable to a failure of the Supplier.

Note – For (I) & (II), a joint inspection report will be prepared with supplier within 3 days from the date of occurrence of incident and repairing works will be done in consultation with supplier.

Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures.

The Supplier shall provide a schedule of maintenance required to carry out (a) and (b) above for the contract period of operation and shall state the number of hours required to carry out each maintenance task. The time stated shall, with the agreement of the Purchaser, form the basis of the assessment of the availability.

This schedule of tasks and time will be reviewed periodically by the Purchaser and the Supplier, jointly, to monitor the practicality of the schedule.

The Purchaser will assist the Supplier, without relieving the Supplier of any other obligations under the Contract, to achieve the guaranteed availability by:

1. Providing normal and proper maintenance, including preventative maintenance in accordance with the Supplier's standard/published recommendations, and making all necessary repairs using only spare parts provided by the Supplier in accordance with the requirements specified in part C6.
2. Providing co-operation to all Suppliers' authorized representatives, complying with all reasonable procedural suggestions to improve efficiency of machine operation or reduce downtime.
3. Where appropriate, providing and maintaining such conditions as:
 - Proper Electrical Supply
 - Terrain Area
 - Bench Preparation
 - Reasonable Floor Conditions
4. Providing all Suppliers' authorized representatives access at all reasonable times to the machine service and repair facilities.
5. Maintaining a logbook for each shift wherein the working hours, breakdown hours, maintenance hours, idle hours, etc. shall be recorded. This record will be available for examination and signature by the Supplier's representative.

Any downtime on Purchaser's account shall not be considered for availability calculation.

Any substantial delay in providing Manpower/ Crane from buyer's side will be recorded jointly for calculation purpose.

Hindrance register has to be maintained in this regard. Hindrance register format is provided in the contract and the same shall be prepared monthly basis and the same may be finalized by the first week of the succeeding month. If the Supplier or its

representative fails to record its comments and finalize the Hindrance Register within the stipulated time, the observations of the Purchaser shall be considered final. The monthly status shall be intimated to the GM (Excv) of the Subsidiary for monitoring purposes.

C.7.3 Effect and Duration of Guarantee

C.7.3.1 This Guarantee shall become effective on the day on which the Equipment is commissioned at the Site. Commissioning shall be evidenced by the issue of the Purchaser's Acceptance Certificate.

C.7.3.2 This guarantee shall remain effective for the entire contract period from the date of commissioning irrespective of the hours operated by the Equipment during the period of the guarantee.

C.7.3.3 Compensation for not achieving Guaranteed Availability during trial period of 12 months

In the event that the Equipment fails to achieve the minimum availability percentage level as defined in the individual Equipment specifications included as the attachment to the Technical Specifications, the supplier shall be allowed one chance during the entire trial period to modify or make certain changes in the equipment, at its risk and cost, to achieve the stipulated guaranteed availability. In such an event, the performance of the modified equipment for the stipulated period shall be counted from its re-commissioning date. The period for which the equipment has worked before carrying out the modifications will not be taken into account for assessing the performance.

In the case of one time modification, the supplier has to submit complete details of the modification including the details of assemblies, sub assemblies and spare parts as indicated in the other provisions of this contract. Supplier is solely responsible for manpower for such modification. Supplier is responsible for safety and correct integration with Other system of the equipment.

Any additional spares required as a consequence of such modification, beyond the list of spares recommended by the Supplier under Clause C.6.2.1, shall be supplied by the Supplier free of cost during the Trial Period. Thereafter, any additional spares attributable to such modification required during the GPCC Period from Year 2 to Year 5 shall be supplied by the Supplier within the applicable yearly contract price. The Supplier shall also submit to the Purchaser a year-wise list of such modified/additional spares, along with their prices, within

the applicable yearly contract price, at the time of submission of the final performance report of the Trial Period.

If, even the modified equipment fails to achieve the minimum availability percentage level as defined in the individual Equipment specifications included as the Attachment to the Technical Specifications, the Purchaser shall have the right to encash 100% Performance Bank Guarantee submitted by the Supplier. Consequent upon the encashment of the 100% Performance Bank Guarantee due to non-achievement of stipulated minimum availability percentage, the Supplier shall have right to take back the equipment at no cost to the Purchaser.

C.7.3.4 Compensation for not achieving Guaranteed Availability during remaining period of 48 months.

In the event that Equipment fails to achieve the Availability herein provided, measured over each twelve (12) month period, the Supplier shall be liable for and pay to the Purchaser, as liquidated damages, a sum equal to as indicated hereunder for each equipment against the PBG/ extended SDBG / bills submitted by the bidder as per contract:

- a. 1% of the delivered landed price of the equipment including the GPCC Spares Value for the year in which the machine could not achieve guaranteed availability for reduction in every percentage or part thereof from the Guaranteed Availability for the first 5%.
- b. 10% of the delivered landed price of the equipment including the GPCC Spares Value for the year in which the machine could not achieve guaranteed availability for reduction beyond 5% from the guaranteed availability.

Note: Whenever deductions for unsatisfactory performance of equipment are made within the tenure of the PBG/extended SDBG/amount held back as PBG, the amount deducted, from the PBG/extended SDBG/amount held back as PBG, should be replenished within a month in order to ensure that the original value, of the PBG/extended SDBG/amount held back as PBG, remains the same.

C.8 Deemed Breakdown

When the supplier is unable to supply the replacement of a failed part during the contract period, and if the machine is commissioned by using the spares from the stock of the project, the period after 21 days till the supplier replaces the part shall be treated as 'deemed breakdown' (the credit for keeping machine available shall not be given to the supplier.)

The supplier shall not in any way be allowed to take out spare parts from other equipment, which are under breakdown and covered within the scope of this contract. However, CIL, in the interest of work, reserves the right to advise the supplier to commission the breakdown equipment covered under this contract by taking out spare parts from other breakdown equipment. Nevertheless, during this period also, the equipment shall be treated as 'deemed breakdown' till the supplier replaces the spare parts.

C.9 Composite-warranty/guarantee

The supplier shall warrant that the equipment supplied under this contract is:

- a. In accordance with the contract specifications.
- b. The equipment shall have no defects arising out of design, material or workmanship & the complete equipment package shall be warranted for 12 months from the date of commissioning. Any defect arising observed on this account will have to be attended immediately.
- c. The supplier must ensure that there is no major breakdown due to manufacturing / design defects during the warranty period. In case such breakdown occurs, the purchaser reserves the right to extend the warranty period suitably.

The Supplier shall be the **single point of responsibility** for all warranty obligations covering the complete Equipment package, including all bought-out systems, charging equipment and all associated items supplied under the Contract, irrespective of their original manufacturer.

The Warranty shall cover the complete Equipment package so that comprehensive responsibility rests solely with the Supplier, notwithstanding that individual components or systems may have been manufactured or supplied by different manufacturers.

C.10 Quality Assurance

C.10.1 The Supplier shall furnish in detail its quality assurance plan for various stages of manufacture. The quality assurance plan shall be of the manufacturing plant where the bidder proposes to manufacture the equipment. The Quality Assurance plan

shall comply with an internationally recognized quality assurance standard such as ISO 9000 or its equivalent.

C.10.2 The Supplier shall provide facilities to Purchaser or their authorized representatives for progress inspection during manufacture at his works and furnish all test data available in this regard for quality control, both for bought-out items and his own manufactured items.

C.10.3 The Purchaser or its authorized representative, when so required by him, shall also be provided with samples of “bought-out” materials for the purposes of undertaking independent tests, which independent tests shall be at the expense of the Purchaser.

PART - 'D'

EQUIPMENT SPECIFICATION OF 60 Ton ELECTRIC REAR DUMPER

1. Scope of Specification

This specification is intended to cover the technical requirements for the design, manufacture, testing, supply, delivery, erection, commissioning, performance testing and successful operation of a Self-Propelled, Wheeled, Off-Highway Electric Rear Dumper with Rock Body having payload range of 60 Ton, powered by an Energy Storage System and Electric Drive System, for deployment in opencast coal mines of Western Coalfields Limited.

The offered equipment shall be a purpose-built Heavy Earth Moving Machinery (HEMM) designed for continuous heavy-duty mining operations and shall be suitable for transportation of overburden, coal and other mine materials under the operating conditions specified in this document. The offered equipment shall be new or suitably

redesigned on an off-highway mining rear dumper platform specifically designed for mining applications.

The equipment shall be capable of carrying the rated payload and achieving the required operational performance under the specified mine duty cycle, haul road conditions, gradients, dusty, humid, muddy, waterlogged and high ambient temperature conditions normally encountered in opencast coal mines and shall meet the productivity requirements specified in this document.

The Supplier shall be responsible for providing a complete integrated Equipment package capable of meeting all technical, operational, safety, reliability, availability and performance requirements specified in this Tender. All systems and equipment supplied under the Contract shall be fully compatible and integrated to ensure safe, reliable and efficient operation of the Electric Rear Dumper throughout the Contract Period.

The scope of supply shall include all systems, assemblies, sub-assemblies and accessories required for safe, reliable and efficient operation of the Electric Rear Dumper, including but not limited to:

- a) Energy Storage System
- b) Electric Drivetrain System
- c) Charging Equipment complete with communication facilities capable of transmitting operational, health and diagnostic data for all major charging system parameters at intervals not exceeding ten (10) seconds , along with event-based alerts for critical charging and safety-related conditions.
- d) Vehicle Telematics System capable of transmitting operational, health and diagnostic data of all major systems and parameters at intervals not exceeding one (1) minute, with onboard data buffering for a minimum period of ten (10) minutes. The system shall also provide event-based alerts for critical safety, equipment health and operational parameters to pre-configured/authorized users designated by the Purchaser. Such alerts shall be generated automatically upon detection of predefined critical conditions and shall be transmitted through the available communication network without undue delay. The system shall maintain an event log of such alerts for subsequent review and analysis
- e) Safety Systems, Monitoring Systems and Electrical Protection Systems on the Vehicle.
- f) Automatic Fire Detection and Suppression Systems (AFDSS) on the vehicle.
- g) Vehicle Health Monitoring System (VHMS) and Pay Load Monitoring System

- h) All safety systems, devices and protections required to comply with DGMS requirements, CMVR, AIS, applicable Indian Standards (IS), IEC, ISO and other statutory/regulatory requirements applicable at the time of supply. The Supplier shall bear all costs of complying with the statutory and regulatory requirements applicable during the Trial Period, including any amendments or new requirements applicable to the Equipment supplied under this Contract.
- i) All accessories, tools, test equipment, special maintenance equipment and diagnostic equipment required for operation and maintenance of the equipment.
- j) Any other equipment, systems, assemblies, components, accessories, software, tools, interfaces and facilities required for the safe, reliable and efficient operation, maintenance, charging, monitoring, diagnosis and performance of the complete Equipment package.
- k) The Vehicle and Charging Equipment shall be provided with automatic charging interruption and protective functions to prevent or terminate charging whenever an unsafe or abnormal operating condition is detected, in accordance with the applicable statutory requirements and the approved safety design of the Equipment.

The scope shall also include supply, installation, testing and commissioning of the charging Equipment, associated electrical systems, protection systems, monitoring systems and all other facilities necessary for safe and reliable operation of the Electric Rear Dumper.

This specification is performance-based and technology-neutral. The Bidder may offer suitable Energy Storage System, Electric Drive System and Charging Equipment capable of meeting all technical, operational, safety, reliability, availability and performance requirements specified in this Tender.

Note: If offered payload capacity is in fraction, then the fraction equal to or more than 0.5 shall be taken as 1 (one) and less than 0.5 shall be considered as zero. (1 Ton = 0.907185 Tonne).

2. Applicable Standards / References

2.1 . The following International Standards as per latest amendment are referred to in, and form part of, the Specification. The superseded or equivalent standards, if any, to any of the following ISO standards if offered are to be supported by documentary evidence in form of copies of the equivalent standards certifying that offered standards are identical to the corresponding ISO standards of NIT.

- ISO 2867 Earth-moving machinery - Access systems
- ISO 3450 Earth-moving machinery - Wheeled machines - Performance requirements and test procedures for braking systems

- ISO 3457 Earth-moving machinery - Guards and shields - Definitions and specifications
- ISO 3471 Earth-moving machinery - Roll-over protective structures - Laboratory tests and performance requirements
- ISO 5010 Earth-moving machinery - Wheeled machines - Steering requirements
- ISO 6014 Earth-moving machinery - Determination of ground speed
- ISO 6405-1 Earth-moving machinery-Symbols for operator controls and other displays- Part 1: Common symbols
- ISO 6405-2 Earth-moving machinery - Symbols for operator controls and other displays - Part 2: Symbols for specific machines, equipment and accessories
- ISO 6483 Earth-moving machinery - Dumper bodies - Volumetric rating
- ISO 6682 Earth-moving machinery - Zones of comfort and reach for controls
- ISO 6750-1 Earth-moving machinery - Operation and maintenance - content & Formats.
- ISO 6750-2 Earth-moving machinery - Operation and maintenance -Operator's manual- Part 2 : List of references.
- ISO 7132 Earth-moving machinery - Dumpers - Terminology and commercial specifications
- ISO 7457 Earth-moving machinery - Measurement of turning dimensions of wheeled machines
- ISO 10268 Earth-moving machinery - Retarders for dumpers - Performance tests
- ISO 10968 Earth-moving machinery - Operator's controls
- ISO 7000/IEC 60417 Graphical symbols for use on equipment.
- ISO 20474-1:2017-Earth-moving machinery – Safety, Part 1: General requirements
- ISO 3411:2017 - Earth-moving machinery – Physical dimensions of operators and minimum operator space envelope
- ISO 5006:2017 - Earth-moving machinery – Operator's field of view – Test method and performance criteria

- ISO 6395:2008 - Earth-moving machinery – Determination of sound power level – Dynamic test conditions
- ISO 6396:2008 - Earth-moving machinery – Determination of emission sound pressure level at operator's position – Dynamic test conditions
- ISO 12100:2010 - Safety of machinery – General principles for design – Risk assessment and risk reduction
- ISO 19014-1:2018 - Earth-moving machinery – Functional safety, Part 1: Methodology to determine safety-related parts of the control system and performance requirements.
- ISO 9244:2008 – Earth-moving machinery .– Machine safety labels – General principles.
- ISO 12508:1994 – Earth-moving machinery – Operator station and maintenance areas - Bluntness of edges.
- IS 12589:1993 / ISO 2860:1992 – Earth-moving machinery – Minimum access dimensions.
- ISO 6011:2023 – Earth-moving machinery – Visual display of machine operation.
- ISO 9533:2010 Earth-moving machinery — Machine-mounted audible travel alarms and forward horns — Test methods and performance criteria
- ISO 11112 – Earth moving machinery – Operator's seat – Dimensions and requirements
- ISO 13766-1:2018 Earth-moving and building construction machinery — Electromagnetic compatibility (EMC) of machines with internal electrical power supply, Part 1: General EMC requirements under typical electromagnetic environmental conditions
- ISO 13766-2:2018 Earth-moving and building construction machinery — Electromagnetic compatibility (EMC) of machines with internal electrical power supply, Part 2: Additional EMC requirements for functional safety
- ISO 6683:2025 Earth-moving machinery — Seat-belt assemblies and seat-belt anchorages — Performance requirements and tests
- ISO 3449:2005 Earth-moving machinery — Falling-object protective structures — Laboratory tests and performance requirements
- ISO 14401-1:2009 Earth-moving machinery — Field of vision of surveillance and rear-view mirrors, Part 1: Test methods

Note: Other ISO standards mentioned in the specification of individual system of the equipment shall also be applicable

2.2 Additional Standards Applicable to Electric Rear Dumper and Charging Equipment

The Electric Rear Dumper, Energy Storage System, Electric Drive System, Charging Equipment and associated electrical systems shall comply with the latest applicable editions/amendments of relevant Indian and International Standards, wherever applicable, and within the scope of the respective standards, including but not limited to the following:

AIS Standards

The following AIS standards shall be applicable wherever relevant and within the scope of the respective standard

- AIS-038 (Rev.2) (Part I) – Specific Requirements for Electric Power Train Vehicles- Part I: Requirements of a Vehicle with Regard to Specific Requirements for the Electric Power Train - wherever applicable.
- AIS-038 (Rev.2) (Part II) Specific Requirements for Electric Power Train of Vehicles - Part II: Requirements of a Rechargeable Electrical Energy Storage System (REESS) with Regard to its Safety- wherever applicable.
- AIS-039 (Rev.1) - Electric Power Train Vehicles - Measurement of Electrical Energy Consumption.
- AIS-040 (Rev.1) - Electric Power Train Vehicles - Method of Measuring the Range.
- AIS-041 Electric Power Train Vehicles Measurement of Net Power and The Maximum 30 Minute Power.
- AIS-049 (Rev.1) - Electric Power Train Vehicles - CMVR Type Approval for Electric Power Train Vehicles.
- AIS-138 (Part 1) - Electric Vehicle Conductive AC Charging System
- AIS-138 (Part 2) - Electric vehicle conductive DC charging system
- AIS-161 – Safety Requirements for Construction Equipment Vehicles.
- AIS-174 – Safety Requirements for Electric Power Train Construction Equipment Vehicles

- AIS -090 (Rev.1) - Approval of Retro-Reflective Markings for Motor Vehicles, their Trailers and Semi-Trailers
- **CMVR**
 - Central Motor Vehicle Rules (CMVR), wherever applicable.
- **IS Standards**
 - IS 17017 (Part 1) – Electric Road Vehicles – Conductive Power Transfer System – General Requirements.
 - IS 17017 (relevant parts) – Charging Systems and Electric Vehicle Supply Equipment.
 - Relevant BIS Standards applicable to batteries, electrical systems, charging equipment and safety systems.
- **IEC Standards**
 - IEC 61851 – Electric Vehicle Conductive Charging System.
 - IEC 62196 – Plugs, Socket-Outlets, Vehicle Connectors and Vehicle Inlets for Conductive Charging.
 - IEC 62619 – Safety Requirements for Secondary Lithium Cells and Batteries for Industrial Applications.
 - IEC 62933 (relevant parts) – Electrical Energy Storage Systems.
 - IEC 60529 – Degrees of Protection Provided by Enclosures (IP Code).
 - IEC 61508 (relevant parts) – Functional Safety of Electrical/Electronic Systems.
 - IEC 61508-1- Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 1: General requirements (see Functional Safety and IEC 61508)
 - IEC TR 60784 - Instrumentation for electric road vehicles
- **ISO Standards**

- ISO 6469 (relevant parts) – Electrically Propelled Road Vehicles – Safety Specifications.
- ISO 6469-1:2019- Electrically propelled road vehicles – Safety specifications, Part 1: Rechargeable energy storage system (RESS)
- ISO 12405 (relevant parts) – Electrically Propelled Vehicles – Test Specification for Lithium-ion Battery Packs and Systems.
- ISO 13849 (relevant parts) – Safety Related Parts of Control Systems.
- ISO 26262 (relevant parts), wherever applicable – Functional Safety of Electrical and Electronic Systems.
- **SAE J2344_202010** - Identifies and defines the preferred technical guidelines relating to safety for vehicles that contain High Voltage (HV)
- **Battery and Fire Safety**
 - Applicable standards governing battery safety, thermal management, thermal runaway protection, automatic fire detection and fire suppression systems.
- **Communication, Diagnostics and Monitoring Systems**
 - Applicable standards for communication protocols, diagnostics, cybersecurity and remote monitoring systems, wherever provided.

2.3 The bidder shall clearly indicate the standards complied with for the offered Energy Storage System, Electric Drive System, Charging Equipment, Electrical Systems and Safety Systems and shall furnish documentary evidence, test certificates and compliance certificates, wherever applicable.

The bidder shall furnish a list of the applicable standards and indicate compliance thereof for the offered equipment.

In addition to the references specified above, the offered equipment and all associated systems, assemblies, sub-assemblies, components, accessories and charging unit shall comply with any other applicable Indian and/or International Standards, Codes and References relevant to their design, manufacture, testing, operation, maintenance, safety and performance. The bidder shall clearly indicate such standards in the offer and furnish compliance details, wherever applicable.

Note: In case of any conflict between the requirements of two or more applicable standards, the Supplier shall identify such conflict and obtain the Purchaser's approval regarding the applicable requirement before proceeding. Where a statutory or regulatory requirement is

more stringent than the corresponding requirement specified herein, the statutory or regulatory requirement shall prevail.

3. Design Criteria/Operational Design Requirements

The Equipment shall be designed for continuous heavy-duty mining operations on a three (3) shift basis, each shift consisting of eight (8) hours, throughout the year under the operating conditions normally encountered in opencast coal mines.

The Equipment shall be designed to achieve the specified productivity while carrying the rated payload under the operating cycle, haul road conditions and operating environment specified in this Tender. The Equipment shall maintain the specified performance, safety, reliability and availability requirements throughout the Contract Period.

The Equipment shall be capable of withstanding frequent loading and unloading operations, repeated start-stop cycles and repeated charging cycles associated with continuous mining operations without deterioration of the specified technical, operational, safety, reliability and performance requirements.

3.1 Vehicle Design Parameters

The offered Electric Rear Dumper shall meet the following minimum design requirements

Operating Cycle

Time for hauling, carrying rated payload and returning empty to the place of loading on a haul road of the following profile with a rolling resistance of 2%.

First 1500 meters up a 12% grade, next 200 meters level, next 200 meters up a 10% grade, last 100 meters level.

A fixed time of six (6) minutes for loading and dumping shall be added to the haul cycle time for calculating the total operating cycle.

The offered Electric Rear Dumper shall be capable of achieving a **minimum continuous operating duration of six (6) hours on a full charge from** the minimum operating SOC to the normal full-charge SOC per shift under the reference operating cycle specified in this Tender while carrying the rated payload and meeting the specified performance, productivity and safety requirements before requiring the next charging cycle.

The offered Equipment, together with the charging equipment supplied under this Contract, shall be capable of recharging the Energy Storage System (ESS) from the minimum operating State of Charge (SOC) to the normal operating full-charge SOC **within a maximum period of two (2) hours** under the charging conditions recommended by the Manufacturer, so as to support the minimum operating duration specified above.

The offered Equipment shall be designed to achieve a minimum operating duration of six (6) hours and a maximum charging period of two (2) hours under the specified duty cycle and operating conditions.

Note: The above operating cycle is indicative and the actual haul road profile, haul distance, gradients, rolling resistance and operating conditions may vary depending upon the mine conditions and operational requirements. The offered Equipment shall be capable of operating safely, reliably and efficiently under such varying operating conditions while meeting the specified performance, productivity, safety, reliability and availability requirements.

3.2 Loading Compatibility

The Equipment shall be compatible with loading by 5-6 m³/ 6-7 m³ Backhoe Hydraulic Shovels, 5.5-6.5 m³ / 6-7 m³ Face Hydraulic Shovels and 5 m³ Electric Rope Shovels handling blasted rock having an average density of **1,800 kg/m³**.

3.3 Operating Environment

The Equipment shall be capable of operating safely, reliably and efficiently under the operating conditions normally encountered in opencast coal mines, including dusty, humid, muddy, waterlogged and high ambient temperature conditions, without degradation of the specified technical, operational, safety, reliability and performance requirements.

3.4 The Bidder shall submit a confirmation that the proposed design and configuration of the offered Equipment are capable of meeting the performance requirements specified in Part D under the specified duty cycle and Mine operating conditions.

4. Technical Requirements

4.1 Energy Storage System

The Electric Rear Dumper shall be provided with an Energy Storage System of suitable capacity to achieve the operating duration, productivity, availability and performance

requirements specified in this Tender under the prescribed mine duty cycle, drive cycle, haul road conditions and operating environment.

The Energy Storage System shall continuously monitor and record critical operating parameters including, but not limited to, State of Charge (SOC), State of Health (SOH), voltage, current, temperature, charging status and fault conditions. Such information, together with alarms and fault indications, shall be available to the operator through the onboard display system.

The Energy Storage System shall be adequately protected against abnormal operating conditions including over-voltage, under-voltage, over-current, short circuit, electrical isolation faults, over-temperature, thermal runaway and other conditions that may affect the safe and reliable operation of the Equipment.

The Energy Storage System and all associated components shall be of robust construction suitable for heavy-duty mining applications and shall withstand vibration, shock, impact, dust, mud, water spray, waterlogged conditions and other operating conditions encountered in opencast coal mines.

The Energy Storage System shall be provided with adequate protection against damage from rocks, debris, spillage material and other external influences encountered during mining operations. The Bidder shall indicate the ingress protection (IP) rating provided for the Energy Storage System and other critical electrical components.

The Bidder shall furnish the following details:

- Energy Storage System (ESS) technology.
- Installed energy capacity (kWh)/nominal energy capacity (kWh), and usable energy capacity (kWh) within the manufacturer's specified operating SOC limits.
- Guaranteed operating duration under the specified reference operating cycle and mine duty cycle, the minimum operating SOC to the normal full-charge SOC
- Guaranteed maximum charging time to charge the ESS from the minimum operating SOC to the normal full-charge SOC, clearly indicating the applicable initial and final SOC values and the charging and the charging power adopted for the calculation.
- Expected useful/service life of the Energy Storage System, including expected operating hours/cycles and corresponding capacity retention, wherever applicable.
- Guaranteed capacity retention during the Warranty Period.
- Thermal management philosophy.
- Fire detection, protection and safety features incorporated in the Energy Storage System, Electric Power Train, and other High Voltage (HV) equipment.

The Bidder shall clearly indicate the guaranteed capacity retention during the Warranty Period. If the capacity falls below the guaranteed value during the Warranty Period, excluding deterioration resulting from operation outside the limits specified in the Contract, the Supplier shall repair or replace the affected modules or the complete Energy Storage System, as necessary, at no additional cost to the Purchaser.

4.2 Charging Equipment

The Charging Equipment shall be capable of charging the Energy Storage System of the Dumper in accordance with the charging philosophy proposed by the Bidder and shall enable the Electric Rear Dumper to achieve the operating duration, productivity, availability and performance requirements specified in this Tender.

The Bidder may offer any suitable Charging equipment and charging arrangement capable of meeting the requirements of this specification. The selection of the charging technology shall be the responsibility of the Bidder.

The Purchaser shall provide electrical power supply from the available mine electrical infrastructure up to the designated electrical interface point for the Charging Equipment. The Supplier shall be responsible for the complete Charging Equipment and all associated equipment, accessories, cabling and connections downstream of the designated interface point, including erection, testing and commissioning. The electrical rating and interface requirements to be provided by the Purchaser shall be clearly specified by the Bidder in its offer.

The Purchaser shall provide suitable site/location for installation and operation of the Charging Equipment. The Supplier shall furnish the site requirements and necessary technical details for installation and safe operation of the Charging Equipment.

The Charging System shall be fully compatible with the Energy Storage System of the offered Equipment and shall function as an integrated system. The Charging System shall, to the extent technically feasible and subject to applicable communication, safety and charging protocols, be capable of charging compatible electric rear dumpers of other makes/OEMs without requiring major modification or replacement of the Charging Equipment.

The Charging Equipment shall be suitable for continuous operation under the specified mining environment and shall incorporate adequate safety, protection, monitoring and diagnostic features to ensure safe and reliable charging operation. Charging shall be automatically interrupted under abnormal or unsafe operating conditions.

The Bidder shall furnish complete details of the proposed Charging System, including:

- a. Charging philosophy.
- b. Charging technology.

- c. Electrical input requirements of the Charging Equipment, including rated voltage, frequency and maximum power demand.
- d. Charging equipment configuration, rated capacity/power and quantity proposed.
- e. Safety, protection and monitoring features.
- f. Maintenance requirements and charging operating procedures, including necessary precautions, dos and don'ts, emergency shutdown and other safety requirements.
- g. Charging interface, communication protocol and interoperability provisions adopted for charging compatible Electric Rear Dumpers of other makes/OEMs.

4.3 Electric Drive System

The Electric Drive System shall be of heavy-duty off-highway mining design and shall be capable of meeting the performance, productivity, safety, reliability and availability requirements specified in this Tender under the prescribed duty cycle, haul road conditions and operating environment.

The Bidder may offer any suitable electric drive configuration capable of meeting the requirements of this specification. The selection of the drive configuration shall be the responsibility of the Bidder.

The Electric Drive System shall continuously monitor its operating condition and provide warnings, fault indications and diagnostic information necessary for safe operation and maintenance. Such information shall be displayed through the onboard display system and shall also be available through the diagnostic system.

The Electric Drive System and all associated components shall be suitable for continuous operation and shall be adequately protected against vibration, shock, impact, dust, moisture heat and water ingress.

The Bidder shall furnish complete details of the proposed Electric Drive System, including its configuration, number and type of traction motor(s), rated power and torque characteristics, power transmission arrangement, operating characteristics and maintenance requirements.

4.4 Final Drive

The drive transmission and final drive arrangement shall be of heavy-duty mining design and shall be capable of transmitting the rated power and torque required to meet the

performance requirements specified in this Tender under all specified operating conditions.

The drive transmission and final drive arrangement may comprise, wherever applicable, a propeller shaft with universal joints, heavy-duty differential with high-quality spiral bevel gear and pinions, drive axle, heavy-duty planetary gear system or any other proven heavy-duty mining drive arrangement capable of meeting the specified performance, reliability and durability requirements.

Where the offered design differs from the above arrangement, the Bidder shall furnish complete details of the proposed drive transmission and final drive arrangement and demonstrate that it provides equivalent functionality, performance, reliability and durability.

Adequate protective features shall be provided to prevent or minimise consequential damage to other components in the event of failure of any drive system component

4.5 Electrical System

The Dumper shall be provided with a suitable electrical system comprising the traction power system, auxiliary power system, control system and associated electrical equipment necessary for safe, reliable and continuous operation under the specified operating conditions.

All HV cables shall be clearly identifiable and adequately protected against mechanical damage, abrasion, heat and other environmental and operational hazards during normal operation.

All HV components shall be adequately protected against accidental mechanical damage and other hazards during normal operation.

The electrical system shall incorporate adequate protection against short circuit, over-current, over-voltage, under-voltage, earth fault, insulation failure and other abnormal operating conditions that may affect the safe and reliable operation of the Dumper.

The electrical system shall incorporate suitable means for electrical isolation to facilitate safe operation, inspection and maintenance.

The Bidder shall furnish complete details of the proposed electrical system, including the electrical architecture, HV system architecture, auxiliary power arrangement, protection philosophy and electrical safety features incorporated in the offered Dumper.

4.6 Ingress Protection (IP)

All electrical, electronic and high-voltage equipment, components and enclosures shall be adequately protected against the ingress of dust, water and other contaminants encountered during operation in the mining environment specified in this Tender.

The level of ingress protection shall be suitable for continuous operation under the specified environmental and operating conditions, including dust, mud, waterlogged conditions, high humidity, equipment washing and the maximum ambient temperature specified in this Tender.

The ingress protection requirements shall be applicable, as appropriate, to the Energy Storage System, Charging Equipment, Electric Drive System, Electrical System, traction motor(s), power electronics, control units, junction boxes, connectors, sensors and other electrical/electronic components exposed to the operating environment.

The Bidder shall furnish the Ingress Protection (IP) ratings of all major electrical, electronic and high-voltage equipment and confirm compliance of each item with the applicable standards specified in this Tender.

Ingress Protection (IP) ratings shall be determined in accordance with IEC 60529 or equivalent internationally accepted standard.

4.7 Suspension:

Suitable (hydra-air) independent front and rear gas over oil suspension shall be provided to absorb road shocks and prolong chassis & tire life.

4.8 Steering:

Full hydraulic orbitrol power steering and emergency steering, which complies with ISO 5010, shall be provided. Emergency steering shall be automatically activated in the event of failure of the normal steering power source. Suitable steering locking device shall be provided in steering linkage to avoid unwanted movement of steering wheel and tyre during working below the cabin.

4.9 Hoses

Fire resistant/ fire retarder/ heat resistant hydraulic hoses in place of ordinary hoses to decrease the chance of fire. All the sleeves and conduits in which cable/wire are laid shall be of fire resistant /fire retarder type.

4.10 Brakes

Suitable reliable service, secondary (Emergency) and parking brakes which comply with latest ISO 3450, shall be provided. The offered Dumper shall be provided with a fail-safe braking system in accordance with applicable DGMS requirements.

4.10.1 Service brakes

The front service brakes shall be air and/ or hydraulic actuated calliper/ disc type and should operate automatically in the event of low oil pressure.

The rear service brakes should be air and / or hydraulic actuated oil cooled multiple disc type and should operate automatically in the event of low air/oil pressure.

They shall be fully enclosed to prevent entry of dust, mud and water and designed for low maintenance.

4.10.2 Secondary/ Emergency Brake

Provision of Automatic Emergency Brake along with manual Emergency Braking system, which shall be operative in the event of failure of service Brake, shall be provided.

4.10.3 Parking brakes

The parking brake shall have suitable interlocking arrangement with drive system to prevent movement of dumper when parking brake is engaged.

The parking brakes should be of calliper type and operational even at zero air or oil pressure.

4.11 Retarder

The Equipment shall be provided with a suitable retarding system capable of safely controlling the vehicle speed during continuous downhill operation under the rated payload and operating conditions specified in this Tender.

The retarding system shall provide both automatic and manual modes of operation and shall be designed to ensure safe, smooth and reliable speed control on downhill gradients.

The Bidder may utilise regenerative braking through the electric drive system, mechanical retarding devices, or any combination thereof, provided the overall retarding performance meets the requirements specified in this Tender.

The retarding system shall be capable of maintaining the required vehicle speed and providing the specified retarding performance even when regenerative braking is unavailable or limited due to battery State of Charge (SOC), battery operating conditions, electric drive system limitations or any other system limitation.

The retarding system shall be capable of continuous operation on the maximum specified downhill gradients under rated payload and specified operating conditions without thermal overload or degradation of the required retarding performance.

4.12 Tyres:

Tubeless, rock duty, cut-resistant E4 tyres of size 24.00 x 35 of suitable TKPH rating to match the operational condition, shall be provided.

4.13 Frame:

The frame should be a rugged, durable construction of high strength steel and free from any stress concentration. The design must take care of all forces encountered during the operation of the dumper.

4.14 Dump Body :

The body should be a exhaust heated (excluding the extended canopy portion), heavy-duty (Rock as mentioned in clause 3) type with high hardness abrasion resistant side, front and bottom plates. The width of the body should be such that it protrudes over the tyres to prevent damage due to spillage of material from the body.

The volume of the body should be such that it can accommodate 6 pass loads from 5 CuM shovel & 5 pass loads from 6 CuM Shovel (**minimum 28CuM struck capacity**) without spillage and body design should be such that the stability of the machine is maintained in all operating conditions especially during turning.

(Note: In case of coal body, the number of pass and minimum dump body volume shall be indicated based on density of coal.)

A body position indicator shall be provided in operator's cabin. Should comply as per requirement of Clause-6 of DGMS Circular no:06 of 2020 Dhanbad dated:27.02.2020

4.15 Lubrication System:

A centralized PLC / micro process/ micro control based hydraulic/Air/Electric operated lubrication system shall be provided to service all lubrication points on the machine, including those points where use of high viscosity lubricant is required.

Lubrication system shall be fully monitored to ensure that adequate lubricant flow is maintained to all points of major parts. The monitoring system shall, wherever necessary, be interlocked with the relevant control circuit to prevent damage due to lack of lubrication at any point.

Alarms and indications for the failure of lubrication system shall be provided and may be repeated in the OBD (Onboard display) of the operator's Cab.

The Lubricant container of adequate size shall be located in a separate room / enclosures inside the machinery house / convenient location and be large enough to cater lubrication needs for continuous operation between refills. The container shall be fitted with suitable arrangement for cleaning and refilling.

All lubrication lines and injectors shall be protected from damage. Location of all injectors shall be such that these can be conveniently inspected and repaired. The lubrication lines to the remote points should be properly guided. Flexible lines shall only be used where there is relative movement between parts and for final connection to movable components. Steel piping shall be used for long runs and shall terminate in steel junction blocks or rigidly mounted bulk head connectors to prevent disturbance to steel piping when flexible hoses are replaced.

Fire/ heat resistant / retardant hoses shall be provided in lubrication system. Lubrication recommended shall be of reputed make with Indian equivalent, if available.

Note: Maintenance of lubrication system shall be done by the supplier during the contract period

4.16 Fire Detection and Suppression System:

4.16.1

A suitable automatic fire detection and suppression system of reputed manufacturer (indigenous or imported) shall be provided on the equipment complying **Clause -5** of DGMS (Tech) circular No.06 of 2020 dated 27.02.2020

Automatic fire detection and suppression system suitable for fire class A, B & C shall be provided in the fire prone zone of the dumper.

- Bidder requires submitting a schematic drawing indicating Plan of the system with relative position of items to be protected from fire.
- Fire detection and suppression of fire may be either total gas flooding or dry chemical powder base spray through nozzle strategically through an actuation cartridge, located to the targets, or combination of the two.
- Fire suppression agent used in neighbourhood of electrical appliances shall be clean and shall not damage electrical / electronic component.
- Fire suppression system shall be non-hazardous & safe for human and environment friendly. It should have quick cleanup and environmental sustainability.
- The sensor shall send the signal to the control unit integrated with a LED and/or alarm indicator to show the status of the detector.
- The system shall operate to supply adequate quantity of fire suppressing agent for effective fire fighting and to avoid re-ignition and suitably designed to extinguish the fire as per class of fire (A, B & C) of that location. The System shall operate only in active fire area.
- The system shall be actuated automatically by detection of fire and control unit to be installed within the Operator's cabin for automatic system operation.
- The system shall also have provision of actuating manually.

- The system shall provide facility for self-checking /testing/inspection without operating.
- The system should be capable for efficient operation in the extreme mining conditions with dust, dirt, water & vibrations.

The high-pressure storage vessels and hoses, if used with fire- fighting and fire suppression systems, shall conform to the requirements stipulated in the relevant Indian standards.

Bidder shall submit a Certificate as an undertaking that, a valid Test Certificate (valid as on the date of commissioning of the equipment at site) shall be submitted at the time of supply of equipment along with other documents, for AFDSS including materials and chemicals used in fire suppression system from any Government or Government approved Laboratory in compliance with relevant Indian Standards as per DGMS (Approval) Circular No. 02 dated 08th July 2013.

Note: Periodical refilling and maintenance shall be done by the supplier at its own cost during the contract period.

4.16.2 Fire Safety Requirements for Energy Storage System and High-Voltage Equipment

The Energy Storage System (ESS), High-Voltage (HV) electrical system and associated power electronics of the Electric Rear Dumper shall be provided with suitable fire detection, protection and safety measures appropriate to the technology and chemistry of the offered Energy Storage System.

The fire detection and protection system shall be capable of detecting and providing appropriate warning of abnormal conditions associated with the ESS, including overheating, thermal runaway and other conditions that may lead to fire, and shall initiate the appropriate protective action in accordance with the Supplier's approved safety philosophy.

The ESS shall incorporate suitable measures to prevent or minimise propagation of thermal runaway between cells, modules or battery packs, as applicable to the offered design, and to minimise the possibility of re-ignition following a fire event.

The Supplier shall furnish details of the fire detection, protection and thermal runaway mitigation philosophy adopted for the offered ESS, including the detection method, alarm and warning system, protective action, suppression/mitigation system, if provided, and measures adopted for prevention of thermal runaway propagation and re-ignition.

The fire detection and protection system shall be integrated with the vehicle control and monitoring system, wherever applicable, to provide appropriate warning to the operator and initiate automatic protective actions under defined unsafe conditions.

The provisions of this clause shall be in addition to and shall not dilute or replace the requirements of the AFDSS specified under Clause 4.16.1

4.16.3

A suitable Automatic Fire Detection and Suppression System (AFDSS) shall be provided for the Charging Equipment. The Supplier shall submit complete details of the proposed AFDSS, including its detection, alarm and suppression arrangements.

4.17 Fire Extinguishers:

A fire extinguisher shall be provided on the dumper, suitably mounted in heavy-duty bracket for ease of removal. The extinguisher shall be dry powder (cartridge type) with a minimum capacity of 5 kg and shall comply with Indian Standard IS:15683 with latest amendment.

Bidder shall submit a Certificate as an undertaking that, a valid Test Certificate (valid as on the date of commissioning of the equipment at site) shall be submitted at the time of supply of equipment along with other documents, for Materials and Chemicals to be used in fire extinguisher from any Government or Government approved Laboratory in compliance with relevant Indian Standards as per DGMS Circular No. **DGMS(Approval) Circular No. 02 dtd. 08th July 2013.**

Note: Periodical refilling of fire extinguisher and maintenance shall be done at its own cost by the supplier during the contract period.

4.18 Operator's Station:

A suitable operator's station shall be provided on the equipment as per gazette notification issued by chief Inspector of mines vide F.No. Z-20045/01/2018/ S&T (Hq) Dhanbad, 1st October, 2018.

4.18.1 Operator's Cabin:

A fully insulated, high visibility, rigidly mounted, sound suppressed, vibration suppressed, air-conditioned operator's cab with tinted safety glass should be so positioned to facilitate a clear and unrestricted view of the travel & work area of the machine necessary for its intended use. The performance criteria shall be in accordance with ISO5006. The sound level inside the cab shall be below 85dB while the equipment is operating and with the door closed. All operating controls, all monitoring, working signals and emergency stop switches shall be conveniently located within easy reach of the operator and comply with ISO 6405-1, ISO 6405-2, ISO 6682 and ISO 10968. The operator's cab shall be provided with emergency exit in addition to primary access path to the cabin.

Alternative opening (Emergency Exit) : An alternative opening shall be provided on a side other than that of a primary opening. A window panel or another door is acceptable if they are easy to open or remove without the use of keys or tools. Latches may be used if they can be opened from inside without the use of keys or tools. The breaking of a suitable size of glass pane is considered to present a suitable alternative opening, provided that the necessary pane hammer, immediately accessible to the operator, is provided and stored in the cab. When the window panel is used as an emergency exit, it shall bear an appropriate marking.

Doors, Windows and flaps shall be securely held in their intended operating positions. Doors shall be retained at their intended positions by a positive engagement device. The front glass shall be fitted with motorized wind screen wipers and washers. The tank of the front glass washers shall be easily accessible.

Pipes and hoses that contain fluids at pressures exceeding 5MPa or temperatures above 60 degree C located inside the cabin shall be suitable guarded.

Steps and handrails of robust design, which comply with ISO 2867, shall be provided for access to the operator's cab.

Note: Periodical maintenance of Air Condition system including gas refilling to be done by the supplier during the contract period .

4.18.2 Operator's Protective Structure

Dumper shall be equipped with a roll over protective structure (ROPS). The ROPS shall comply with ISO3471. Also, FOPS shall be provided as per ISO – ISO3449.

4.18.3 Operator's Seat

The Operator's Station shall be fitted with an ergonomically designed adjustable seat that supports the operator in a position that allows the operator to control the machine under the intended operating conditions. The seat and its suspension shall be so designed to reduce vibration transmitted to the operator to the lowest level that can be reasonably achieved.

An additional seat for a trainer installed in the Operator's Station, shall be padded and shall provide adequate space for the trainer. The trainer shall also have available a conveniently placed handhold.

Seat Belt for operator with reminder shall be provided as per DGMS circular no. DGMS (Tech) Circular No. 06 of 2020 Dhanbad dated 27.02.2020.

4.18.4 Operator's Controls and Indicators:

The controls shall be of suitable design and construction and arranged ergonomically so that they are able to be operated with ease from the operator's seat and within the operator's force limits. Controls shall be laid out and designed to allow easy and safe operation based on the principle that a given direction of movement of any control produces a consistent and expected effect. The surfaces of frequently used pedals shall be fitted with skid resistant type materials.

Controls that can cause a hazard due to inadvertent activation shall be so arranged, deactivated or guarded as to minimize the risk — particularly while the operator is getting into or out of the operator's station. The deactivation device shall either be self-acting or shall act by compulsory actuation of the relevant device.

4.18.5 Starting and Stopping System

The Dumper shall be provided with a suitable machine energizing and de-energizing system with protection against unauthorized operation.

The machine shall not move unless all required operating conditions and safety interlocks are satisfied.

Suitable interlocks shall be provided to prevent unintended machine movement during energizing, de-energizing, charging and maintenance.

Emergency stop switches shall be provided at suitable easily accessible locations to enable safe shutdown of the machine during emergency conditions.

Clear audio-visual indication shall be provided to the operator for the energized/ready-to-move status of the Electric Rear Dumper and the status of the high-voltage system.

The Bidder shall furnish complete details of the proposed starting, stopping and safety interlock system.

4.19 Gauges and Indicators / Electronic Display

The Equipment shall be provided with a suitable electronic display system capable of continuously monitoring and displaying the critical operating parameters necessary for the safe, reliable and efficient operation of the Equipment.

The electronic display system shall include, but not be limited to, the following:

- a) Energy Storage System State of Charge (SOC)
- b) Energy Storage System State of Health (SOH)
- c) Energy Storage System voltage
- d) Energy Storage System current
- e) Energy Storage System temperature(s), wherever applicable
- f) Charging status
- g) Available energy and/or estimated remaining operating duration, wherever provided by the system
- h) Traction motor temperature
- i) Power electronics / inverter temperature
- j) Hydraulic oil temperature
- k) Speedometer
- l) Hour meter
- m) Odometer / travel distance indicator
- n) Selected travel direction / drive mode indication
- o) High Voltage System status indication
- p) Auxiliary electrical system voltage, wherever applicable
- q) Diagnostic and fault indications
- r) Any other critical operating parameter necessary for the safe, reliable and efficient operation of the Equipment.
- s) Retarder / regenerative braking status or activation indication.

t) All other essential operating indications and warnings provided in conventional diesel dumpers of equivalent class shall be retained, wherever applicable to the Electric Rear Dumper.

The Bidder shall furnish complete details of the proposed electronic display system and the operating parameters displayed to the operator.

4.20 Warning Alarms/Lights/Indicators

Suitable visual and/or audible warning systems shall be provided to alert the operator of abnormal operating conditions requiring attention and to ensure the safe and reliable operation of the Equipment.

The warning system shall include, but not be limited to, the following:

- a. Reversing audio-visual alarm complying with DGMS Approval Specification No. DGMS (Approval)/AVA/01 dated 25.05.2010 and subsequent amendments, if any.
- b. Parking brake applied/released indication.
- c. High Energy Storage System temperature warning.
- d. High traction motor temperature warning.
- e. High power electronics / inverter temperature warning.
- f. High hydraulic oil temperature warning.
- g. Low Energy Storage System State of Charge (SOC) warning.
- h. Low Energy Storage System voltage warning
- i. Low auxiliary electrical system voltage warning, wherever applicable.
- j. High Voltage System warning/fault indication.
- k. Emergency steering warning, wherever applicable.
- l. Indicator(s) for retarder operation, over-speed warning and service brake status/fault, wherever applicable.
- m. Dump body raised warning and/or dumping buzzer.

- n. Warning indication in the event of failure of the automatic lubrication system, wherever applicable.
- o. Tyre Pressure Monitoring System (TPMS) indication in the operator's cabin.
- p. Overload and uneven load indication
- q. Any other warning, alarm or indication necessary for the safe and reliable operation of the Equipment

4.21 Auxiliary Electrical System

The Equipment shall be provided with a suitable auxiliary electrical system for supplying power to control, monitoring, lighting, communication, safety and other auxiliary equipment required for the safe and reliable operation of the Equipment.

The auxiliary electrical system shall include, but not be limited to, the following:

- a. Auxiliary power source of suitable voltage and capacity.
- b. Suitable arrangement for charging and maintaining the auxiliary power source during Equipment operation.
- c. Suitable electrical isolation arrangement for safe operation and maintenance.
- d. Adequately rated protective devices for all electrical circuits against short circuit, overload and other abnormal operating conditions.

The protective devices shall be easily accessible for inspection and maintenance. Where replaceable fuses are provided, at least two spare fuses of each rating shall be supplied in the Equipment.

The Bidder shall furnish complete details of the proposed auxiliary electrical system, including the system voltage, power source, charging arrangement, electrical protection philosophy and isolation arrangement.

4.22 Lighting:

Adequate lighting shall be provided for safe night shift operation.

All lighting system shall be LED type which include the following:

- a. 4 nos. LED Headlight
- b. Stop and tail LED lights

- c. Hazard and Turn signal lights (left and right) on both front and rear LED type
- d. Fog lamps 2 nos.
- e. Backup lights 2 nos.
- f. Cabin Dome & Ladder lights
- g. Service light in rear axle & under hood (Wherever applicable)
- h. Manual/ Auto backup light

The lighting arrangement shall provide adequate illumination for safe operation, inspection, maintenance and emergency activities under mining conditions.

4.23 Guards and shields:

Adequate guards and shields, which comply with ISO 3457, shall be provided on the dumper, including, as applicable, for the Energy Storage System, Electric Drive System, High-Voltage (HV) components and HV cables, to protect them against mechanical damage, accidental contact and other hazards encountered during normal operation.

5. SAFETY REQUIREMENTS

5.1 General Safety Requirements

The Equipment shall comply with all applicable provisions of Government of India Gazette Notification No. Z-20045/01/2018/S&T (HQ) dated 01.10.2018, DGMS Circular No. DGMS (Tech) Circular No. 06 of 2020 dated 27.02.2020 and subsequent amendments, if any, together with all other applicable statutory requirements in force on the date of supply.

The Bidder shall submit a certificate confirming compliance with all applicable statutory safety requirements and incorporation of all required safety features and devices in the offered Equipment.

In addition to the above statutory requirements, the Equipment shall be provided with the following safety features.

5.2 Equipment Safety Features

The Equipment shall be provided with:

- a. Mechanical steering locking device to prevent unintended movement of the steering wheel and tyres while maintenance work is being carried out underneath the operator's cabin and the Equipment is energized.

- b. Blind spot mirrors and/or other suitable visibility aids in addition to rear-view mirrors.
- c. Proximity Warning Device complying with Clause 14 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- d. Device/system to avoid head-to-tail collision of dumpers complying with Clause 4 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- e. Seat belt and seat belt reminder complying with Clause 10 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- f. Suitable facility to restrict or control the speed of the Equipment as determined by the Owner.
- g. Load Indicator complying with Clause 8 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- h. Dump Body Raised Position Indicator with warning system complying with Clause 6 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- i. Rear Vision Camera complying with Clause 1 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- j. Operator Fatigue Warning System complying with Clause 2 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- k. Auto dipping system complying with Clause 3 of DGMS Circular No. 06 of 2020 and subsequent amendments.
- l. Right-hand and left-hand rear-view mirrors.
- m. Retro-reflective reflectors on all sides of the Equipment for visibility during night operation.
- n. Manual wheel stoppers for parking the Equipment on gradients.
- o. Cabin Guard Extension. The canopy shall fully cover and protect the operator's cabin.
- p. Suitable provision for safely holding the dump body in the hoisted position during inspection and maintenance.
- q. Fire-resistant, fire-retardant and heat-resistant hydraulic hoses. All sleeves, conduits, cable protection systems and wiring harness protection shall be of fire-resistant or fire-retardant type.

- r. Hot zones shall be suitably segregated from other areas to minimize fire risk and facilitate safe maintenance.
- s. Guards for all high-temperature components, rotating equipment and other moving parts to prevent accidental contact during operation and maintenance.
- t. Suitable protection shall be provided for the traction motor(s), Energy Storage System (ESS), High-Voltage (HV) components and associated cooling systems against mechanical damage, excessive temperature, ingress of dust, water and other contaminants, leakage and other hazards encountered during normal operation and maintenance.
- u. Propeller shaft guard, wherever applicable.

The manufacturer shall submit a self-certificate stating that the safety features provided shall not adversely affect the normal operation, stability, steering, loading, dumping or overall performance of the Equipment.

5.3 High Voltage Safety

The Equipment shall be provided with a High Voltage Safety System for the Energy Storage System, Electric Drive System, Charging Equipment and associated high-voltage circuits.

The High Voltage Safety System shall provide:

- a. Protection against electric shock.
- b. Protection against short circuit.
- c. Protection against earth fault.
- d. Protection against insulation failure.
- e. Protection against over-current.
- f. Protection against over-voltage.
- g. Protection against under-voltage.
- h. Protection against over-temperature.
- i. Protection against conditions that may lead to thermal runaway and appropriate protective measures in the event of thermal runaway.
- j. Electrical isolation and high-voltage interlocks for safe operation.

- k. Automatic isolation of the high-voltage system in the event of any critical fault affecting safe operation.
- l. Suitable interlocks to prevent unintended movement, unintended energization and unsafe operating conditions.
- m. Manual emergency high-voltage isolation/disconnect arrangement, clearly identified and readily accessible for emergency response and maintenance.
- n. Safe isolation arrangements for inspection, maintenance and repair of the Energy Storage System, Electric Drive System, Charging Equipment and associated high-voltage circuits.
- o. Continuous monitoring and diagnostic facilities for the high-voltage system with suitable warning and fault indications.
- p. Suitable warning labels, hazard markings and high-voltage identification markings on all relevant equipment, enclosures, access covers and components.

5.4 Charging Equipment and Charging Infrastructure Safety

The Charging Equipment shall comply with applicable Indian and International Standards and shall be suitable for operation under the environmental and mining conditions specified in this tender.

The Charging Equipment shall incorporate suitable safety provisions and monitoring facilities, including transmission of relevant operational, health, diagnostic and safety data through the telematics/monitoring system at the intervals specified elsewhere in this specification.

- a. Electrical protection, monitoring and interlocks necessary for safe charging operation.
- b. Automatic interruption of charging under unsafe or abnormal operating conditions.
- c. Suitable earthing and grounding arrangements.
- d. Interlocks to prevent charging unless all charging safety conditions are satisfied.
- e. Interlocks to prevent movement of the Equipment / dumper while the charging connector or charging interface is engaged.
- f. Protection against accidental contact with live electrical parts.
- g. Emergency stop facility.

- h. Suitable warning indications, alarms and fault annunciation.
- i. Protection against overheating of charging equipment, charging cables, charging connectors and associated electrical components. The Supplier shall specify the IP ratings of the Charging Equipment, connectors and other relevant enclosures.
- j. Suitable cable management and connector locking arrangements.
- k. Suitable communication and monitoring between the Equipment and Charging Equipment to ensure safe charging operation.
- l. Protection against dust, heat, moisture, water ingress, vibration, impact and mechanical damage encountered in mining operations.
- m. Lightning protection and surge protection, wherever applicable.
- n. Suitable fire detection and fire protection arrangements.
- o. Suitable warning signs, hazard markings and safety instructions.
- p. Safe isolation arrangements for inspection, maintenance and repair.

The Charging Equipment, Charging Connectors and Charging Cables shall be suitable for operation under dusty, humid, muddy, waterlogged and monsoon mining conditions.

The Bidder shall furnish complete details of the charging safety philosophy, protection systems, interlocks, isolation arrangements and safety features incorporated in the offered Charging Equipment and Charging Infrastructure.

5.5 Functional Safety

The Equipment shall be designed to achieve safe operation under normal, abnormal and fault conditions.

The control system shall incorporate suitable monitoring, diagnostics, protection and interlocks to detect abnormal operating conditions and initiate appropriate protective actions.

The Equipment shall not permit unintended movement or unintended energization following a fault, emergency shutdown or restoration of electrical power unless the normal operating sequence is re-established.

The Bidder shall furnish complete details of the functional safety philosophy adopted for the offered Equipment.

6. Ancillary Equipment and other requirements:

The following shall be provided on the dumper:

- a. Front and rear tow hooks.
- b. Headlight high beam indicator
- c. Cab protection spill guard
- d. Water separators in air lines (wherever applicable)
- e. Rock ejector bar/chains between each set of dual rear wheels
- f. Suitable on-board payload monitoring system with a feature to store & retrieve data of at least one month
- g. Self-diagnostic and real time monitoring system/electronic tool for the equipment
- h. Tyre inflation kit.
- i. Special tools, testing equipment and diagnostic tools/software required for operation, inspection, maintenance and troubleshooting of the Equipment, including the Energy Storage System, Electric Drive System and associated electrical systems.
- j. Suitable communication interface, cables, software licences and accessories required for operation of the diagnostic system during the warranty period and GPCC contract period (where applicable).
- k. Suitable personal protective equipment (PPE), insulated tools, electrical test and measurement equipment and other safety equipment required for inspection, maintenance and troubleshooting of the High-Voltage (HV) system and Energy Storage System, as recommended by the Supplier.

The Bidder shall furnish complete details of all ancillary equipment, diagnostic tools, software and accessories supplied with the Equipment.

7. Productivity & Health monitoring system:

The equipment shall be provided with suitable licensed, on-line, real time, monitoring interface facility, compatible for GPS-based transfer of equipment performance data (commonly known as PMS and HMS) to third party equipment management system.

The system shall have OBD Self-diagnostic & error alarm features and should capture the parameters of HMS module and other parameters not covered by HMS of the equipment to monitor the following items:

- I. Working hour, idle hour, based on the duration of a shift for which the equipment is switched on for operation
- II. Maximum speed, average speed, distance travelled, waiting time, loading time, unloading time, load carried by dumper for each trip and cumulative.
- III. Energy consumption in terms of kWh/hour of operation.
- IV. Number of charging cycles completed.
- V. Energy Storage System State of Charge (SOC)

- VI. Energy Storage System State of Health (SOH).
- VII. Energy Storage System voltage, current and temperature.
- VIII. Traction motor operating parameters including torque and motor temperature.
- IX. Power electronics / inverter operating parameters including temperature.
- X. Energy consumption, energy regeneration (wherever applicable) and estimated remaining operating duration / available energy.
- XI. Hyd. oil temperature
- XII. Auxiliary electrical system voltage and High Voltage System status
- XIII. All vital parameters of the Electric Drive System, including diagnostic fault codes with details.
- XIV. Tyre inflation pressure & temperature

This system shall have suitable memory capacity to store above measured data in batch form for at least one month period and shall have suitable port to download these data to a laptop / data storage system.

Alert audio messages to be given to Dumper Operators for the following events:

- a. In the case of operator exceeds pre-defined maximum speed for different dumpers.
- b. In the event of dumpers travelling in opposite direction falls in line.
- c. To maintain safe distance between dumpers travelling in the same direction.
- d. Fire warning to operator in case of catching fire.
- e. Dump Body hoist indication to be given in the event of dumper travelling in dump body hoist position.
- f. In the event that the State of Charge (SOC) falls below a pre-specified level requiring operator action to ensure safe return to the designated charging location.
- g. High/critical Energy Storage System temperature or other critical ESS condition requiring operator attention.

The supplier shall provide the following:

- A. There has to be one integrated single online port for capturing all the vital data.
- B. The real time interface telemetry port will be provided in the equipment
- C. All the data shall be available in the individual form through single port and its communication protocol must be as per global standards.
- D. There shall be no additional requirement of any data converter for data capturing like Analog to Digital and vice-versa etc.
- E. There shall be integrated on board data management system as explained at point no.3 as above.
- F. Permission to third party for interfacing, data collection through real time telematics transfer and online port.
- G. Signing of non-disclosure agreement to protect intellectual property right on either side.

- H. To provide full technical support to third party vendor for interpretation and defining parameters for individual alarm to monitor equipment vital data.
- I. The HEMM equipment supplier should provide access to data as required by end user without any financial implication to third party.

This interface facility shall be made available till the working life of equipment. However, the supplier shall provide this interface facility during the contract period as a part of contract cost.

To ensure the satisfactory operation of above system, a tripartite agreement shall be signed by the user, supplier and the service provider of OITDS / System Integrator.

8. Special Guarantees

The following guarantee will apply for the different components from the accepted date of commissioning

Sl. No.	Component	Special Guarantee
a.	Chassis/Frame	20,000 Hours
b	Dump Body	10,000 Hours
c.	Energy Storage System (ESS)	6500 charge-discharge cycles or 6 years, whichever occurs later, with guaranteed usable energy capacity retention of not less than 80% of the declared usable energy capacity at the end of the applicable ESS Special Guarantee period.
D	Electric Drive System (Traction Motor(s), Inverter(s) and associated power electronics)	8,000 Hours
E	Auxiliary Motors	8,000 Hours
F	Charging Equipment	10,000 Hours
G	Drive Transmission / Differential / Final Drive (where applicable)	8,000 Hours
H	Service Brake Assembly	24 Months or 8,000 Hours, whichever is earlier
I	OTR Tyres	4,500 Hours or 12 Months (First Life before Retreading), whichever is earlier

In case of failure of any of the above component within special guarantee period, the supplier shall replace the same with new one.

If the measured usable energy capacity of the ESS falls below the guaranteed minimum of 80% of the declared usable energy capacity during the applicable ESS Special Guarantee Period, the Supplier shall, at its own cost, repair, replace or refurbish the affected battery

module(s)/pack(s), or replace the ESS, as necessary, to restore the guaranteed usable energy capacity.

Failure of any peripheral or auxiliary component associated with the Energy Storage System, Electric Drive System or Drive Transmission (where applicable), such as cooling system components, sensors, control units, auxiliary pumps, auxiliary motors or similar items, shall not by itself be treated as failure of the complete major assembly. However, the failed peripheral or auxiliary component shall be replaced with a new component and shall remain covered under the applicable Special Guarantee up to completion of the applicable Special Guarantee Period. Repair of such components or use of spares supplied under Clause C6.2 shall not be permitted during the applicable Special Guarantee Period.

However, spares supplied against Clause C6.2 can be used for repair/ replacement of above assemblies after completion of the applicable Special Guarantee Period as indicated against individual items.

The Special Guarantees specified herein shall be valid for the respective periods indicated against the individual components. Except for the Energy Storage System (ESS), the Special Guarantees shall be limited to the Contract Period.

Notwithstanding the expiry or completion of the GPCC/Contract Period, the Special Guarantee applicable to the Energy Storage System (ESS) shall survive and remain valid and enforceable until completion of the ESS Special Guarantee Period specified herein.

9 . Performance Guarantee:

In accordance with the provisions of clause C 6.2.6 of the technical specifications the expected working hours per annum are 4000 (four thousand) hours.

In accordance with the provisions of clauses C 7.2.2 and C 7.3.2 of the technical specifications the supplier shall guarantee that the availability of each complete Equipment Package, comprising the Electric Rear Dumper and Charging Equipment supplied under the Contract shall be not less than 85% (Seventy-five percent) annually for the first three years and 80% (Eighty percent) annually for the following two years.

10. Expected life of major assemblies:

Manufacturer shall give expected life of major assemblies also in the Format given in Table below, duly signed.

Table

Equipment	Major Assemblies	Expected Life* (Hours)
Electric Rear Dumper	Chassis/Frame	
	Dump Body	
	Energy Storage System (ESS) Life in Years and Cycles	
	Electric Drive System	
	Traction Motor (s)	
	Auxiliary Motors	
	Reduction Gear / Transmission (where applicable)	
	Differential (where applicable)	
	Final Drive (where applicable)	
	Charging Equipment	

Note - * Expected life means life before first overhaul wherever applicable.

11. Information to Be Provided By the Bidder

The bidder shall furnish the following information. All technical information shall be in SI units.

11.1 General

- a. Number of similar model supplied during the last five (5) years. The information shall be given in the following format and in the order of most recent first:

Company Name	Mine Name	Mine Location	Mine type	SI No. of Machines	Model & Capacity	Commissioned date (DD/MM/YYYY)

The information in the above format should be self certified.

- b. Details of special tools to be provided with the equipment.
- c. Details of erection programme for the bid.

- d. Details of nearest Depot/Warehouse and Service Facility available for the present offer.

11.2 Technical Details (to be provided by the bidder)

- a. Latest performance curves showing torque-speed and power-speed characteristics of the traction motor(s)/Electric Drive System, together with the corresponding operating characteristics of the offered Equipment.
- b. Maximum speed determined according to ISO 6014
- c. Latest Rim-pull - Speed - gradeability Curves of the offered model clearly indicating Driving speed fully loaded up 14% effective grade.
- d. Latest retarding performance chart of the offered model in accordance with ISO 10268 clearly indicating: Maximum constant speed fully loaded down 10% effective grade.

The chart shall clearly indicate the retarding system/method and the contribution of regenerative/electrical and mechanical retarding, wherever applicable.

- e. Calculations determining the time for the operating cycle specified in clause 11.3.12 including the estimated energy consumption and energy recovery, wherever applicable, for the specified operating cycle..
- f. Result of service and secondary brake stopping tests carried out according to ISO 3450.

Braking system tested	Slope (%)	Machine Speed (km/h)	Stopping distance(m)
Service			
Secondary			

- g. Turning diameter in accordance with ISO 7457.
- h. Detail technical description of all systems of the dumper.
- i. Detailed technical description of the Energy Storage System (ESS), Electric Drive System, Charging Equipment, High Voltage Electrical System, control and monitoring system, their integration with other major systems of the Equipment, details of data capturing (active, intermittent & calculated) and functional features, Diagnostic Tools and its software version, data storage capacity and features, and Payload Monitoring System fitted on the Equipment.

- j. Layout drawings and detailed technical descriptions of hydraulic systems and components
- k. Details of major bought out assemblies and sub-assemblies including manufacturer's name & full address, type, model etc. as indicated in clause no C.6.1.b.
- l. Comprehensive commercial literature specifications, the content of which must comply with ISO 7132.
- m. Operation and Maintenance manuals in accordance with ISO 6750 as indicated in clause A-3 of section VI.
- n. Details and layout of Automatic lubricating system.
- o. Details and layout of Automatic fire detection and suppression system.
- p. Details of rear vision system
- q. Details of proximity warning device.
- r. Calculations and drawings verifying the body capacity.
- s. Layout drawings and technical description of the Energy Storage System (ESS), its installation on the Equipment, and associated thermal management and protection arrangements.
- t. Layout drawings and technical description of the Charging Equipment and the associated charging infrastructure proposed for the offered Equipment.
- u. Detailed calculations, assumptions and methodology supporting the guaranteed operating duration of the Equipment between two consecutive charging cycles under the operating cycle specified in this Tender.
- v. Estimated energy consumption (kWh/hour and kWh/tonne-km) under the operation cycle specified in this Tender, together with the assumptions, methodology and operating conditions adopted for estimation.
- w. Guaranteed charging duration from the minimum operating SOC to the normal full-charge SOC under the proposed charging philosophy, along with detailed calculations, methodology and assumptions adopted.
- x. Details of the proposed charging philosophy, charging frequency, charging schedule and charging infrastructure requirements for achieving the performance and availability requirements specified in this Tender

11.3 Design Validation and Verification Documents

The bidder shall submit Design Validation and Verification Documents demonstrating that the offered Equipment has undergone adequate engineering design validation and verification. The submitted documents shall establish that the Equipment has been designed, analysed, simulated, tested and validated to meet the operating requirements specified in this tender.

The Design Validation and Verification Documents shall, wherever applicable, include engineering calculations, simulation reports, laboratory test reports, prototype test reports, field validation reports, certificates or equivalent technical documents covering the following:

- a. Vehicle dynamics validation.
- b. Weight distribution analysis.
- c. Structural strength and fatigue validation.
- d. Energy Storage System (ESS) enclosure validation.
- e. Drive cycle simulation and performance validation.
- f. Thermal analysis and thermal management validation of the Energy Storage System (ESS), Electric Drive System and associated power electronics.
- g. Electrical safety validation.
- h. Stability and roll-over analysis.
- i. Ingress Protection (IP) validation/testing.
- j. Prototype testing and/or field validation of the offered Equipment or an equivalent platform.

The design validation, simulation and physical testing shall be carried out by the bidder/OEM. All such design validation reports, simulation reports, test reports and field validation reports submitted against the above requirements shall be independently verified by a Central Government Laboratory or Central Government Research Institution or Institute of National Importance (such as IITs, NITs, IISc) or any other Central Government Technical Institution having expertise in the relevant field.

Along with the technical bid, the bidder shall submit:

- 1. A self-certified copy of each applicable design validation report, simulation report, laboratory test report, prototype test report or field validation report; and
- 2. The corresponding verification certificate/report/document issued by the above Government institution confirming that the submitted report has been verified.

3. The verification document shall clearly identify the corresponding report(s) being verified and shall bear the name, designation, signature and official seal of the issuing institution.
4. The Purchaser or its authorized representative reserves the right to seek clarifications from the bidder and/or the issuing Government institution regarding any submitted report or verification document, if considered necessary

Where the offered Equipment incorporates any newly developed or modified safety-critical aggregates, assemblies, sub-assemblies or components, the Supplier shall submit documentary evidence of the design validation carried out, including virtual simulations, analytical studies and/or physical validation tests, as applicable, to demonstrate the adequacy of the design for the intended mining application.

11.3 Dimensions, Weights and Performance Details

11.3.1 Dimensions

- a. Maximum Overall length (m)
- b. Maximum overall width (m)
- c. Maximum height without body (m)
- d. Maximum height with body (m) and body fully lifted condition
- e. Loading height (m)
- f. Dump height (m)
- g. Discharge height (m)
- h. Maximum body depth (m)
- i. Body target area [inside length and width at top] (m²)
- j. Wheel base (m)
- k. Approach Angle
- l. Departure Angle
- m. Ramp-over Angle
- n. Minimum Ground Clearance
- o. Static Rollover Angle

11.3.2 Weight Distribution

- a) Empty vehicle (kg)
 - Front axle (kg)
 - Rear axle (kg)
 - Total (kg)
- b) Loaded vehicle (kg)
 - Front axle (kg)
 - Rear axle (kg)
 - Total (kg)

- c) Payload (kg)

11.3.3 Electric Drive System

- a. Manufacturer and model
- b. Drive configuration
- c. Number of traction motor(s)
- d. Make, Model, Rated Power, Peak Power, Rated torque, Peak torque and cooling methods of Traction Motors and Auxiliary motors.
- e. Make and model details of all HV components.
- f. Diagnostic software, version and features

11.3.4 Energy Storage System (ESS)

- a. Manufacturer and model
- b. Energy Storage system technology/chemistry
- c. Total installed energy capacity (kWh)
- d. Guaranteed usable energy capacity (kWh)
- e. Nominal system voltage
- f. Battery Management System (BMS) (if available) (make and model)
- g. Thermal management method
- h. Automatic Fire Detection and Suppression System (AFDSS)
- i. Weight of ESS (kg)

11.3.5 Mechanical Drive System (wherever applicable)

I. Transmission/Reduction Gear box

- a) Manufacturer and model
- b) Type
- c) Number of gear speeds: forward and reverse
- d) Travel speeds: forward and reverse

II Differential

- a) Manufacturer and model
- b) Type

- c) Ratio

III Final Drive

- a) Manufacturer and model
- b) Type
- c) Ratio

11.3.6 Suspension

I Front

- a. Type
- b. Stroke
- c. Load - deflection rate: loaded and empty

II Rear

- a) Type
- b) Stroke
- c) Load - deflection rate: loaded and empty

11.3.7 Steering

- a) Type
- b) Emergency steer method

11.3.8 Brakes

11.3.8.1 Service Brake:

I. Front

- a. Type
- b. Actuating System

II. Rear

- a) Type
- b) Actuating System

11.3.8.2 Emergency Brakes

- a) Type
- b) Actuating System

11.3.8.3 Parking brakes

- a) Type
- b) Actuating System

11.3.9 Retarder

- a) Type
- b) Actuating System

11.3.10 Tyres

- a) Manufacturer
- b) Size and type
- c) Tread
- d) Rim size
- e) TKPH

11.3.11 Hydraulic System

- a. Make & model, Number, flow rates and operating pressures of pumps
- b. Make & model, Number, piston diameters and stroke length of cylinders
- c. Relief valve operating pressures

11.3.12 Electrical System

- a. Nominal auxiliary electrical system voltage
- b. Auxiliary battery type and rating
- c. DC/DC converter make and model
- d. High voltage system nominal voltage
- e. Lighting details (Number, Type & Rating)

11.3.13 Charging Equipment

- a. Manufacturer and model
- b. Rated charging power (kW)
- c. Input supply voltage and frequency
- d. Output voltage range
- e. Maximum charging current
- f. Cooling method
- g. Overall dimensions
- h. Weight
- i. Charging interface/connector

11.3.14 Operating Cycle

The operating cycle, for which the bidder shall provide the information required in clause 11.2 (e), shall be:

Time for hauling, rated payload and returning empty to the place of loading on a haul road of the following profile with a rolling resistance of 2%.

First 1500 meters up a 12% grade, next 200 meters level, next 200 meters up a 10% grade, last 100 meters level.

A fixed time of six (6) minutes for loading and dumping shall be added to this time to calculate the total operating cycle.

12. Equipment Acceptance

The Equipment ordered will be finally accepted subject to the Supplier demonstrating to the Purchaser or its authorised representative (may be third party) that the equipment, or assembly or sub-assembly (selected at random by the Purchaser) when tested, meets the Performance Data provided by the Supplier in accordance with the requirements of clause C-10. In case, if testing facility for a particular parameter is not available at site, the Equipment ordered will finally be accepted subject to submission of Manufacturer's certified test copy for that parameter of performance data provided by the supplier in accordance with the requirements of clause 10. A detrimental deviation of up to 2½% will be accepted.

	Specific Fuel Consumption for engine	To be tested at Works / engine manufacturer plant and minimum of 3 (three) readings at full load to be averaged - Manufacturer's test data in respect of fuel consumption in terms of gm/kw-hr is to be submitted.
	Engine Net Power & RPM	Manufacturer's test report shall be submitted. However, the inspector should ensure the above during pre-dispatch inspection/ acceptance of equipment at site to ensure acceptance of equipment.
1	Pay load Capacity	To be tested at Works & Project Site.
2	Maximum Operating Duration on Full Charge under the specified reference operating cycle	Manufacturer's test report and/or Project Site demonstration

3	Charging Time (as guaranteed by the Supplier)	Works / Project Site
4	Driving Speed - fully loaded up 14% effective gradient (assuming 2% Rolling resistance)	To be tested at Works / Project Site.
5	Retard Speed - fully loaded down 10% effective gradient (assuming 2% Rolling resistance)	To be tested at Works / Project Site.
6	Service Brake Stopping Distance as per ISO 3450	To be tested at Works / Project Site.
7	Secondary Brake Stopping Distance as per ISO 3450	To be tested at Works / Project Site.
8	Turning Dimension as per ISO 7457	To be tested at Works and/or Project Site.
9	Dump body should accommodate 6 pass loads from 5 CuM shovel & 5 pass loads from 6 CuM Shovel without spillage	To be tested at Project Site.
10	Electrical Safety Functions and Protective Interlocks	Manufacturer's test reports / Functional demonstration
11	Charging Equipment Functional Performance	Works / Project Site

ANNEXURE - 1

PROFORMA FOR EQUIPMENT AND QUALITY CONTROL

(To be submitted by the Startups / MSE firms who claim the relaxation of the prior turnover and prior experience criteria)

Reference : Western Coalfields Ltd Hqrs____ TenderNo.____
Date_____ for _____ supply
of_____

1. Name and Address of the Firm
2. (a) Telephone No. office/factory/works
(b) Fax No. / E-mail ID
3. Location of manufacturing works/factories owned by the firm (documentary evidence of ownership must be produced).
4. Brief description of the factory (i.e. area covered accommodation, Department into which it is divided, laboratory etc.)
5. Details of plant and machinery erected and functioning in each department (monographs and description pamphlets) be supplied if available.
6. Whether the process of manufacture in the factory is carried out with the aid of power or without it.
7. Process Flow Chart for the whole manufacturing process of the tendered item
8. Details and stocks of raw materials held.
9. Production capacity of items quoted for with the existing plants and machinery
(a) Normal
(b) Maximum
10. Details of Quality Assurance Plan and Quality Control Infrastructure such as laboratories etc.
11. (a) Details of technical supervisory staff in-charge of production and quality control.
(b) Skilled labour employed.
(c) Unskilled labour employed
(d) Maximum number of workers (skilled and unskilled) employed on any day during 18 months preceding the date of application.
12. Whether stores were tested to any standard specification, if so, copies of original test certificate should be submitted in duplicate.

(Signature of Tenderer)

NB: Details against sl nos. 5 to 12 inclusive need be restricted to the extent they pertain to the items under reference

ANNEXURE - 2

RELAXATION OF NORMS FOR STARTUPS & MSEs in Public procurement regarding prior experience criteria as per CI 2.8.3.7 of Purchase Manual:

Further, vide Policy Circular No. 1(2)(1)/2016-MA dated 10.03.2016 of MoMSME, it has been clarified that all Central Ministries/ Departments/ Central Public Sector Undertakings may relax the condition of prior turnover and prior experience with respect to Micro and Small Enterprises in all public procurements subject to meeting of quality and technical specifications, i.e. these MSEs must have the technical capability to deliver the goods and services as per prescribed technical and quality specifications. Further, as per Department of Expenditure, Ministry of Finance OM No. F.20/2/2014/PPD-(Pt) dated 25.07.2016 circulated vide note F. No. 24/2/2013/Fin-I dated 02.08.2016, relaxation of the condition of prior turnover and prior experience in public procurement has been extended to all Startups (whether MSE or not) subject to meeting of quality and technical specifications in accordance with the relevant provisions [Rule 173(i)(b) of GFR, 2017]. It has subsequently been clarified by the Department of Expenditure, MoF vide OM No. F.20/2/2014/PPD- (Pt) dated 20.09.2016 that there may be circumstances (like procurement of items related to public safety, health, critical security operations and equipment, etc.) where procuring entities may prefer the vendors to have prior experience rather than giving orders to new entities. For such procurements, wherever adequate justification exists, the procuring entities may not relax the criteria of prior experience/ turnover for Startups. In view of the above instructions, wherever, it is decided not to relax prior experience/ turnover criteria, adequate justification has to be given.

Tender Inviting Authority (TIA) in CIL and its Subsidiaries shall make a provision in the tender documents that prior experience and prior turnover criteria are not applicable for Startups and MSEs in the tender.

However, if bidders have submitted documents to prove the Startup/MSE status for the tendered item without certificate towards quality, assurance and capability from some authority like MSME, NSIC, etc., the TIA, if needed, may assess the techno-commercial capability of the vendors to manufacture and deliver goods as per the prescribed quality and technical specification before awarding contract to them. For

this purpose, a 'Proforma for Equipment and Quality Control' (as per Annexure-1) has to be enclosed in the tender documents and such MSEs/ Startups should be asked to submit the details of plant & machinery, quality control arrangements, etc., in the above proforma along with their bids for verification of their technical capability. After opening of bids, the verification of technical capability may be done by the concerned Technical Department immediately without any undue delay so that it is available for consideration at the time of evaluation/ processing of offers.

It should be ensured that the designated technical authority from whom the technical capability report is being called, is furnished with copy of the enquiry, the details of equipment, quality control, man-power availability, compliance/deviation statements and any other relevant particulars related to manufacturing/supply of the item as furnished by the firm(s) along with their tender.

If required, a techno-commercial team of the organization may visit the manufacturing unit of the vendor without any undue delay for quick finalization of tenders.

In case there is deficiency in technical capability of the firm, the same is to be communicated to them by TIA for improvement in the quality of their product for future tenders and clearly indicate that their offer cannot be considered for relaxation against the tender in question in order to avoid any future complications. The issues relating to Technical capability may be decided by the Head of the Technical Department.

If favorable technical capability reports obtained earlier on such firms for supply of the item in question as per the required specification is available, these may be considered for granting relaxation to the criteria of prior experience and prior turnover provided date of such reports are not more than one year from the date of opening of bids.

If bidders have submitted documents to prove the Startup/MSE status for the tendered item and their products are ISI marked/DGMS approved/Proven in CIL or its Subsidiary companies/Proven product of the ancillary unit of a Subsidiary Company of CIL, they will be required to submit the following applicable related documents, digitally signed copy (for documents submitted on e-procurement

portal)/ self-certified copy (for documents submitted in modes other than e-procurement portal), for relaxation from the criteria of prior experience and prior turnover:

- a valid BIS Marking License for the quoted items

or

- Rate contract issued by CIL/its Subsidiary Companies for the quoted items

or

- a valid DGMS Approval certificate for the quoted items

or

- Proven Ancillary certificate issued by the Subsidiary Companies for the quoted items.

The document(s)/certificate(s) furnished by the bidders for ISI markings or DGMS approval for any relaxation should be valid on the date of tender opening and a copy of such document(s) / certificate (s) valid on the date of supply, self-certified, must accompany their bill(s).

If the documents are related to the OEM or principal, the self-certification of OEM or principal shall also be required.

Commercial Terms and conditions

Bidders should read the following terms and conditions and accept while participating in tender/bid for respective items (those are applicable to them):

1. Eligibility Criteria for Bidders: -

(Documents related to Eligibility Criteria should be submitted by the bidders, along with offer)

Purchase Preference : Purchase Preference will be given to eligible bidders as per Public Procurement (Preference to Make in India), Order 2017 issued vide order No. P-45021/2/2017-B.E.-II dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019, 04.06.2020 and 16.09.2020, clarified vide OM dated 04.03.2021 and latest revision dated 19.07.2024 and latest directives of GOI if any) of Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry

a) Only the Local Suppliers i.e. Class – I Local supplier (a supplier or service provider, whose goods, services or works offered for procurement has local content of minimum of 50%) and Class – II Local Supplier (a supplier or service provider, whose goods, services or works offered for procurement has local content of minimum of 20% but less than 50%) are only eligible to Quote.

The Local suppliers (Class I / Class II) shall have to submit the certificate regarding the quantum (Percentage) of the local content and shall also give details of the location(s) at which the local value addition is made as per the Annexure "A" of NIT.

Non-Local Supplier means a supplier or service provider, whose goods or services offered for procurement have local content less than 20%. Non-Local Suppliers are not eligible to participate in this Domestic Tenders which meant only for Indigenous Manufacturers / Local Suppliers.

Local content means the amount of value added in India, which is the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Explanatory notes for calculation of local content given above:

- a. Imported items sourced locally from resellers/distributors shall be excluded from calculation of local content.**
- b. The license fees/royalties paid/technical charges paid out of India shall be excluded from local content calculation.**

c. Procurement/Supply of repackaged/refurbished/rebranded imported products as understood commonly shall be treated as reselling of imported products and shall be excluded from calculation of local content. The definition of repackaged/refurbished/rebranded imported products is as follows:

'Refurbishing' means repair or reconditioning of an imported product does not amount to manufacture because no new goods come into existence.

'Repackaging' means repacking of imported goods from bulk packs to smaller packs would not ordinarily amount to manufacture of a new item.

'Rebranding' means relabeling or renaming or change in symbol or logo/makes or corporate image of a company/organization/firm for an imported product would amount to rebranding.

d. To ensure items sourced locally from resellers/distributors are excluded from calculation of local content, bidders shall submit, the cost of such locally sourced imported items (inclusive of taxes) along with breakup on license/royalties paid/technical expertise cost etc. sourced from outside India. For items sold by bidder as reseller, OEM certificate for country of origin to be submitted.

For contracts involving supply of multiple items, weighted average of all items to be taken while calculating local content.

The definitions of 'Local Supplier', 'Local Content' and 'Margin of Purchase Preference' are as follows:

(i) 'Class - I Local Supplier' means a supplier or service provider, whose goods or services offered for procurement, meets the minimum local content of 50%.

(ii) 'Class - II Local Supplier' means a supplier or service provider, whose goods or services offered for procurement, meets the minimum local content of 20% but less than 50%.

iii) Non - Local Supplier means a supplier or service provider, whose goods or services offered for procurement, have local content less than that prescribed for Class-II Local Supplier.

iv) "Local Content" means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

(v) "Margin of Purchase Preference" means the maximum extent to which the price quoted by a local supplier may be above the L I for the purpose of purchase preference. The margin of purchase preference is 20%.

Special Treatment of items covered under PLI scheme

The manufacturers manufacturing an item under PLI scheme shall be treated as deemed class II local supplier for that item unless they have minimum local content equal to or higher than that notified for Class- I local supplier for that item, provided the manufacturer has received incentive from the concerned PLI ministry for the item. The above shall be applicable for the specific time period only as notified by concerned PLI ministry

Verification of local content:(i) The 'Class - I Local Supplier' / 'Class - II Local Supplier' at the time of tender, bidding or solicitation shall be required to indicate **percentage of local content** and provide self-certification that the item offered meets the minimum local content requirement for 'Class - I Local Supplier' / 'Class - II Local Supplier' as the case may be. They shall also give details of the location(s) at which the local value addition is made.

(ii) In cases of procurement for a value in excess of Rs. 10 crores, the 'Class - I Local Supplier' / 'Class - II Local Supplier' shall be required to 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**.

The certificate issued 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) **should have valid UDIN number**.

(iii) The bidder shall give self-certification for local content in the quoted item (goods/works/services) at the time of tendering. However, at the time of execution of the project, for all contracts above INR 10 Crore, the contractor/ supplier shall be required to give local content certification duly certified by cost/ chartered accountant in practice. For cases where it is not possible to provide certification by Cost/Chartered Accountant at the time of execution of project, the supplier shall be permitted to provide the certificate for local content from Cost Chartered Accountant after completion of the contract, within time limit acceptable to the procuring entity. In case the contractor/ supplier does not meet the stipulated local content requirement and the category of the supplier changes from Class-I to Class-II/ Non-local or from Class-II to Non-local, a penalty upto 10% of the contract value may be imposed. However, contract once awarded shall not be terminated on this account.

(iv) CIL/ Subsidiary Companies may constitute committees with internal and external experts for independent verification of auditor's/ complaints.

A fee of Rs 2 Lakh or 1 % of the value of the locally supplied products, services or works being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, is to be submitted along with the complaint by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld in part or full, deposited fee of the complainant will be refunded without any interest.

(v) False declarations will attract banning of business of the bidder or its successor(s) as per provisions of CIL Purchase Manual 2020 along with such other actions as may be permissible under law.

(vi) A local supplier who has been debarred by any procuring entity for violation of above order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities.

b) Indian Agent of Local Supplier: (Broadly includes Distributor, Dealer, Channel Partner etc.) (Applicable for tenders of value **more than Rs.5.00 lakhs**) Procurement should generally be made from manufacturers only.

However, if the manufacturer does not quote directly to any organisation in India as a matter of its corporate policy (except in situations like supplies to OEM /OES/ OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints), the procurement shall be made from its authorised Indian Agent based on the tender specific authorisation issued by the manufacturer mentioning tender reference number and date and validity of such authorisation.

c) In cases where value of service component is more than 10% of the total estimated value of the complete package of goods and services, the average Annual Financial Turnover of the bidder during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the total estimated value of the tender.

The list of documents to be submitted by the bidder:

i)Local Suppliers (Class-I Local Supplier and Class – II Local Supplier): In case the bidder is a Local supplier (Class-I Local Supplier), they have to submit certificate regarding the quantum (Percentage) of the local content and details of the location(s) at which the local value addition is made as per the Annexure A of NIT.

ii) In case of Indian Agent of Local Supplier (Applicable for tenders of value of more than Rs.50.00 lakhs) (Class-I Local Supplier and Class – II Local Supplier):

1. Self attested copies of the Local Supplier certificate (to be issued by Local supplier) indicating the quantum (Percentage) of the local content and details of the location(s) at which the local value addition is made as per the Annexure "A" of NIT.
2. A tender specific authorization issued by the manufacturer mentioning tender reference number and date and validity of such authorization (Format as per **Annexure "B & C" NIT**). Authorization should be pre-dated (from the tender opening) and should be properly signed and its validity should correspond to the delivery period stipulated in the Tender Enquiry.
3. Undertaking from the manufacturer that, as a matter of its corporate policy, it does not quote directly to any organization in India (except in situations like supplies to OEM / OES/OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical / logistics constraints). If, subsequently, at any stage, it is found that it has quoted directly to any organization in India excepting the situations mentioned above, it shall be liable for penal action as per provisions of the NIT and the CIL Purchase Manual 2020, if the justification provided by the bidder has not been considered adequate and satisfactory by the procuring entity. Further, if at any stage, it is found that agency commission has been paid by the manufacturer/ principal without declaring the agent, the commission will be recovered with interest
4. Undertaking from the manufacturer that it will accept the responsibility for the satisfactory execution of orders placed on the authorized agents including warranty/ guarantee obligations.
5. Undertaking from the manufacturer that, wherever necessary, it will provide requisite inspection and testing facilities at its works in respect of orders placed on authorized agent.
6. Undertaking from the manufacturer that the authorized agent's price will not exceed that which the manufacturer would have quoted.
7. Undertaking from the manufacturer that in the event of placement of order on their authorized dealer, the goods supplied / goods offered for inspection would be accompanied by a certificate stating that the goods have been manufactured by them.
8. Undertaking from the manufacturer that No agent / Middle man / Liaisoning agent or any entity in any name other than the disclosed authorized Indian Agent is involved in the process of procurement of goods and services.

(if subsequently at any stage, it is found that it has given a false certificate, it shall be liable for penal action as per the provisions of CIL Purchase Manual 2020).

9. Undertaking from the bidder (authorized dealer) that he will be responsible for all the contractual obligations including quality aspects, replacement of part/items and warranty/ guarantee obligations, and also will be responsible for providing the required after sale service.

10. The business entity of the Indian Agent should be in existence for 3 years on the date of tender opening, irrespective of date of appointment as Indian Agent. The relevant self attested document in this regard is to be submitted along with the offer.

11. In cases where value of service component is more than 10% of the total estimated value of the complete package of goods and services, the average Annual Financial Turnover of the bidder during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the total estimated value of the tender (as specified against each item). Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid.

Note:

1. If both the Local Supplier (Class – I Local Supplier and Class – II Local Supplier) and the Indian Agent participates in this tender, then the offer of the Indian Agent will be rejected.

2. One manufacturer can authorize only one Indian agent and an agent should not represent or quote on behalf of more than one Principal for same tendered item.

3. If Indian Agents submits bid on behalf of a manufacturer, the same agent shall not submit a bid on behalf of another manufacturer in the same tender for the same item / product.

2)BANNED OR DELISTED OR DEBARRED OR PUT ON HOLIDAY SUPPLIERS :

The manufacturer as well as the bidder (if bidder is not the manufacturer) will give a declaration (As per Annexure D) that they have not been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs. If a bidder and/or manufacturer has been banned or delisted or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSU, this fact must be clearly stated and it may not necessarily be a cause for disqualifying them.

Bidder must declare any previous transgressions of such a code of integrity with any entity, in any country, during the last three years, or of being debarred by any other procuring entity.

However, if the manufacturer/bidder is banned or delisted or debarred or 'Put on Holiday' by DoE/MoC/WCL/CIL, the offer shall be **not be considered for further evaluation.**

3. Pre-contract Integrity Pact: (Applicable for tenders for value of Rs.2.00 cr and above)- APPLICABLE

IEM details: Names, Full Address, Phone no and email Id of both the Independent External Monitors are as under:

Sl no	Name of IEM	Address	e-mail ID	Mobile No
1	Dr. Atanu Purkayastha, IAS(Retd)	D/5, Sector-27, NOIDA PIN: 201301	dratanu2011@gmail.com	9899772227
2	Shri Ved Prakash Yajurvedi, IoFS (Retd)	E-33, Ayudh Vihar, Plot no-3, Sector - 13, Dwarka, New Delhi - 110075	vpyajurvedi@gmail.com	9473763645

4. Clarification of Bids/ Shortfall/ Confirmatory Documents:

After evaluation of the uploaded documents, shortfall documents, if required, shall be sought from the bidder. For this purpose, **maximum 1 chance** shall be given. The time period for the clarification will be 7x24 hrs given to the bidders to upload these clarifications / shortfall documents. The bidder will upload the requested documents within the specified period and no additional time will be allowed in this regard for on-line submission of documents after the maximum 1 chance, of 7x24 hours duration. If the bidder does not comply or respond by the specified date & time, his tender will be liable to be rejected. The shortfall information/documents shall be sought only in case of historical documents as per GeM provision/rules.

5.Payment terms:

100% payment shall be made after three months of satisfactory performance against submission of Bank Guarantee of 100% of order amount, valid for a period of three months beyond the trial period (after excluding initial three months). The equipment found to perform satisfactorily and fulfilling the contractual obligations as per the supply order for a period of one year from the date of commissioning, 100% Bank Guarantee shall be released.

Three months satisfactory performance shall not, however, give entitlement to claim that their equipment shall have to be considered proven.

Note:- Since this is a Trial Tender, EMD, Security deposit, liquidated damages/penalty for late delivery, risk purchase and debarment clauses will not be applicable.

Note: All MSME vendors/suppliers are advised to get themselves registered on TreDS platform (www.treds.in) or on www.rxil.in , www.invoicemart.com & www.m1xchange.com , www.c2treds.com and avail the facility of the TreDS.

Paying Authority:General Manager(Fin) HOD, WCL, Hqrs, Nagpur

6. Submission of Bills: The supplier will submit the following documents along with bills to the paying authority:

- a. Four copies of the Supplier's invoice, Pre-Receipted and Stamped showing Contract Number, Goods description, quantity, unit price, total amount and GST No. of Ultimate Consignee.
- b. Receipted Challan/ Consignment Note of all the consignments/E-way Bill.
- c. Manufacturer's Test / Inspection Certificate.
- d. Manufacturer's Warranty /Guarantee Certificate.
- e. Lowest Price Certificate
- f. Price fall clause certificate
- g. Any other document(s) required as per contract / Technical specifications of the bid / contract.

7. Performance Bank Guarantee- APPLICABLE (Submission of Performance Bank Guarantee is exempted for the contracts having value up to Rs. 5.00 lakhs):-

Successful tenderer will have to submit performance bank guarantee for 100% of equipment landed value along with maximum annual landed value of spares and consumables (i.e. maximum value out of 1st, 2nd, 3rd spares) (landed cost of items ordered inclusive GST) valid for a period of 3 months beyond Guarantee / Warranty and the same shall be released on receipt of satisfactory performance throughout the guarantee period.

The release of the Performance Bank guarantee(s) after above indicated period, shall be subject to satisfactory performance of the equipment/ items during the warranty period and fulfillment of contractual obligations failing which, action for further extension or encashment of PBG, as deemed suitable shall be taken. The Performance Bank Guarantee shall be released with the approval of concerned HOD (MM) / Area GM after obtaining the following:-

1. 'No Claim Certificate' from the concerned HOD (User Dept.) indicating that there is no claim pending.
2. 'No Claim Certificate' from the contractor indicating that there is no claim pending and that there is no dispute pending as per Annexure 36.

In the event of breach of a contract / failure of fulfilment of contractual obligations by the supplier, the Performance Bank Guarantee shall be forfeited and encashed / credited to the procuring entity's account.

In cases where the supplier does not submit the PBG in time or as per the prescribed format in line with the contract stipulations, the PBG amount may be deducted from the first bill or in case of insufficient amount, from subsequent bill(s) of the supplier till the full PBG amount is deducted. This amount shall be refunded to the supplier upon acceptance of PBG submitted by them.

The PBG must be submitted along with the supply. No payment shall be made without submission of PBG. (Format of PBG is enclosed as Annexure - "G" which is to be submitted physically and through SFMS platform)

(This is in addition to the Security Deposit to be submitted @5% of order value)

Note

1: The PBG can be submitted by the OEM or their authorized dealer for the supply of Equipment.

2: Bidders submitting Bank Guarantee are encouraged to submit e-BG through NeSL platform (refer Annexure "I").

8. Security Deposit~~(Submission of Security Deposit is exempted for the contracts having value upto Rs. 5.00 lakhs):~~ **NOT APPLICABLE**

~~The Successful bidder who has been awarded the contract/ Supply order is required to submit the Security Deposit.~~

~~Case i) Security Deposit shall be for an amount of **Five per cent** of the total landed value of the contract including all taxes, duties and other costs and charges without considering the Input Tax Credit.~~

~~Case ii) In case of Rate / Running Contracts the Security Deposit shall be for an amount of 5% of annual offtake contractual value; and in case RC period is longer than 1 year, SD amount shall be 5% of average annual offtake.~~

~~Case iii) In case of Contracts for procurement of Capital Goods along with Warranty Spares & Consumables (if applicable) and additional Spares & Consumables / AMC / CMC for more than one year, the Security Deposit shall be for 5% of equipment landed value along with maximum annual landed value of Spares & Consumables / AMC / CAMC.~~

~~The Security Deposit shall be deposited through RTGS / NEFT / IMPS / e-BG/ other digital modes or in the form of a Bank Guarantee as per format given in GeM from an RBI Scheduled Bank in India (on a non-judicial stamp paper) within 15 days from date of notification of award or placement of order.~~

~~(Bidders submitting Bank Guarantee are encouraged to submit e-BG through NeSL platform (refer Annexure "I"))~~

~~i) — The Security Deposit shall be in the same currency in which contract is to be signed / Supply order issued. In case of Multi Currency contract separate SDBG in respective currency for required value as above shall be submitted and must conform to the Uniform Rules for Demand Guarantees (URDG 758) — an international convention regulating international securities.~~

~~ii) — In case of equipment, SDBG shall not be individual equipment wise. However, multiple Bank Guarantees for Security Deposit shall be permissible provided value of all the SDBGs totals to 5% of the contract value, and all are submitted simultaneously within the specified time schedule and all of them are in the same prescribed format of SDBG without linking to any particular equipment.~~

~~iii) — The SDBG shall remain valid up to 60 Days beyond the scheduled delivery period after completion of supplies and acceptance of materials by the consignee in case of supply Contracts / Rate / Running Contracts and in case of contracts for equipment involving installation and commissioning, 60 days after the supply and commissioning of all the equipment covered in the contract.~~

~~iv) — Security Deposit will be released within 30 days after completion of supplies and acceptance of material by the consignee in case of supply contract /rate/running contracts or after successful commissioning and on receipt of confirmation of Performance Bank Guarantee (s) for all the equipment covered in the contract in case of contracts for equipment and all those items/ goods involving installation and commissioning on part of the supplier and PBG.~~

~~However, in case of contracts for equipment and all those items/ goods involving installation and commissioning (installation & commissioning in supplier's scope), where there is a delay in commissioning due to reasons not attributable to the supplier (e.g., Non-availability of Site by the purchaser), the SD shall be released after receipt of PBG.~~

v) ~~Security Deposit may be converted into Performance Bank Guarantee (PBG) wherever PBG is required at the option of the supplier. At the time of conversion of security money into PBG, it should be ensured that the amount of PBG should not be less than 10% of landed value of order. Wherever Security Deposit is converted into PBG, the operation of such SDBG/ Performance BG shall be guided by the Performance Bank Guarantee clause.~~

vi) ~~If the successful tenderer fails to deposit the security deposit within 15 (fifteen) days from date of notification of award/ placement of order, another opportunity shall be given to them for submission of Security Deposit within next 15 days. If the successful tenderer still fails to deposit the security deposit within the extended period but executes the supplies within the security deposit submission period i.e. within 30 days from date of Notification of Award / placement of Order, the submission of Security Deposit shall be waived, as the purpose of submission of SD is fulfilled.~~

vii) ~~In cases where the supplier does not submit the Security Deposit (SD) in time, the SD amount will be deducted from the first bill or in case of insufficient amount, from subsequent bill(s) of the supplier till the full SD amount is deducted.~~

viii) ~~**In cases where the successful tenderer did not submit the security deposit** even within the extended period for SD submission but has supplied the materials either in full or in part after the extended period for SD submission, **a penalty equivalent to 0.5% (half percent) of SD amount for delay** of each week or part thereof (period of delay is to be calculated from the 31st day from the date of notification of award/placement of order to the date of receipt of full SD/deduction of full SD) shall be levied subject to a maximum of 5% of the contract value.~~

Note:

- ~~1. E PBG for 5%, as indicated in bid document is towards security deposit and to be deposited as per GeM provision. Security Deposit (E PBG 5%) will be released after successful completion of supplies and acceptance of the material as per contractual terms and conditions.~~
- ~~2. **For unsatisfactory performance and / or contractual failure, the security Deposit money shall be forfeited. GST at an applicable rate shall not be applicable on Security deposit forfeiture.**~~

8a. EXEMPTION OF SECURITY DEPOSIT:

- ~~1. Submission of Security Deposit is exempted for the contracts having value upto Rs. 5.00 lakhs.~~
- ~~2. All Central/State Government Organization/PSUs shall be exempted from submission of Security Deposit.~~
- ~~3. OEM/OES shall also be exempted from submission of Security Deposit in case of procurement of Spare Parts for equipment against Single Tender Enquiry/Open/Limited Tenders. However, dealers of the OEM / OES are not allowed the exemption.~~

- ~~4. Government Ministries, Departments, attached and subordinate offices, autonomous bodies formed by the Government~~

~~**Note:** No exemption from Security Deposit shall be allowed for Ancillaries of WCL/MSE/ Startups.~~

~~In addition to Security deposit the successful bidder has to submit PBG for 10% of contract value as per~~

09. CONSIGNEE AND ALLOCATION: - Regional Stores, Nagpur Area, Silewara, Nagpur

10. Delivery Period:- 180 DAYS

11. The bidder/contractor must disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents concerning the selection process or execution of the Contract. The information disclosed must include the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee in the Tender Document. Failure to do so would amount to violation of this code of integrity.

12. Bidder to submit the following commercial documents along with their offer / bid documents in addition to documents sought in technical specification:

1. Pre-Contract Integrity Pact
2. Local content certificate (as per Annexure "A")
3. Documents in support of Eligibility (documents as applicable for Manufacturer / Indian Agent including Annexure "B" and Annexure "C", as the case may be)
4. Non-Banning Certificate/Declaration as per **Annexure "D"**
5. Lowest Price Certificate-Annexure "E"
6. Undertaking of Price Fall Clause as per **Annexure "F"**
7. ~~**The average Annual Financial Turnover of the bidder**~~ during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the total estimated value of the tender. Documentary evidence in the form of a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid.

13. All disputes shall be under the jurisdiction of Nagpur court only.

14. CHECKLIST OF "DOCUMENTS TO BE SUBMITTED" (This is for information ONLY and will not be considered for commercial evaluation):

Sl. No	Description	Submitted (Yes/No/NA)
1	EMD Exemption claimed.	
2	If EMD exemption is claimed, requisite documents submitted as per NIT	
3	If EMD is submitted, EMD Submission Document (Online transaction, BG with SFMS from issuing bank, etc.) submitted	
4	Make in India Certificate for bids with estimated value <u>less than ₹10 crores</u>: Self-certificate from the OEM of offered product submitted	
5	Make in India Certificate for bids with estimated value <u>more than ₹10 crores</u> MII certificate signed by OEM of offered produce and certified by statutory auditor or cost auditor if the OEM is a company and from a practicing Cost Accountant or practicing Chartered Accountant for OEMs other than company with Valid UDIN, submitted	
6	Integrity Pact (For bids above ₹2 Cr estimated value) to be submitted with seal and sign of bidder.	
7	"Banned or Delisted or Debarred or Put on Holiday" declaration as per Annexure D of ATC from OEM/bidder in case OEM is the bidder of offered product. In case the bidder is an authorized dealer/distributor, BOTH manufacturer as well as authorized dealer/distributor has to submit the "Banned or Delisted or Debarred or Put on Holiday" declaration as per Annexure "D" of ATC	
8	Lowest Price Certificate (as per Annexure "E" of ATC) Submitted	

9	Price Fall Certificate (as per Annexure "F" of ATC) Submitted	
10	In cases where value of service component is <u>more than 10%</u> of the total estimated value of the <u>complete package of goods and services</u> : Turnover of the bidder during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the total estimated value of the tender (as specified against each item). Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid	
11	In case bidder is participating as Indian Agent of Local Supplier/Manufacturer, A tender specific authorization issued by the manufacturer (as per the Annexure "B" of ATC) submitted	
12	In case bidder is participating as Indian Agent of Local Supplier/Manufacturer, Undertaking to be Submitted by the Indian Agents of Local Suppliers as per Annexure C of ATC, submitted	
13	GST certificate for Vendor code creation	
14	PAN Card for Vendor code creation	
15	Bank mandate for Vendor code creation	

Annexure "A"

CERTIFICATE TOWARDS LOCAL CONTENT

(To be submitted FROM OEM of offered product)

Bid No.....Date:

We do hereby certify that the **product/products** offered against the tender are manufactured at our factory situated at & that the items offered have a local content of% of the total value as prescribed by the competent Ministries/Departments in pursuance to the Public Procurement (Preference to Make in India) Order OM No. P-45021/2/2017-PP (BE-II)-Part(4)Vol.II issued by DPIIT, dated 19.07.2024 and subsequent amendments.

Address of Location where local value is added

Authorized Signatory of OEM of primary product

Name & designation

Date:

Seal of the firm and signature

Also submit following certification for statutory auditor or cost auditor (in case of tender value is Rs. 10.00 Crores and OEM is a company)

I/We _____ (Name of the auditor) _____ are statutory/cost auditor of _____ (Name of the bidder) _____ and are authorized to submit the above certification as per MII Policy.

Signature & Stamp of statutory auditor or cost auditor of the firm

UDIN No. _____

NOTE:

When tender value is Rs. 10.00 Crores and above, the certificate needs to be issued through statutory auditor or cost auditor if the OEM is a company and from a practicing Cost Accountant or practicing Chartered Accountant for OEMs other than company as per provision of MII policy.

ANNEXURE – “B”

FORMAT FOR AUTHORIZATION TO BE SUBMITTED BY THE INDIAN AGENTS:

(to be typed on the Principals letter head and should be pre dated(prior to tender opening date and properly signed)

Tender no: _____

To
General Manager (MM)
Western Coalfields Ltd

Dear Sir.

We, M/s. (..... name of the Principal firm.....) represented by the undersigned, Mr/Ms..... Director/ Partner /Legal Attorney / Proprietor /Employee / Accredited Representative hereby authorize M/s. ____ (Name of the Bidder firm) to participate in the tender and submit the offer and enter into contract / Supply order, on our behalf against this tender. This authorization is valid till the successful execution and completion of contract period against this tender. We further confirm that:

1. As a matter of our corporate policy, we do not quote directly to any organization in India (except in situations like supplies to OEM / OES / OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints). If, subsequently, at any stage, it is found that we have quoted directly to any organization in India (except in situations like supplies to OEM / OES / OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints), we shall be liable for penal action as per provisions of the NIT and the CIL Purchase Manual 2020. Further, if at any stage, it is found that agency commission has been paid by us without declaring the agent, the commission may be recovered with interest.
2. We will accept the responsibility for the satisfactory execution of orders placed on the authorized agent including warranty/ guarantee obligations.
3. Wherever necessary, we will provide requisite inspection and testing facilities at our works in respect of orders placed on authorized agent.
4. The price quoted by our authorized agent will not exceed the price which we would have quoted.

a) In the event of placement of order on our authorized dealer, the goods supplied / goods offered for inspection would be accompanied by a certificate stating that the goods have been manufactured by us.

b) We further confirm that No agent / Middle man / Liasoning agent or any entity in any name other than our authorized Indian Agent is involved in the process of procurement of goods and services against this tender. If subsequently at any stage, it is found that false certificate is given, we shall be liable for penal action.

c) We have never been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs.
OR

d) We were banned/de-listed/debarred/'Put on Holiday' by the organization named "-----" for a period of ----- year/s, effective from ----- to -----for ----- (the reasons to be mentioned).

Signature of Authorized signatory of Principal

Date & Seal of the firm

ANNEXURE – “C”

UNDERTAKING TO BE SUBMITTED BY THE INDIAN AGENTS

(To be typed on the Indian agent letter head)

To

General Manager (MM)

Western Coalfields Ltd

Dear Sir.

Against the Tender no: _____, we have quoted as the authorized dealer /Indian agent of M/s. _____ who is the manufacturer of the offered products. We confirm that we will be responsible for all the contractual obligations including the quality aspects, replacement of parts / items, warranty / guarantee obligations and also provide the after sales and services.

We have submitted the following documents.

- 1.**Tender specific authorization from the Principal including the specific confirmations as required as per the terms of the NIT.
- 2.** The certificate for Local content issued by the Local Supplier / Principal.
- 3.**The self-attested copy of the documents to prove that our business entity is existence for 3years on the date of tender opening.

Signature of Authorized Dealer / Indian Agent

Date:

Seal of the firm

Annexure – “D”

BANNED OR DELISTED OR DEBARRED OR PUT ON HOLIDAY SUPPLIERS DECLARATION

This is to certify that we have not been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs.

Signature of Bidder

Date:

Seal of the firm

OR

If bidder has been banned/Delisted/Debarred/ Put on Holiday, by any Government or quasi- Government agencies or PSU, then bidder has to indicate the details below:

- (1) Name of the Organisation which has banned the bidder:
- (2) Ban Period:
- (3) Reasons for BANNING OR DELISTING OR DEBARRING OR PUT ON HOLIDAY:

Signature of Bidder

Date

Seal of the firm

Note 1: In case the bidder is an authorized dealer/distributor, BOTH manufacturer as well as authorized dealer/distributor has to submit the "Banned or Delisted or Debarred or Put on Holiday" declaration as per format above

Note 2: Bidder must declare any previous transgressions of such a code of integrity with any entity, in any country, during the last three years, or of being debarred by any other procuring entity.

Annexure- "E"

LOWEST PRICE CERTIFICATE

This is to certify that the prices quoted/charged by us for the offered/supplied items are the lowest prices as applicable to any other Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization.

Signature of Bidder

Seal of the firm

PRICE FALL CLAUSE

If the contract holder reduces its price or sells or even offers to sell the contracted goods or services following conditions of sale similar to those of the contract, at a price lower than the contract price, to any person or organization during the currency of the contract, the contract price will be automatically reduced with effect from that date for all the subsequent supplies under the contract and the contract be amended accordingly.

The provisions of price fall clause will however not apply to the following:

- i) Export/Deemed Export by the supplier.
- ii) Sale of goods or services as original equipment prices lower than the price charged for normal replacement.
- iii) Sale of goods such as drugs, which have expiry date.
- iv) Sale of goods or services at lower price
 - a) on or after the date of completion of sale/placement of order of goods or services by the authority concerned, under the existing or previous Rate Contracts
 - b) under any previous contracts entered into with the Central or State Government Departments including new undertakings (excluding joint sector companies and or private parties) and bodies.

Note:

- a. The currency of contract will mean the period till completion of supply.
- b. The bidder will be asked to submit a copy of the latest purchase order for the tendered / similar item(s) received by them from any Organization/ Ministry/ Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization, along with the offer.

“In case the bidder has not received any purchase order for the tendered / similar item(s) from any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization, they need to submit a self-certificate as under:

Certificate

“It is hereby certified that, We..... (Name of the Firm), have not received the

following last latest purchase/supply order (**copy enclosed**) for the tendered / similar item(s) from any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and / or its Subsidiaries or other PSU or any other Private Organization.”

c. It shall be responsibility of the supplier to inform the purchaser of offer to supply / supply of the ordered /similar item(s) at a lower rate to any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization during the currency of the contract.

d. The supplier shall submit a certificate along with the bill(s) as under: -

“I/We certify that there has been no reduction in the sale price of the offered / supplied goods under this contract or similar item(s) and such goods have not been offered/sold by me/ us to any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization, as the case may be, during the currency of the contract at a price lower than the price charged under the contract.”

e. The provisions of fall clause will however not apply for purchase value up to Rs. 2.00 lakh.

Signature of Bidder

Seal of the firm

ANNEXURE – “G”

Performance Bank Guarantee Format

Re : Bank Guarantee in respect of Agreement / Contract / Purchase Order vide no dated..... between Western Coalfields Limited and
(Name of Supplier Company)

Messers a Company / Firm having its office at No.
..... (hereinafter called 'the Contractor') has entered into the Agreement / Contract / Purchase Order vide no dated
(hereinafter called 'the said agreement') with Coal India Limited, Kolkata on behalf of Western Coalfields Limited (Name of the Purchaser Company) hereinafter called ('the Company') to supply..... stores / materials amounting to Rs..... on the terms and conditions contained in the said agreement.

The(name of the bank) (hereinafter called 'the bank') having its Office at has at the request of the Contractor agreed to give the guarantee as hereinafter contained.

We (name of the bank) do hereby unconditionally agree with the Company that if the Contractor shall in any way fail to observe or perform the terms and condition of the said agreement or shall commit any breach of its obligations thereunder, the bank shall on demand and without any objection or demur pay to the Company the said sum of Rs..... or any portion thereof without requiring the Company to have recourse to any legal remedy that may be available to it to compel the Bank to pay the same, or calling on the company to compel such payment by the contractor.

Any such demand shall be conclusive as regards the liability of the Contractor to the company and as regards the amount payable by the Bank under this guarantee. The Bank shall not be entitled to withhold, payment on the ground that the contractor has disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between the Company and the contractor regarding the claim.

We, the Bank - further agree that the guarantee shall come into force from the date hereof and shall remain in full force and effect till the period that will be taken for the performance of the said agreement which is likely to be the day of but if the period of agreement is extended either pursuant to the provisions in the said agreement or by mutual agreement between the contractor and the Company the Bank shall renew the period of the guarantee failing which it shall pay to the Company the said sum of Rs.....or such lesser amount out of the said sum of Rs.....as may be due to the Company and as the Company may demand. This guarantee shall remain in force until the dues of the Company in respect of the said sum of Rs.....and interest are fully satisfied and the company certifies that the agreement regarding re-payment of the said sum of Rs..... has been fully carried out by the contractor and discharges the guarantee.

The Bank further agrees with the Company that the Company shall have the fullest liberty without the consent of the Bank and without affecting in any way the obligations hereunder to vary any of the terms and conditions of the said agreement or to extend the time for performance of the said agreement from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the contractor and to forbear to enforce any of the terms and conditions relating to the said agreement and the Bank shall not be relieved from its liability by reason of such failure or extension being granted to the contractor or through any forbearance, act or omission on the part of the Company or any indulgence by the Company to the contractor or any other matter or thing whatsoever which under the law relating to sureties would but for this provisions have the effect of relieving or discharging the Guarantor.

The Bank further agrees that in case this guarantee is required for a longer period and it is not extended by the Bank beyond the period specified above the Bank shall pay to the Company the said sum of Rs..... or such lesser sum as may then be due to the Company and as the Company may require.

Notwithstanding anything herein contained the liability of the Bank under this guarantee is restricted to Rs.....only. The guarantee shall remain in force till theday of..... 20.. and unless the guarantee is renewed or a claim is preferred against the Bank within the validity period and / of the claim period from

the said date, all rights of the company under this guarantee shall cease and the Bank shall be released and discharged from all liability hereunder except as provided in the preceding clause.

The Bank has under its constitution power to give this guarantee and
(Name of the person) who has signed it on behalf of the Bank has authority to do so.

The details of beneficiary bank for sending details of BG under SFMS Platform is furnished below

Name of beneficiary and details	
Name	Western Coalfields Ltd
Area	Head Quarter
Bank A/c No: / Cust ID of beneficiary	Current Account no: 005905018053; Customer Id: 556096497 ; ICICI Bank Ltd, Commercial Banking, 9C/A& 9C/B, Ground Floor, Shriram Towers, LIC Square, Nagpur – 440001,Maharashtra
IFSC code	ICIC0000059
Bank Manager Name & Ph no:	Alfiya Mirza: Ph n: 0712-6627389
BG ADVISING MESSAGE – 760COV / 767COV via SFMS	
Field Number	Particulars
7035	ICICI0000059
7037	WCL556096497

Controlling Officer of the Bank:

Name –

Address –

.....

Telephone No. –

Branch of the Bank issuing BG –

Dated this.....day of 20.....

Place.....
person

Signature of the authorized

For and on behalf of the Bank

Additional Information required: (Optional)

If Bank Guarantee is submitted towards EMD/ Security Deposit / Performance the bidder is requested to submit following details:

The original Bank Guarantee (if submitted) in paper form should be sent to the beneficiary and following details to be submitted separately.

FIRM's NAME	
FIRM's ADDRESS	
FIRM's EMAIL & MOBILE NO	

ISSUING BANK DETAILS				
IFSC CODE	PIN CODE	EMAIL ID	MOBILE NO	BANK ADDRESS

OPERATING BANK DETAILS				
IFSC CODE	PIN CODE	EMAIL ID	MOBILE NO	BANK ADDRESS

No Claim Certificate
(On company letterhead)

To,
(Contract Executing Officer)

Procuring Entity_____

NO CLAIM CERTIFICATE

Sub: Contract Agreement no. ----- dated -----for the supply of -----

We have received the sum of Rs. (Rupees _____ only) in full and final settlement of all the payments due to us for the supply of _____ under the above mentioned contract agreement, between us and _____ (CIL or Subsidiary). We hereby unconditionally and without any reservation whatsoever, certify that we have no claim whatsoever, of any description, on any account, against Procuring Entity, against aforesaid contract agreement executed by us. We further declare unequivocally, that we have received all the amounts payable to us, and have no dispute of any description whatsoever, regarding the amounts worked out as payable to us and received by us, and that we shall continue to be bound by the terms and conditions of the contract agreement, as regards performance of the contract.

Yours faithfully,

Signatures of contractor or
_____ officer authorized to sign the contract documents
on behalf of the contractor
(company stamp)
Date: _____

Place: _____

Annexure – “I”

Following details are provided to enable bidders to generate and submit an e-Bank Guarantee (e-BG) against Earnest Money Deposit (EMD)/Security Deposit (SD) /Performance bank Guarantee (PBG) in the NeSL portal via issuing bank.

S.No	Field	Description Of Field	Value
1	UIN/PAN	UIN/PAN of the legal entity	NCTGC2517P
2	Name	Name of the legal entity	Materials Management Department Under Western Coalfields Limited
3	Email ID	Email ID of the legal entity	gmmm.wcl@coalindia.in
4	Name of the representative	Representative of the legal entity	VENKATA RAMANA YELAMANCHILI
5	Email ID	Email ID of the representative	gmmm.wcl@coalindia.in
6	Mobile Number	Mobile Number of the representative	8275970180
7	Business Unit Code	Identifier of the department /zones/office	WCL9001700
8	Contract Reference Number	PO reference, Tender Id, Bid No etc	PO Ref/GEMC No/Tender Ref/Bid No /.... etc
9	Relation to Contract	Options are:	Beneficiary
		Debtor/Beneficiary/Creditor	

It is requested to avail the facility of e-Bank Guarantee. This facility is alternate to the paper based Bank Guarantee as financial coverage.