



BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT - TIRUCHIRAPPALLI
Notice Inviting Tender for cryogenic ASU

1802600063

CTC – ASU

Rev. No. 00

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NOTICE INVITING TENDER

Ref. No: 1802600063

Dated: 22.05.2026

To,

THE PROSPECTIVE BIDDERS
(Through Global Tender)

SUBJECT: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project at Bandhabal, Jharsuguda district, Odisha (India)

1. Brief Scope of Work

As ASU is the one of the major system for any gasification project, BHEL is looking for competitive techno commercial offer on an end to end basis from reputed suppliers having proven experience in this field.

The ASU supplier shall be responsible for design, engineering, supply, erection, testing, pre-commissioning, commissioning, trial runs operation, operator training, demonstration of guarantees, supply of spares, operation & maintenance as well as handing over, all on turnkey basis as required & complete in all respect.

This tender covers the requirement of Design, Engineering, Manufacturing, Assembling, Inspection, testing at manufacturer's works and Delivery of properly packed and painted ASU with all accessories as specified in the scope of work and as required for the safe and trouble-free operation of equipment to be installed at site.

2. Salient features of bidding document

A.	TENDER (NIT) NO.	1802600063
B.	TYPE OF BIDDING	TWO PART BIDDING
C.	TYPE OF TENDER	GLOBAL TENDER
	MODE OF SUBMISSION	E-TENDER, THROUGH NIC PORTAL
D.	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	FOR INDIAN BIDDERS: INR 300 Lakhs /- FOR FOREIGN BIDDERS: US\$ 310463



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E.	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	NIC Portal (https://eprocurebhel.co.in/)	
F.	LAST DATE OF RECEIPT OF BIDDER'S QUERIES	02.06.2026	
G.	DATE, TIME & VENUE OF PRE-BID MEETING	03.06.2026, 10:00 Hrs. (IST) through video conference, Link as below	
https://bhel.webex.com/bhel/j.php?MTID=m09e132e5020b3f2f2afd6e92e94daa93			
H.	BID SUBMISSION START DATE & TIME (in CPP Portal)	10.06.2026, 10:00Hrs (IST)	
	DUE DATE & TIME FOR BID SUBMISSION (in CPP Portal)	20.06.2026, 12:00 Hrs. (IST)	
I.	DATE AND TIME PART-I BID OPENING	20.06.2026 at 16:00 Hrs. (IST)	
J.	COMPLETION PERIOD / OPERATION & MAINTENANCE (O&M) PERIOD	Mechanical Completion	21 Months from Effective Date of Contract
		Preliminary Acceptance	24 Months from Effective Date of Contract
K.	Address for Communication:	R SrijaMole, Manager, MM/BOI, Email: srija@bhel.in Phone: 0431-2577872/7598369940 E Venkatesh, SDGM/MM/BOI, Email: evenkat@bhel.in Phone: 0431-2577042/9442503007	

PRE-QUALIFICATION CRITERIA (PQC)

Any bidder, who meets the PRE-QUALIFICATION CRITERIA (PQC) enclosed as Annexure-PQC and wishes to quote against this Tender and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Due Date & Time of Bid Submission.

Bid(s) received from bidders shall be taken into consideration for evaluation & award provided that the Bidder is found responsive subject to provisions contained in PQC and the tender document.



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The Tender Document calls for offers on single point responsibility basis and in total compliance of Scope of Works as specified in Tender Document.

Any revision, clarification, corrigendum, time extension, etc. to this Tender Document will be hosted on the NIC Portal (<https://eprocurebhel.co.in/>). Bidders are requested to visit the website regularly to keep themselves updated.

The bidder shall submit the bid online through NIC Portal (<https://eprocurebhel.co.in/>). Bids complete in all respects should be uploaded in the NIC portal on or before the Bid Due Date and time mentioned in at Sl. No. 2.0 (H) above. Bids through Post/ Fax / E-mail /CD/ any other mode will not be accepted.

BHEL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

3. TECHNICAL SPECIFICATION:

- Technical Specification for Cryogenic Air Separation Unit (ASU) (Doc no: TCG -007 ASU)
- Annexures- TD to Technical Specification
- Annexure F: Instrumentation & Control System Philosophy
- Annexure C- Datasheet - Air Separation Unit
- Annexure G- Scope Matrix between BHEL and ASU vendor
- Annexure MSP
- ANNEXURE J – COOLING WATER REQUIREMENTS
- Plot plan with boundary limits and terminal point details
- Cooling water analysis

4. COMMERCIAL TERMS:

Commercial terms are covered in the below mentioned documents:

- Commercial Terms (Part-I)
- Commercial Terms (Part-II)
- Definition of Terms and Interpretation

This is not an Order.

Thanking You,

For & on behalf of

BHEL, Trichy

(R SrijaMole)

Manager (MM/BOI)

BHEL, Trichy.



BHARAT HEAVY ELECTRICALS LIMITED
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Pre-Qualification Criteria (PQC) for cryogenic ASU

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ANNEXURE A – PQC

1. Technical Criteria

- a. The prospective BIDDER must be an Original Equipment Manufacturer (OEM) possessing proven technology for Air Separation Unit (ASU) with Design, Engineering, Manufacturing & testing capabilities and the OEM should have been executed at least one ASU project.

Offers from authorized vendor/representative of OEM is also acceptable. However, the above said condition shall apply for the OEM. Such vendor/representative of OEM shall submit the below mentioned documents.

- I) Authorization letter indicating the division of work and undertaking for the guarantee of offered system from the OEM
- II) Business dealing Agreement
- III) At least one ASU project should have been executed under the OEM supply.

- b. The prospective BIDDER should be able to provide non-infringing technology solutions.
- c. The prospective BIDDER should have designed and installed cryogenic ASU plant of either 1000TPD oxygen capacity or 1500 TPD Nitrogen capacity in the last 10 years. The ASU supplied should be operational/ should have operated successfully for a minimum period of two years for the said capacity with a minimum availability of 98%. The referred plant should have been executed on Lump Sum Turnkey/Licensing, Engineering, Procurement and Construction/ Engineering, Procurement and Construction (LSTK/LEPC/EPC) basis. BIDDER must submit necessary documents indicating the capacity and availability from the end customer as a proof.

2. Financial Criteria

- a. Indigenous suppliers shall submit copies of annual reports (balance sheets), profit & Loss Statement for the last three years (or from date of incorporation whichever is less) and GST Certificate.
- b. Import suppliers shall submit latest audited report from any reputed third party business rating agency like D&B report / credit reform etc.
- c. OEM Supplier shall have Average Minimum Turnover of 200 Cr for last 3 years. The authorized Indian vendor / representative of OEM shall have Average Minimum Turnover of 50 Cr for the last 3 years.



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2.1 For verification purpose all submitted documents shall be self-attested and stamped by the BIDDER.

2.2 Work/purchase order copies as well as documentary proof for capacity and availability certificate must be from the end user/customer of the gaseous oxygen/oxygen & nitrogen plant. In case of foreign plant references, the documents must be in English language or a certified translated copy of the same in English language is to be enclosed. The name and contact details with email ID of the designated official at the end user/ customer side is to be furnished.

2.3 Indigenous supplier should submit audited copies of annual reports (Balance Sheet, Profit & Loss statement) for the last 3 years or from the date of incorporation whichever is less and GST certificate. Foreign supplier should submit the latest reports from reputed third party business rating agencies like Dun & Bradstreet, Credit reform etc.

2.4 All documents in support of Technical and Financial PQC furnished by the BIDDERS shall be verified and certified by any of the below mentioned independent third party inspection agency or their Indian subsidiaries. All charges of the Third party for verification and certification shall be borne by the BIDDER. However, the PURCHASER reserves the right to accept/reject the documents furnished.

- a. Société Générale de Surveillance(SGS)
- b. Gulf Lloyds Industrial Services (India) Pvt. Ltd.(GLISPL)
- c. International Certification Services(ICS)
- d. Bureau Veritas
- e. DNVGL
- f. TUV Rheinland
- g. TUV SUD
- h. TUV Nord Group
- i. Intertek India Pvt. Ltd.
- j. Moody International
- k. RINA India Pvt. Ltd.
- l. Competent Inspectorate and Consultants LLP
- m. ABS Industrial Verification (India) Pvt. Ltd.
- n. KBS Certification Services Ltd.
- o. Carbon Check India Pvt. Ltd.
- p. Lloyd's Register
- q. RITES

Note:

1. PURCHASER reserves the right to verify the information provided through suitable means viz. e-mail, telephonically, video calling or visit of PURCHASER team as per discretion of PURCHASER. Supplier shall also agree to facilitate the visit of PURCHASER team to his



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customer's premises, if considered necessary by PURCHASER. Travel, boarding and lodging expenditure for such visits shall be borne by PURCHASER.



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Technical Specification
for
Cryogenic Air Separation Unit (ASU)
for the proposed
Coal to Ammonium Nitrate (2000 TPD) Project
at
Bandhabal, Jharsuguda district, Odisha (India)



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1.0 INTRODUCTION

BHEL is pursuing the business in coal gasification through its in-house developed pressurized fluidized bed gasification (PFBG) technology for “Coal-to-Chemicals” applications. The synthesis gas produced from the coal gasifier will be used as a precursor for manufacturing value added products like methanol, ammonia/hydrogen etc.

As ASU is the one of the major system for any gasification project, PURCHASER is looking for competitive techno commercial offer on an end to end basis from reputed suppliers having proven experience in this field.

2.0 INTENT OF SPECIFICATION

The intent of this specification is to elaborate the scope of ASU supplier for the proposed Coal to Ammonium Nitrate (2000TPD) Project. The ASU supplier shall be responsible for design, engineering, supply, erection, testing, pre-commissioning, commissioning, trial runs operation, operator training, demonstration of performance guarantees, supply of spares and handing over, all on turnkey basis as required & complete in all respect. This specification specifies the requirement of Design, Engineering, Manufacturing, Assembling, Inspection, testing at manufacturer’s works and Delivery of properly packed and painted ASU with all accessories as specified in the scope of work and as required for the safe and trouble-free operation of equipment to be installed at site.

3.0 DESCRIPTION OF PRODUCT/SYSTEM REQUIREMENT

3.1 Brief of the system requirement

ASU based on cryogenic process cycle consisting of main air compressor, precooling, purification, booster air compressor and rectification columns. The process to include internal compression for the required oxygen and nitrogen products and external compression, if required. Supplier shall use the state of the art technology with greatest energy efficiency so as to reduce the power consumption to a minimum. Final process cycle adopted must minimize capital cost, minimize energy usage, maximize product recovery, and allow maximum operating flexibility. The required ASU to be designed considering plant life of 25 years.

The air separation process should include below major steps: -

- Compression
- Pre cooling
- Purification
- Cooling to liquid air temperature
- Separation into components by low temperature distillation
- Re-warming of Separated components
- Storage
- Vaporization



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The ASU should comprise the following main equipment groups:

- a. Main Air Compressor (MAC) for compressing the required air flow to the required process pressure in the rectification system.
- b. Inlet silencers and fresh air filters shall be provided at the suction of the compressor. The filter construction shall have suitable provision to prevent water ingress into filter/silencer due to rains and also provide a bird screen.
- c. Air Precooling System for cooling the air from MAC
- d. Molecular Sieve Station (Air Purification Unit) for water, CO₂ and hydrocarbon removal to make the air suitable for cryogenic air separation plant. This will be a two train system, one will be under adsorption and another will be under regeneration.
- e. Booster air compressor for compressing the air further
- f. The main air compressor and booster air compressor to be driven through condensing type steam turbine.
- g. Suitable air filtration unit to arrest dust up to 5 microns with 99% efficiency.
- h. Moisture Separator to be provided to remove max. free moisture from the cooled air.
- i. Cold Boxes containing all cryogenic equipment and heat exchangers for cooling. The inside of the cold box shall be sufficiently insulated to prevent ingress of heat. The cold box shall be internally provided with ladders, platforms and access doors at various levels for accessibility for maintenance. Bidder to specify number of exchangers and its various locations inside the cold box along with its specification
- j. Suitable access doors for maintenance of the equipment inside the cold box shall be provided. All valves requiring manual operation shall have handles outside the cold box.
- k. Rectification columns for the separation of oxygen and nitrogen. The trays/structural packing provided inside the column shall be suitable for efficient separation of product gas/liquid & to achieve the required purity in the entire turndown range.
- l. The column shall be equipped with all necessary instrumentation and control for level, liquid transfers, pressure differential, temperature indication etc.
- m. Expansion Turbine for providing the required cold of the cryogenic process. Suitable access doors shall be provided for expansion turbine
- n. Back-up system for Oxygen and Nitrogen consisting of storage tanks, pumps and vaporizers, LIN tanker filling pump
- o. Suitable handling equipment

Note: The above listed equipment groups are not exhaustive and other items/ systems required for the efficient functioning of the ASU and meeting the desired end product requirements are also to be included in the techno commercial offer and supplied.



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3.2. End Product Requirements (Continuous)

Product		Quantity (in TPD)	Quantity (in Nm ³ /hr)	Purity (in vol%)	ASU Terminal Point Pressure (in Kg/cm ² (g))
Gaseous Oxygen	Normal	1090	31800	≥ 99.6	33
	Design	1200	35000		
LP Gaseous Nitrogen	Normal	810	27000	> 99.99 < 5 ppm O ₂ < 50 ppm Ar	10
	Design	891	29700		
MP Gaseous Nitrogen	Normal	1030	34300		36
	Design	1135	37800		

NOTE:

1. Turndown requirement for the ASU is 50% of normal flow.
2. Compressors are to be steam turbine driven (Condensing type turbine) with steam parameters – **40 kg/cm²(g) and 380°C**
3. **Minimum 98%** plant availability to be ensured
4. Parameters for gaseous O₂/N₂ production to be demonstrated under normal as well as design mode of operation

3.3 Back-up system

Product	Quantity (in TPD)	Pressure (in Kg/cm ² (g))	Remarks
Liquid Oxygen	30	Suitable for transfer to storage tank. Required liquid Nitrogen/Oxygen transfer pumps to be supplied	Storage tank capacity indicated below
Liquid Nitrogen	40		

NOTE: Back-up system parameters shall be demonstrated under the normal as well as design mode of operation.

3.3.1 Vaporizers and Pumps for Back-Up

	Pumps & Vaporizers	
	Capacity (in Nm ³ /hr)	ASU Terminal Point Pressure (in Kg/cm ² (g))
Liquid Oxygen	31800	33
Liquid Nitrogen	34300	36



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3.4 Storage Tank details

Product	Storage Capacity in Tons
Liquid Oxygen	1200
Liquid Nitrogen	1600

4. GENERAL REQUIREMENTS OF VARIOUS SUB-SYSTEMS (NOT EXHAUSTIVE)

- a. The plant shall be designed to operate in the specified capacity range with optimum energy consumption. This shall be achieved by automatic capacity control with manual over ride facilities. Venting of air or product shall not be resorted to up to specified turndown operation of the plant.
- b. Adequate redundancy to be considered for all necessary equipment for continuous operation of the ASU Plant with availability of more than 98%.
- c. Supplier is advised to visit and examine the site conditions including Air Quality and obtain for itself on its own responsibility all information that may be necessary for preparing the technical bid. Claims of any kind due to variation or ignorance of site conditions and environmental conditions will not be eligible in any circumstances.
- d. Since the ASU is to be installed in an ammonia manufacturing facility, suitable material of construction and machineries may have to be considered, as there may be possibility of ammonia traces in the ambient air.

The expected ground level concentration of ammonia in the atmospheric air of plant area shall be about 25 mg/Nm³ (TLV for 8 hrs working)

- e. All couplings, gears and exposed rotating parts shall be provided with adequate guards. Drive belts, if any, shall be anti-static type.
- f. Each machinery module shall have its own local panel, as applicable.
- g. The compressors and refrigeration unit shall be housed in a suitable building with material handling facilities. Compressor shed/ building shall have suitable material handling facilities (EOT crane of adequate capacity) for maintenance.
- h. All pumps (except backup system pumps) are to be designed for 2 x 100% capacity (1 working + 1 standby)
- i. Condensate from ASU should be terminated at the ASU terminal point at 8 kg/cm²(g)
- j. Turndown requirement is not to be demonstrated by the way of storing excess production in storage tanks.

4.1 Refrigeration Unit

- a. The refrigeration unit shall have fully automatic operation. The turn down of the unit shall synchronize with the air separation unit turn down.
- b. The refrigeration unit shall be designed as per applicable International Standards



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- c. The refrigeration compressor shall be reciprocating /centrifugal/ screw type depending upon the operating condition/duty requirements.
- d. The refrigeration unit shall 1 Working and 1 Standby compressors
- e. The refrigeration plant shall be of independent skid mounted modular construction comprising of condensing unit, evaporator/chiller.
- f. Internal refrigeration unit that generates chilled water with the use of cold from waste nitrogen, to cool the process air is also acceptable. In such a case, all pumps for circulation shall have 100 % installed standby.

4.2 Air Purification Unit

- a. The purification unit shall be twin bed desiccant system of heat-reactivated type. Waste nitrogen gases from cold box may be considered for heat reactivation of the desiccant bed after heat up in reactivation heater.
- b. The desiccant shall be activated alumina and molecular sieve designed to remove moisture, carbon dioxide, hydrocarbons, and other gases/compounds as dictated by process requirements.
- c. The quantities required for activated alumina and molecular sieve shall be calculated based on their respective dynamic adsorption capacities corresponding to inlet air temperature. Over and above this, a 10% margin shall be added to quantity of each adsorbent. Supplier shall ensure desiccant manufacturer's recommendation for dynamic adsorption capacity.
- d. Desiccant shall be supported in the vessel on stainless steel wire mesh adequately supported on carbon steel grid. Filling & discharge nozzles shall be provided on the vessels.
- e. Sizing of vessels shall take into account the attrition of desiccant due to compression, consequent bed inactivity and ageing.
- f. Regeneration heater shall be sized for at least 20% excess heat duty. Heater shall be designed and located so as to enable the servicing of the same without disturbing piping networks.
- g. Heater shall have safety valve and thyristor based temperature control. The heater shall also be provided with safety features to cut off the heater in case of high skin temperature of heating elements and low flow of regeneration gas.
- h. The filtration efficiency of air purification unit shall be 99% for particles size 5 microns & above.
- i. Required gas analysers to measure the impurities in the purified air and moisture analyser to be provided.

4.3 Turbo Expander

- a. Turbo expander shall have variable flow nozzle to account for temperature control & turn down.



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- b. A local panel containing speed indicator, bearing return oil temperature indicator and alarms for over speed, low seal gas pressure etc. shall be provided. Vibration probes shall be provided.
- c. The lube oil system shall comprise of SS oil reservoir of adequate capacity, oil pump (1 Working+ 1 Standby), oil cooler, SS piping, duplex filters, oil pressure and return oil temperature gauge, pre-alarm and trip for low oil pressure.
- d. A warehouse spare rotor assembly for the turbo expander shall be considered under the list of spares. The expansion turbine shall be housed adjacent to the cold box and expeditious replacement of the rotor shall be possible.

4.4 Distillation Column(s)

- a. Number of columns, their sizes and sizing of condenser re-boiler with respect to the required product mix shall be based on proven proprietary design of the supplier.
- b. The column shall have adequate no. of trays or packing designed to achieve the specified purity and turndown.
- c. The material of the column shell and internals shall be austenitic SS or Aluminium alloy. The material of construction of condenser re-boiler shall be Aluminium alloy
- d. Supporting arrangement of bottom column shall be adequately designed to reduce transfer of cold from column.

4.5 Cold Box

- a. Cold box consisting of main exchanger, distillation column, condenser reboiler, expansion turbine shall be supplied as a single unit.
- b. The material for piping inside the cold box shall be austenitic SS or Aluminium alloy. For trays and plate fin exchangers, Aluminium alloy material shall be used.
- c. Cold box shall be maintained at slight positive pressure by continuous purging of dry nitrogen. Cold box shall be insulated from inside, with expanded perlite. Cold box structure, outer skin shall be of carbon steel construction.
- d. Adequate access in the form of tight shut doors, ladders, platforms etc. shall be provided outside the cold box.
- e. All valves requiring manual operation shall have their hand wheels brought out of cold box with proper identification.
- f. Similarly, all indicating instruments shall have their indicating dial brought out of the cold box.
- g. All controls, control valves and other equipment requiring periodic maintenance shall have adequate access for the same.
- h. The skin temperature of the cold box cladding shall not go below 5 °C less than ambient temperature.



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- i. The various liquid drains from the cold box shall vented at adequate height where the liquids are vaporized by means of dry air. Vent piping shall be of SS.

4.6 Vaporizers

- a. Vaporiser shall have temperature controlled shutdown valve to guard against accidental flow of liquid to gas outlet.
- b. Suitable Steam bath vaporiser tank shall be provided.

4.7 Liquid Storage Tanks

- a. Double wall tank shall be designed to ensure that Evaporation loss is not more than 0.35%.
- b. The tanks shall be double wall construction type, constructed of austenitic SS inner shell contained within a carbon steel outer shell. The space between the shells shall be filled with non-inflammable insulation (perlite powder) material and maintained under vacuum.
- c. The storage tank shall be complete with all accessories, auxiliaries (e.g., pressurisation coil etc.) and safety features including double safety valves etc.
- d. Facility for liquid nitrogen injection from storage tank to distillation column shall be provided.
- e. Also facility for loading and unloading of liquid into or from a road tanker (for liquid nitrogen) shall be provided.
- f. Storage tanks shall have level transmitters with alarms, pressure gauge, temperature gauge, vacuum gauge for annular space vacuum measurement, as a minimum.
- g. The tank shall fully meet the statutory requirement of the Chief Controller of Explosives (CCOE)/Petroleum Explosive Safety Organisation (PESO)/ Static and Mobile Pressure Vessels (SMPV), Govt. of India.

4.8 Deriming Heater

- a. The deriming heater shall be electrically operated & shall have adequate safety & control instrumentation.

4.9 Instrumentation & Controls

Instrumentation



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- a. Instrumentation for the ASU Plant is to provide a highly reliable and comprehensive control and monitoring system. To facilitate these, well proven techniques shall be adopted for measurement and control
- b. All instruments and equipment shall be suitable for use for specified site climatic conditions and industrial environment in which corrosive gases and/or chemicals may be present. As a minimum, all instruments and enclosures in field shall be dust proof and weatherproof to IP-65 as per IEC-60529 or equivalent NEMA 4X enclosure rating or better and secure against the ingress of fumes, dampness, insects and vermin. All external surfaces shall be suitably treated to provide protection against corrosive plant atmosphere with HART protocol
- c. All electrical/electronic instruments used in hazardous area shall have statutory certification from the country of origin. Additionally, these instruments shall be certified by CCE/PESO/ATEX as applicable.
- d. Irrespective of area classification, the execution of instrumentation shall be as per area Zone 2, group IIC, T6, EExia. EMC compatibility and electrical safety as per latest IEC standard.
- e. Electrical instrument equipment shall be designed for and supplied as intrinsic safe certified. Analysers, Gas detectors, solenoid valves and other equipment that cannot be classified intrinsic safe shall be ex-proof. Certification for installation in hazardous areas shall be in accordance with IEC 60079 series.
- f. All instrumentation shall be subject to SIL Assessment based on SIF categorization. The implementation of SIL requirements shall be in accordance with IEC 61508 & 61511. Irrespective of licensor recommendation and area classification, SIL & HAZOP Study (SIL assessment study, validation/verification) has to be done and recommendations to be implemented without any cost implications. All Smart Positioners, Transmitters, Gas Detectors shall be SIL 2 certified and all Partial Stroke Testing (PST), Solenoids & Relays shall be implemented by SIL3 mechanism.
- g. Valves specified for "Oxygen Service" shall be cleaned, labelled and packaged in accordance with CGA G-4.1 or equivalent. All metals in contact with oxygen in the main flow stream should be of appropriate materials suitable for the given oxygen service. Non-metals materials shall be avoided for use in valve seats or other parts exposed to the flow stream.
- h. Pressure, temperature & flow of each battery limit interfaces to be measured within the ASU battery limit.

Control system

- a. The control system shall be a modern Digital Distributed Control System (DCS) located in the Control Room. The system shall be reliable, fault tolerant and build up in modules from the suppliers' standard components and software. The system shall have facilities for plant control monitoring and alarm handling. It shall be self-diagnostic, self-documenting and contain all the functions necessary for advanced regulatory control



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- b. In order to increase the system availability and the continuity of plant operation, 100% fault tolerance and dual redundancy in Controller, all communication cards and buses, all control buses, all type of common cards in the system, all power supply modules, all I/O modules for closed loops and interlock I/Os, buses, Ethernet modules shall be provided. The failure of any single I/O module for open loop shall not affect more than the channels being catered by that particular I/O card. Dual redundant power supply modules for each dual redundant controller shall be considered.
- c. All the system hardware of DCS shall have ISA G3 level corrosion protection. All the hardware including control/communication processors, networks, cables, all type of system cards, all type of I/O cards shall be hot replaceable.
- d. Systems shall be designed with 20% installed pre-wired spare capacity for all I/O type cards of each category
- e. Necessary hardware and software shall be provided with the LVS for connectivity to the DCS system. Provision for projecting any of the screen from DCS OS/ES to screen of LVS shall be provided
- f. Interfacing of ASU unit DCS with Main plant control system for critical data exchange (parameters & commands required for data exchange shall be informed during detail engineering phase) for monitoring only. Necessary hardware for interfacing to be provided in control system.
- g. Emergency shutdown System shall be with a very high degree of reliability, SIL-3, TUV certified microprocessor based programmable logic control (PLC) with fault tolerant redundant processors based on TMR or better technology.

4.10 Electrical Equipment

- a. Bidder shall design, engineer, supply, install, test and commission an independent and fully self-contained Electrical Substation and electrical power distribution system within the ASU battery limits. This system shall include, but not be limited to, incoming feeders, distribution switchgear, MCCs, transformers, UPS systems, DC systems, cabling, grounding/earthing systems and all associated protection, monitoring and control facilities. The electrical distribution system shall be capable of meeting the continuous, reliable and energy-efficient operation of all ASU process units and auxiliary systems, and shall be fully segregated from the Owner's facility except at the defined interface points
- b. To ensure high plant availability and uninterrupted operation of ASU Plant, Bidder shall design and implement a double radial electrical power distribution system within their battery limit. Auto Transfer Scheme (ATS) logic shall be provided between both the incomers and bus-coupler to enable seamless switching between feeders in the event of upstream disturbances. This distribution philosophy is mandatory and shall be fully reflected in bidder's system studies, equipment sizing and electrical design packages.
- c. The design, engineering, installation, testing and commissioning of all electrical and associated systems shall be carried out in accordance with applicable statutory regulations, established codes, relevant standards and recognized good engineering practices. Bidder shall be fully responsible for obtaining all necessary approvals,



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clearances, licenses and inspections from the statutory authorities such as Central Electricity Authority (CEA), Electrical inspectorate, Chief Controller of explosives (CCoE)/PESO and any other authority as applicable prior to commissioning of electrical facilities.

- d. 'Emergency' or 'essential' loads shall be identified on the criteria that, when failing in operation or when failing if called upon, will affect the continuity of operation, the quality or the quantity of product. For such loads, reliable source shall be ensured. Such feeders shall be grouped on a separate bus section in the respective Switchboards/ MCCs / PCCs.
- e. For HV transformer 10% design margin on continuous loads to be considered and for LV transformer 20% design margin on continuous loads to be considered.
- f. 11kV & 3.3 kV Switchboard shall conform to IS/IEC 62271-200, IAC-A FLR-40KA/31.5KA, 1 Sec, PM, LSC 2B which means that the switchgear panels shall be four side internal arc tested, shall have metal partitions and shall confirm to loss of service continuity. LV switchboard shall conform to IEC 60947.
- g. All HV, MV & LV Switchboards shall be LOTO compliance.
- h. LV switchboard (EPMCC/PMCC/MCC) shall be TOTAL TYPE TESTED (TTA) design as per IEC 61439-1/2 and comply with Internal Arc Containment test as per IEC 61641. Type Test certificates for short circuit withstand of 50kA for 1 sec along with ACB mounted in the Switchboards shall be provided.
- i. The bus bars and connection shall be made of electrolytic grade copper / Aluminium. All bus bars of 11kV & 3.3kV switchgear including bus duct shall have Raychem sleeving suitable for Line to line voltage. Proper shroud to be provided in the joints.
- j. The HV switch boards and power control centres shall have sufficient number of spare feeders to the extent of 20% or 1 No., whichever is higher for each type & rating.
- k. For other boards (PMCCs, MCCs, MLDBs, ASPBs, DCDBs etc.) sufficient number of spare feeders to the extent of 20% or 1 No., whichever is higher, for each type & rating shall be provided.
- l. All HV & LV Switchgear, UPS, Battery Charger etc. shall have Ethernet/Network Switches and other communication equipment.
- m. Continuous duty LT motors shall be Efficiency class-IE3, conforming to IS 12615 or IEC:60034-30. Motors and LPB located in hazardous areas shall have flame proof enclosures conforming to IS:2148.
- n. Motors of rating above 30 kW shall be provided with space heater. Ammeter shall be provided on the panel for the space heater circuit.
- o. Cables shall be sized considering Maximum continuous load current, Voltage drop, System voltage, laying conditions and Short circuit withstand criteria for HT cables
- p. All power, control, data, signal cables shall be FRLS PVC outer sheath.
- q. All LV power cables shall be with stranded aluminium/copper conductor with XLPE insulation, PVC inner sheathed FRLS type, armoured, PVC outer sheathed FRLS type and construction as per IS: 7098 (Part 1). Power cables with conductor size up to and



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including 16 sq. mm shall be with copper conductor, conductor size 35 sq. mm and above shall be aluminium conductor.

- r. All control cables shall be with 2.5 sq. mm, stranded copper conductor with XLPE insulation, PVC inner sheathed FRLS type, armoured, PVC outer sheathed FRLS type and construction as per IS: 7098 (Part 1). Control cables shall be twisted pair or shielded wherever electromagnetic/electrostatic interference is anticipated.
- s. All control cables shall have 20 % spare cores. All cores shall be identified with numerical core numbers printed on core instead of colours.
- t. All HT power cables shall be made of stranded aluminium or copper conductor with dry cured XLPE insulation, PVC sheathed armoured, conductor screen, insulation screen and construction as per IS 7098.
- u. All cables shall be armoured and shall have extruded inner and outer sheath. All power and control cables shall be in continuous lengths without any joints.

4.11 Piping

- a. Wherever, liquid nitrogen is in contact with piping, the material of construction of piping shall be austenitic SS.
- b. Piping material class, line designation, insulation thickness etc. shall be clearly shown by the Supplier in the Piping & Instrumentation drawing (P&ID).

4.12 Protection and Painting

- a. Surface preparation and painting shall be done as per approved painting scheme.
- b. Stainless steel surfaces, both inside and outside, shall be pickled and passivated.
- c. Machined and bearing surfaces shall be protected with varnish or thick coat of grease.

4.13 Packaging and Identification

- a. All packaging shall be done in such a manner as to reduce the volume. The equipment may be dismantled into major components, suitable for shipment and shall be properly packed to provide adequate protection during shipment. All assemblies shall be properly match marked for site erection.
- b. Attachments, spare parts of the equipment and small items shall be packed separately in wooden-cases. Each item shall be appropriately tagged with identification of main equipment, item denomination and reference number of the respective assembly drawing.
- c. Detailed packing list in water-proof envelope shall be inserted in the package together with equipment.
- d. Each equipment shall have an identification plate giving salient equipment data, make, year of manufacture, equipment number, name of manufacturer etc.
- e. Supplier shall furnish procedure for prolonged storage of supplied equipment/ material at site



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5. SITE DESCRIPTION & AMBIENT CONDITIONS

Coal for the project will be sourced from Lakhanpur coal mine, which is part of the IB Valley coal mines, owned by M/s Mahanadi Coalfields Limited (a subsidiary of M/s Coal India Limited). The site is located in Lakhanpur, Jharsuguda District, Odisha

Ambient Temperature for		
Design Point	°C	35
Efficiency Guarantee	°C	35
Max / Min	°C	41/ 10
Minimum for winterization avg.	°C	4.0
Relative Humidity for		
Design	%	74
Efficiency Guarantee	%	74
Max / Min.	%	99.5/21
Auxiliary Power Guarantee	%	74
Barometric pressure	bar	0.99
Seismic Load		
Zone		III
Importance Factor		NA
Zone Factor		
Remarks for Seismic Load		As per IS:1893 Part 1 (2002)
Wind Load		As per IS 875 (Part-3)
Wind velocity	m/s	44.0
Risk Co-efficient K1		NA
Terrain Classification		NA
Remarks for Wind Load		As per IS:875 Part 3 (1987)

The available plot area for ASU is 100 x 200 m.

6. CODES, STANDARDS AND REGULATIONS

- a. Design, manufacturing and inspection of the ASU shall be based on international standards accepted in India
- b. OSHA safety regulations, PESO regulations as well as all valid statutory regulations applicable at all stages of project life cycle shall be complied with.
- c. Compliance with all relevant requirements of static and mobile pressure vessel (SMPV) rules of CCOE.
- d. Compliance with applicable national or overseas codes and standards as well as any statutory regulations in existence for a specific item
- e. Ease of operation and maintenance including any necessary measures for ensuring safety of personnel and equipment as well as a conducive working environment. The



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layout of ASU and storage system shall be in accordance with local & statutory regulations and have adequate access for regular operation & maintenance.

- f. The latest edition of following codes and standards shall be adopted for design, engineering for the Air Separation Unit.
- Pressure Vessels -ASME Sec.VIII Div. I & ASME Sec.IX
 - Heat Exchangers -TEMA 'C' and ASME Sec.VIII
 - Air cooled exchanger -ASME Sec.VIII Div.I, API 661
 - Piping, valves, fittings -ANSI.B 31.3, ANSI-B 16.5
 - Centrifugal Air compressor - API 617
 - Main Heat Exchanger (with Cold Box) - ALPEMA/Other Equivalent Standard

Note:

1. Supplier shall ensure compliance with all Central, State & Local Govt. regulations, laws and requirements applicable to the work and seek & obtain approvals/ clearances from such statutory bodies/ agencies, as required. Purchaser's role will be limited to only providing authorization in favour of supplier for which all the necessary paper work will be done by supplier.

2. In case the bidder intends to use other equivalent Design Code for pressure vessel design, the verification strength design calculation as per ASME Section VIII Div. I shall be submitted in support of selected thicknesses of various pressure parts.

3. In the event of any conflict between this specification, data sheets, statutory regulations, related standards, codes etc., the following order of priority shall govern:

- a) Statutory Regulations*
- b) Data Sheets*
- c) Standard Specification*
- d) Codes and Standards*

7. SAFETY

- a. All safety features comprising of interlocks, alarms, trips etc. shall be incorporated in the composite plant, its accessories and auxiliaries.
- b. The layout of the plant shall facilitate easy and adequate accessibility to all operating and regular maintenance areas.
- c. The layout of the plant and storage system shall be in accordance with statutory regulations and approved by Chief Controller of Explosives (CCOE)/Petroleum Explosive Safety Organisation (PESO) /Static and Mobile Pressure Vessels (SMPV), Govt. of India.
- d. Silencers shall be provided wherever air or gas venting is involved to minimise noise level to 85 dBA.
- e. All PSV outlets shall be routed to safe location.
- f. Plant piping shall be routed and supported on elevated pipe rack.



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- g. All valves and instruments shall be accessible

8. INSPECTION AND TESTING

- a. Equipment shall be subjected to stage wise expediting, inspection and testing at supplier's/sub supplier's works by Purchaser/its authorized inspection agency.
- b. Supplier shall perform tests and inspection necessary to ensure that the material and workmanship conform to the requirement of this specification.
- c. The AIR SEPARATION UNIT equipment shall, on its completion and before being placed in service, be subjected to inspection by purchaser's inspector or purchaser nominated inspection authority during manufacturing/testing stages, to determine that the assembly conforms to applicable requirements.
- d. All test certificates shall be furnished for purchaser's reference and records.
- e. All the pressure vessels shall be hydrostatically tested and inspected as per applicable codes and standards. The total skid shall be hydro tested or pneumatically tested at applicable pressure. Any other tests as per data sheets, standards and codes shall also be performed.
- f. Certified copies of all statutory/Third party inspection authorities shall be furnished to Purchaser's authorized representative.
- g. Inspection requirements of different components shall be as listed in respective specification/data sheets.
- h. Material test certificates are subject to review by Purchaser's authorized representative.
- i. The control panels shall be simulation tested at works prior to dispatch.
- j. Plant instruments shall be duly calibrated.
- k. Any or all the tests, at Purchaser's option, shall be witnessed by Purchaser/its authorised inspection agency. However, such inspection shall be regarded as check-up and shall in no way absolve the supplier of his responsibility.
- l. All inspection certificates shall be furnished for purchaser's reference and records.



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9. UTILITY REQUIREMENT

Utility	Flow (To be provided by supplier for normal mode oprn)	Supply Pressure (in Kg/cm ² (g))	Supply Temp (in °C)	Remarks
Cooling Water (m ³ /hr)	*	4.5	34	Maximum allowable non consumptive cooling water will be 12500 M ³ /hr. (single terminal point at FGL) Pressure drop across supply/return terminal point shall be 1.5 Kg/sq.cm Permissible temperature rise across supply/return terminal point is 10°C
Steam (Tons/hr)	*	40	380	Steam turbine inlet flange parameters, for steam driven compressors Max allowable steam consumption shall be 135 TPH
LP Steam (Tons/hr)	**	4	180	For vaporizer
Instrument air (m ³ /hr)	**	6	34	For Start-up and Performance test
Seal gas (m ³ /hr)	**			Dry gas seal to be considered instead of conventional liquid seals. Seal gas to be mentioned.
Other	**			Any other utility requirement to be indicated

Note:

* Values to be indicated under-price bid

** Values to be indicated in Annexure TD

10. POWER SUPPLY REQUIREMENT

Supplier to indicate the total power requirement mentioning the required infrastructure.

Design Basis	Power	Emergency Power Supply (If required)
No of Line feeder intake	1+1	1
Nominal voltage	11 kV ± 10%, 3Ph, 3 W	415 V, 3 Phase AC
Frequency	50Hz ± 5%,	50 Hz



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The voltage level for motors shall be as follows:

- a) Upto 0.2 KW: Single phase 240V AC / 3 phase 415V AC
- b) Above 0.2 KW and upto 150 KW: 3 phase, 415V AC
- c) Above 150 KW and upto 1000 KW: 3 phase, 3.3 kV AC
- d) Above 1000 KW: 11 kV

11. SCOPE OF SUPPLY/ SERVICES

- D1. Design
- D2. Detailed engineering
- D3. Preparation and submission of drawings and documents for all equipment
- D4. Data for civil foundation design
- D5. Design data for earthing and lighting
- D6. Participation in HAZOP & SIL review
- D7. Procurement of raw materials and bought out components.
- D8. Manufacture, fabrication and assembly
- Q1. Quality plan and inspection schedule
- Q2. Quality control including NDT
- Q3. Inspection and testing including reports and certificates
- Q4. Surface preparation, protective coating and painting including supply of paint
- S1. All required machineries, equipment, pumps, valves, piping, tools and spares for erection and commissioning
- S2. Complete Electrical for ASU portion – Transformers, HT Switchgears, LT switchgears, Emergency switch gear, Motors, actuators, Power distribution board, Push button boxes, Power and control cables, Cable trays, Above and below ground earthing, Illumination, Lightning protection etc.
- S3. Electrical, control system and Instrumentation (including all required analysers) work as per standards. All electrical components & installations, instruments shall be suitable for the electrical area classification and grouping in which the equipment is installed
- S4. MV Motors for compressors, if applicable
- S5. VVVF Converters for VSDs for cryogenic pumps
- S6. Complete control system for ASU portion - Distributed Control System/PLC, Emergency Shut down system(ESD), Engg. Station (HMI), Server, Printers, LVS, Clock, SOE, Historian, furniture etc.,
- S7. Complete Instrumentation for ASU portion – Field instruments (local gauges and remote transmitters), flow elements. Analysers, Vibration monitoring system, Junction boxes, Instrument racks, Instrument enclosures, Leak detectors, hook up materials etc.
- S8. Cabling of all instrumentation equipment up to junction box and junction box to PLC/DCS.
- S9. Power supply for ASU portion - Uninterrupted power supply system, 24 V DC battery/battery charger system and distribution board, 220 V DC battery/battery charger system and distribution boards



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- S10. All Cables (Power, Control & Instrumentation) in ASU
S11. Pneumatic supply and distribution in ASU
S12. Laboratory instruments/equipment required for ASU
S13. Elevators required for ASU island, if applicable
S11. All control and on/off valves for ASU
S12. Silencers, insulation, inter connecting piping, valves, safety valves, fittings, nuts & bolts, gaskets, pipe supports, ladder and platform etc.
S13. Thermal and noise insulation
S14. All required analytical equipment for safe operation and product control
S15. Catalyst, adsorbent, consumables for 2 years trouble free operation, in addition to the initial fill
L1. Packing & Transportation
L2. Transit insurance
L3. Receipt, Unloading, Storage, Handling
C1. Erection, Pre-commissioning and commissioning of complete system
C2. Construction insurance until handover
C3. Heavy lifting of mechanical equipment including provision of cranes and required scaffolding for erection requirement
C4. EOT Crane of suitable capacity for material handling System-Crane capacity
C5. Compressor shed
C6. Structural works
C7. All piping work and installation including pipe racks and supports
C8. Obtaining all statutory clearances, permits and approvals from local & statutory bodies for the construction and operation of ASU (excludes project related approvals)
C9. Performance guarantee test run at site of complete package
C10. Ensuring emission norms and safety
C11. Filling up of oils & lubricants, desiccants, chemicals, refrigerants etc.
O1. Provide full-fledged training for owner's Engineers

12. EXCLUSIONS

- Required civil work such as foundations, roads, geotechnical investigation/ soil report, initial site preparation, land refilling, piling, and fencing etc.
- ASU Control room
- Any equipment, piping, cabling - outside ASU area/ battery limits
- System for steam supply
- Complete cooling water re-cooling system (cooling tower, cycle pumps, water treatment, filtration etc.)
- Supply of utilities during construction phase will be made available on chargeable basis
- HT & LT Cable required outside ASU B/L.
- Cable trays / trench required outside ASU B/L.
- Cable between the Main plant DCS to ASU MCC panel & Main plant DCS to ASU PLC/DCS.
- DG set/ HVAC/ FFS/ FDA/ EOT/Water treatment.



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- Construction water and power shall be provided at one point within battery limit on chargeable basis at ₹10.08/m³ (approximately) for construction water and ₹7.02/kwh (approximately). Construction power charges will be inclusive of all demand charges, energy charges, fixed charges, wheeling charges and electricity duty charges. In case of any escalation by statutory authorities in the unit rates of construction water and construction power, during execution of contract, the same shall be borne by the supplier.

Note:

1. *Any other equipment/ packages not enlisted here but are appearing in process package or is within the battery Limits and is required to make the system complete in all respect for its safe and efficient operation is also included in supplier's scope*
2. *Any additional items or feature required, during detail engineering for the completeness and trouble-free performance of the system shall be included in the supplier's scope without any price implications, as long as system performance & technical requirements are kept unchanged.*

13. BATTERY LIMIT INTERFACES (Utilities and power will be provided at terminal point)

- Gaseous O₂ product
- Gaseous N₂ product
- Cooling water
- Steam & other utilities
- Power

14. PERFORMANCE GUARANTEE & TESTING

- A field performance test shall be conducted by the Supplier to demonstrate the guaranteed performance after commissioning in accordance with test procedure and report to be prepared generally in accordance with ASME PTC 47.1:2017.
- The procedure of performance testing shall be submitted for Purchaser's review and shall be mutually agreed between the purchaser and the supplier and the commencement of performance guarantee test shall be mutually agreed.
- The performance testing shall be for a period of 72 hours of continuous operation. Hourly recording of all operating and/or guaranteed parameters shall be carried out, in the presence of purchaser's representative.
- Necessary instruments for the performance testing shall be arranged by the Supplier, and shall be tested and calibrated before undertaking the performance test.
- The turndown operation of the air separation plant shall also be demonstrated after the performance test.



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The following guaranteed parameters (as indicated in sub-clauses 3.2 and 3.3) shall be demonstrated by the supplier during performance test

- a. Gaseous Oxygen – Rated Flow, purity and pressure
- b. Liquid Oxygen – Rated Flow, purity and pressure
- c. Gaseous Nitrogen – Rated Flow, purity and pressure
- d. Liquid Nitrogen – Rated Flow, purity and pressure
- e. Steam Consumption for Turbine driven compressors
- f. Auxiliary power consumption for total plant
- g. Cooling water consumption

15. SPARES REQUIREMENT

In addition to the spares mentioned in the annexure MSP, supplier shall submit the list of recommended spares indicating the itemised price with quantities. The commissioning spares shall be sufficient for trouble free commissioning of the system at site. Any commissioning spares required during commissioning, over and above, the commissioning spares supplied, shall be made available by the supplier without any cost and time implication to purchaser.

16. OPERATOR TRAINING

The objectives of supplier's training program shall be to transfer process technology and develop technical expertise in a core of individuals so that there is a pool of knowledge among Owner's personnel which can be used to operate and maintain complete plant and to give continuous long term training to junior operations and maintenance staff. The basic objective of training shall comprise of following main elements:

16.1 Owner's manpower shall receive sufficient detailed instructions on the plants to enable them to carry out normal operations, to take corrective action in the event of upset conditions, and to set up routine operating and maintenance procedures.

16.2 Owner's manpower shall be able to develop a thorough understanding of the plants and the know-how and processes behind it, be in a position to take positive and corrective action to prevent any upset and breakdown conditions from occurring, and to optimize plants' operations, maintenance and organization.

17.0 QUALITY ASSURANCE AND QUALITY CONTROL

17.1 Quality Control

The supplier must include in the supply a proven quality control and quality assurance system that will ensure the quality of Air Separation Unit. The quality control system must follow ISO 9001 guidelines.



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17.2 Quality assurance

- The supplier shall be responsible for providing the necessary Quality Assurance and Quality Control procedures, maintaining continual surveillance and inspection activities during the entire periods of the Fabrication and Testing.
- Supplier shall submit Quality Assurance (QA) plan and inspection schedule before commencement of fabrication. Approved QA plan shall form the basis for equipment inspection.
- Inspections report and tests to be provided to purchaser during the fabrication period and before shipment of the equipment of ASU.
- Test and inspection reports shall be furnished for at least:
 - a) Material test certificates
 - b) Hydro test certificates
 - c) Statutory Approval certificate

18.0 TECHNICAL DOCUMENTATION (should be provided only in English language)

18.1 Documents to be furnished with the offer

- Process Flow diagram
- Process Description
- Air quality considered for design
- Equipment List mentioning the quantity and make
- Material Selection data
- Piping MOC
- Manufacturer's Catalogue & Brochures
- Experience record
- Plot area requirement
- Drawings - GA drawing; C/S drawing; Layout drawing,
- P&ID
- Performance curves
- List of recommended spares for of trouble-free operation. The list shall include at least the following Information: Manufacturer P/N, description, quantity required.
- List of Erection & Commissioning spares
- List of Special tools & tackles (as per OEM recommendation)
- Details of analyzers
- Basic data for civil design/ foundation details
- Utility Data – Along with water required during construction (m3)



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- Electrical Load Data – Along with HT/LT power required during construction (max rating in kW and total consumption in kW-hr)
- Electrical single line diagram
- Tentative sizing and heat dissipation data for electrical and DCS panels
- List of approvals/ clearances to be obtained from statutory bodies/ agencies with tentative timelines
- Training plan/ schedule indicating the number of man-hours

18.2 Documents to be furnished after award of contract

The following documents shall be provided. Total of two (2) hard copies and one (1) copy on magnetic media (USB memory stick or CD-ROM) shall be provided within sixty (60) days after issue of purchase order.

- Material and Heat Balance
- Equipment layout drawing
- Static equipment datasheet
- Rotating equipment data sheet
- Equipment and piping corrosion allowance
- Pump and compressor drive details
- Hazardous area classification
- Pipeline list mentioning the criticality
- Tie-in list
- Instrument control philosophy
- Instruments datasheet
- Perlite details (as applicable)
- Detailed dimensional general arrangement drawing of the total system with cross sectional details
- Bill of materials and weight of individual parts for purchaser's approval. (Approval does not relieve the supplier from responsibility).
- Design calculations.
- The drawing showing the supporting arrangement on floor including static & dynamic loading details at each support to be submitted for purchaser's approval.
- Building drawings
- Civil Load Data
- List of bought out items & their specifications.
- Test certificates
 - Test certificates shall be furnished before despatch of components. Test certificate for the following shall be furnished.
 - Material test certificate for all the major components.
 - Performance TC for the intended duty conditions.
- Quality Control/Inspection documents generated during the stages of inspection, performance inspection, and final inspection.



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- Quality & Inspection Test Plan
- Warranty certificate shall be furnished by the supplier.
- Operation & Maintenance (O & M) Manual should be submitted to purchaser prior to despatch of the equipment in digital format. The following aspects also to be covered in O & M manual
 - Manufacturer's Catalogue
 - Operation manual.
 - Safety instruction
 - Maintenance manual
 - Repair and overhaul manual
 - Complete and comprehensive parts catalogue (including pictures if applicable) manufacturer P/N and OEM P/N.
- Complete and comprehensive Parts Catalogue Maintenance/repair manuals and parts catalogue for other repairable components if were not included in the ASU O&M manual.
- Grant of Licence and Transfer of Know How



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ANNEXURE C- DATASHEET - AIR SEPARATION UNIT

S.NO	Parameter	Value	Remarks
	ASU Vendor Information		
1	Utility Requirements	Vendor to specify the following details	
a.	Steam (LP, MP)		Flow
b.	Cooling water for compressor and condensor etc.		Flow
c.	Instrument air each equipment		Flow, T, P
d.	Total Electric Load kW		(HT/LT)
e.	Electrical load list		HT, LT, etc
2	Scope of Supply		With clear indication of ASU Vendor & Sub Vendor
3	Battery Limits		
4	Plot Area		Requirement in meters (L * B)
5	Equipment Details		No of Columns, Tanks with approx weight for erection purpose
6	Civil Foundation load		
7	EOT crane		Capacity to be specified



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ANNEXURE – TD

TECHNICAL DETAILS (To be filled/confirmed by supplier)

1.0 PRODUCT GUARANTEE

Product		Quantity (in TPD)	Quantity (in Nm ³ /hr)	Purity (in vol%)	Pressure at ASU terminal point (in Kg/cm ² (g))	Confirmation
Gaseous Oxygen	Normal	1090	31800	≥ 99.6	33	
	Design	1200	35000			
LP Gaseous Nitrogen	Normal	810	27000	> 99.99 < 5 ppm O ₂ < 50 ppm Ar	10	
	Design	891	29700			
MP Gaseous Nitrogen	Normal	1030	34300		36	
	Design	1135	37800			

Note: Both Normal as well as design mode of operation to be demonstrated and guaranteed.

2.0 UTILITY REQUIREMENT (Values to be indicated for the normal mode of operation)

Utility	Value	Supply Pressure (in Kg/cm ² (g))	Supply Temperature (in °C)	Remarks
Low pressure steam (Tons/hr)		4	180	For vaporizer
Instrument air (m ³ /hr)		6	33	For Start-up and Performance test
Seal gas (m ³ /hr)				Dry gas seal to be considered instead of conventional liquid seals. Seal gas to be mentioned.
Emergency backup power (LT), kWh				
Others				Any other utility requirement to be indicated

3.0 UTILITY REQUIREMENT for various steam parameters

	Steam Parameters		
	40 kg/cm ² (g)		
	300 °C	350 °C	380 °C (Guarantee)
Steam Flow in TPH (not to exceed 135 TPH)			To be furnished in price bid only
Cooling Water in m ³ /hr (not to exceed 12500 m ³ /hr)			



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ANNEXURE F: INSTRUMENTATION & CONTROL SYSTEM PHILOSOPHY (GENERAL)

1. Design and installation of instrumentation & controls shall comply with following codes and recommendations

S.No	Standard & Code	Description / Title
1	API RP 520 Parts I & II	Design and Installation of Pressure Relieving Systems in Refineries
2	API Std 526	Flanged Steel Safety Relief Valves
3	API Std 527	Commercial Seat Tightness of Safety Relief Valves with metal-to-metal seats
4	API RP 551	Process Measurement Instrumentation
5	API RP 552	Transmission Systems
6	API RP 553	Refinery Control Valves
7	API RP554	Process Instrumentation & Control
8	API 6D	Specification for pipeline valves
9	API 6FA	Fire Test for Valves
10	API RP 500	Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Division 1, and Division 2
11	API RP 520	Sizing, Selection, and Installation of Pressure Relieving Devices in Refineries, Part I and Part II
12	API RP 521	Guide for Pressure Relief and Depressing Systems
13	API RP 526	Flanged Steel Safety Relief Valves
14	API RP 527	Commercial Seat Tightness of Safety Relief valves with Metal-to-Metal Seats
15	API RP 550	Manual on Installation of Refinery Instruments and Control Systems
16	API RP 551	Process Measurement Instrumentation
17	API RP 552	Transmission Systems
18	API RP 554	Process Instruments and Control
19	API RP 555	Process Analyzers
20	API 598	Valve Inspection and Testing
21	API Standard 2000	Venting Atmospheric and Low-Pressure Storage Tanks: Non-refrigerated and refrigerated.
22	API 1101	Measurement of Petroleum Liquid Hydrocarbons by Positive Displacement Meter
23	API RP 2001	Fire Protection in Refineries
24	API 2534	Measurement of Liquid Hydrocarbons by Turbine Meter Systems
25	ANSI B 2.1	Pipe Threads



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26	ANSI B 16.5	Steel Pipe Flanges, Flanged Valves, and Fittings
27	B 16.10	Face to Face and End to End Dimensions of Ferrous Valves
28	B 16.34	Hydrostatic body and leak testing of isolation valves.
29	B 16.37	Hydrostatic Testing of Control Valves
30	B 16.104	Control Valve Leakage
31	FCI 70.2	Leak Testing of Control Valves
32	ANSI C 96.1	Temperature Measurement Thermocouples
33	ANSI B 1.20.1	Pipe Threads, General Purpose
34	MC 96.1	Temperature Measurement Thermocouples
35	ASME PTC 19.3	Performance Test Code Temperature Measurement
36	ASME Section VIII	Sizing and Selection of Pressure Relief Valves
37	IEC STD 801	Part 3 – EMI and RFI Immunity
38	IEC 60092-373	Shipboard flexible coaxial cables
39	IEC 60092-359	Specification for insulation and sheath of electric cables
40	IEC 60227	Polyvinyl chloride insulated cables of rated voltages up to and including 440/750 V
41	IEC 60331	Fire resisting characteristics of electric cables
42	IEC 60332-1	Tests on electric cables under fire conditions Part I: Tests on single vertical insulated wire or cable
43	IEC 60332-3	Tests on electric cables under fire conditions Part II: Tests on a single small vertical insulated copper wire or cable
44	IEC 61508-1-7	Functional safety on electrical/ electronic/ programmable electronic safety-related systems
45	IEC 61000-4-2	Electromagnetic Compatibility (EMC) – Part 4: Testing and Measurement Techniques – Section 2: Electrostatic Discharge Immunity Test
46	IEC 61000-4-3	Electromagnetic Compatibility (EMC) – Part 4: Testing and Measurement Techniques – Section 3: Radiated, Radio-Frequency, Electromagnetic Field Immunity Test
47	IEC 61131-3	1993 Programmable Controllers – Part 3: Programming languages
48	ISA 5.1	Instrumentation Symbols and Identification
49	ISA 5.2	Binary Logic Diagrams for Process Operation
50	ISA 5.3	Graphic Symbols for Distributed Control/Shared Display Instrumentation, Logic and Computer Symbols
51	ISA 5.4	Instrumentation Loop Diagrams
52	ISA 7.0.01	Quality Standard for Instrument Air
53	ISA/ANSI-S 84.01	Application of Safety Instrumented Systems for the Process Industry



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54	ISA 912.13	Part I: Performance Requirements, Combustible Gas Detectors
55	ISA 912.13	Part II: Installation, Operation, and Maintenance of Combustible Gas Detectors
56	ISA S 71.01	Environmental Conditions for Process Measurement and Control Systems: Temperature and Humidity
57	ISA S 71.04	Environmental Conditions for Process Measurement and Control Systems: Airborne contaminants
58	ISA S 75.01.01	Flow equations for sizing control valves
59	ISA 75.03	Face to Face Dimensions for Flanged Globe Style Control valves

The latest published issue or amendment at the time of contract placement shall apply unless otherwise stated. Any other standard/code which is NOT specified above but essentially required to full fill tender requirement or any other manner, latest edition shall be followed.

2. The Instrumentation shall be designed to provide stable and accurate plant control ensuring safe plant operation and to facilitate plant maintenance, Control and Monitoring. The operating interface to the process shall display units, presenting overview, group and point displays as well as process graphics with live data. The operator will manipulate all facilities through dedicated operator's keyboard.
3. All elements of the Control function (DCS) and Interlock function (ESD) are to be completely separate and segregated. All Control functions are to be implemented in DCS and all critical trips, safety, shutdown or plant trip logic functions are to be implemented in ESD.
4. The emergency shutdown system shall be implemented in a dedicated SIL-3 PLC and the regulatory control / monitoring in the controller sub-system of DCS.
5. The system shall be redundant in processor, memory, power supply and communication interfaces. The system shall have self-diagnosis features.
6. Loops for indication/ control and interlock/shutdown shall be completely independent of each other including the field sensor / transmitter as well as control valve.
7. Symbols of DCS, ESD system shall be totally separate.
8. All Start function shall be local. Stop function shall be from local/DCS. Trip functions of Rotating equipments are to be from ESD. Interlock functions are not to be initiated from DCS. Interlock initiation shall be from ESD.



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9. Each of the trip parameters shall have individual Process Override switch, which will be used as Process Override Switch (POS) as well Maintenance Override Switch (MOS). These shall be realized as soft touch target with confirmation dialogue box in the DCS graphic and from DCS a dedicated Digital output via interface relay shall be wired to ESD as a Digital Input for override purpose. The status of the POS/MOS from the ESD, as read by ESD, may be communicated to Operator on DCS Operator station via DCS-ESD software communication link. Irrespective of process licensor's recommendation, these override switches shall be provided for all trip input parameters of ESD. This is applicable to each of the trip input parameter
10. Appropriate furniture including chairs, tables etc (Owners choice) of reputed make for Control Room and other places shall be provided by the bidder. Chairs shall be high back with revolving type.
11. A separate highly reliable TMR/QMR/VMR based Emergency Shutdown System shall be specified, using PLC technology and incorporating 2 out of 3 voting systems to ensure freedom from spurious trips. ESD shall be SIL-3 certified as per standard IEC 61508. All sensors / software switches for 2 out of 3 voting system shall be triplicated for critical trips. If necessary, Annunciator window for trip groups shall be provided for monitoring. Field switches shall be avoided to the extent possible. All trips shall be manipulated via software switches with inputs field transmitters for trip purposes and utilities packages.
12. MMS probes and proximeters, along with Transient Data Manger and Condition monitoring monitor for all plants shall be used for vibration monitoring of compressors, with LED/TFT displays inclusive orbital analysis, key phasor output etc. in the control room. Each machine shall have separate racks and each rack shall have dual power supply along with dual redundant serial communication with DCS. All radial and thrust bearings shall have RTD, temperature monitors with 2oo3 trip facility. All monitors shall be located in Control Room. All vibration, axial displacement and speed signals are connected with DCS through hardwired.
13. There shall be Condition Monitoring monitor enterprise license with minimum 2 user/client license. VMS shall be required for machines with capacity greater than 1 MW/OEM or licensor recommended.
14. The alarm and shut-down system shall be fail safe type and utilising field contacts that open in alarm conditions.
15. DCS-PLC communication is to be used only for transferring Status and Alarm signals from PLC to DCS.



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16. No tripping parameters shall be interfaced through serial communication and soft links.
17. Transfer of data through serial link from DCS to PLC and vice versa shall be used only for monitoring purpose and not for control & trip.
18. For Compressors provision of SOE with 1 msec shall be there.
19. MMS/VMS: Two X-Y probes at each radial bearing and three axial displacement probes at each thrust bearing (TMR implementation in the module for tripping/shutdown) along with Condition Monitoring software and hardware shall be required along with RTD, temperature element at Radial and thrust bearing with temperature monitors with tripping facility.
20. Anti-Surge Controller and Speed Governing System shall be provided.
21. BPS for 24V DC shall be provided for each process controllers separately as per segregation philosophy having redundant bus bar.
22. DIs/DOs from MCC to DCS/ESD shall be with relays only also IRC/IRP shall be Separate for DI's & DO's and AI's / AO's.
23. Annunciation system is used to indicate and sound alarm for any process abnormality, trip/status change.
24. An annunciator window on aux console that clearly displays status of trip alarms, bypasses, trip-groups, etc. with a first-up alarm shall be incorporated near the DCS operator work stations. The operator shall also be informed of trip conditions by means of a warning sound that differs from the audible signal from the DCS alarm system. However, operation of override switches to be included in operator action log.
25. There shall be panel segregation for various I/Os meant for DCS and ESD system. Also there shall be panel segregation for diff. type of I/Os for DCS, ESD and other control system.
26. All Servers shall have Raid-5 architecture as a minimum and Operator Station with a minimum Raid-1 architecture.
27. Bidder shall provide one documentation node. Vendor shall be responsible to supply completely engineered documentation node including necessary hardware of proper size and the software necessary to meet the requirements of the node.
28. All signals to DCS and PLC shall be SMART type with HART protocol. The I/O cards for DCS shall be HART protocol compatible.



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29. All field Instruments and control system throughout the complete plant to be designed so as to maintain fewer inventories and have interchangeability at any time. Bidder to submit detailed chart for spare parts interchangeability for instruments/control system.
30. All DCS, Control Systems, ESD/PLC system, All Analyser PLC, Any Analyser system like Mass Spectrometer, CCTV, Fire and Gas System PLC, Any Package PLC shall be connected to Main DCS and Other systems at Control Room with suitable redundant interface using Optical Fibre Cables. If OPC and Firewall is required for any of the interface the same shall be provided by the LSTK Bidder with all the necessary hardware and software support.
31. Suitable graphics pages shall be built in main DCS for viewing these data. Suitable hardware and software required for interface of these with main control system shall be provided by the bidder.
32. All instrumentation shall be as per SIL Assessment and HAZOP recommendation. The implementation of SIL requirements and verification shall be in accordance with IEC 61508 & 61511.



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ANNEXURE G- SCOPE MATRIX BETWEEN BHEL AND ASU VENDOR

S.No	Description	Basic Engineering	Detail Engineering	Supply	Execution
1.	ASU System	ASU Vendor	ASU Vendor	ASU Vendor	ASU Vendor

1) Basic Engineering: means conceptual design, sizing criteria.

2) Detail Engineering: Procurement

3) Execution: means erection, commissioning and establishing performance guarantee.

Note: The civil design and civil works are in the scope of BHEL. However, ASU Bidder shall provide all the necessary civil inputs.

A. TECHNICAL SPECIFICATION

- a. Mechanical: The complete design, supply, erection, commissioning and establishing the performance parameters of all the equipment (as per the enclosed ASU tender scheme) needed to produce required Oxygen & Nitrogen to meet the guarantee parameters. If any equipment is required over and above the scheme, for meeting the outlet parameters, is to be considered by the Bidder. The scheme indicated is minimum.
- b. Electricals: Complete electrical system consisting of motors, MCC panel, cables, cable trays, earthing, etc. for the ASU are in the scope of Bidder.
- c. C&I: All the instruments, as detailed in the attached specification, PLC panel, instrument cables etc. are in the scope of Bidder only. The detailed specification is indicated in the attached tender document Annexure-F.

B. OPERATION AND CONTROL PHILOSOPHY:

- 1) The ASU plant shall be operated, monitored and controlled through one central programmable logic controller (PLC) with complete automation to perform normal operation. However, the total plant shall have provision of manual Intervention and operation of the same, locally or from remote. PLC based control system shall be provided to start, stop, monitor and control the plant from one central place. All the local push buttons required for the plant shall be housed near the plant. Measurements



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- for various parameters shall be sensed by individual transmitters and displayed in the panel/monitor. Operator can read those parameters automatically in sequence or manually to operate the plant effectively.
- 2) An interlock sequence shall be provided for starting and stopping of the plant in predetermined correct sequence only and not otherwise due to any mistake in operation.
 - 3) An alarm annunciator indicates tripping of any drive and also abnormal parameters if any in the plant. This will provide extra facility to monitor the plant from panel and operate the plant correctly in manual mode.
 - 4) An automatic PID based level control loop shall be provided for Outlets of ASU system to regulate product flowing out from the ASU. This ensures constant level in the system and avoids Fluctuations in performance of total plant. The loop consists of flow sensor (indicating transmitter), PID controller (electronic type), I/P converter to convert electronic signal to pneumatic signal and pneumatic control valve.
 - 5) An automatic PID pressure control loop at inlet of live steam line to ensure uniform supply at desired condition to the plant.
 - 6) An automatic PID feed flow control loop shall be provided in the feed line of the plant so that operator is able to control the feed rate to the plant. (Flow control valve shall be provided in N₂ & O₂ discharge).
 - 7) All equipment and valve status (On/off/trip status or open/close) should be indicated. Necessary failure in operation/trip shall have visual and sound alarms.
 - 8) The local push buttons with control boxes of individual pumps, equipment shall have selector switches with position of manual and automatic.
 - 9) The remote selection facility at the HMI shall have the override over the local selector switch position in the local control boxes.
 - 10) PLC shall have indications of all instrument/transmitter readings in HMI. PLC shall have provision to interface with Plant DCS.

NOTE:

For detail Instrumentation and control system, refer Annexure-F

- Specification of equipment and design data are general in nature and may require changes based on specific selection and application. Vendors required to make their own



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judgment for proper selection of equipment in their offer or during detail engineering if LOA is placed on them. Vendor required to submit proper design calculation.

- Responsibility of selection of equipment rests entirely on the vendor considering that vendor is required to provide guarantee on the equipment selected, which will undergo performance testing at site during PG test.
- Where specification of all equipment required for completeness of the system is not specified herewith, vendor is required to make selection of proper equipment based on their judgment.



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Annexure MSP for Cryogenic ASU

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Annexure – MSP

List of spares

S.No	Name of Equipment	Item Description	Unit	Quantity
1	Main Air Compressor	Rotor assembly for all stages	Set	1 for each stage
		Bull Gear with Shaft	Set	1
		Coupling	PC	1
		Bearings - Complete Set (Both rotor shafts and bull gear shaft)	Set	1
2	BAC/GAN/GOX Compressor (As applicable)	Rotor assembly for all stages	Set	1 for each stage
		Bull Gear with Shaft	Set	1
		Coupling	PC	1
		Bearings - Complete Set (Both rotor shafts and bull gear shaft)	Set	1
3	Expansion Turbines With Booster Brake	Completely assembled dynamically balanced rotor	Set	1
		Plug in unit	PC	1
		Bearings for Rotor Shaft	Set	1
		Main oil pump incl. coupling and E-motor	PC	1
4	Expansion Turbines With Generator Brake	Plug in unit	PC	1
		Bearings for Rotor Shaft	Set	1
		Main oil pump incl. coupling and E-motor	PC	1
5	LOX back-up pump	Spare pump including motor	PC	1
6	LIN back-up pump	Spare pump including motor	PC	1
7	Internal compression pumps (As applicable)	Spare pump including motor	PC	1
8	Regeneration gas heater	Spare heater bundle	PC	1
9	Steam Turbine	Completely assembled dynamically balanced rotor	Set	1
		Inlet nozzles complete set	Set	1
		Journal and thrust bearing with internals and pads	Set	1
		Complete set coupling with internals for turbine/gear box	Set	1
		Governor assembly	Set	1
		Thrust collar assembly	Set	1
		Lube oil pump	PC	1
Complete gear box set	Set	1		



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Annexure – Cooling Water Analysis

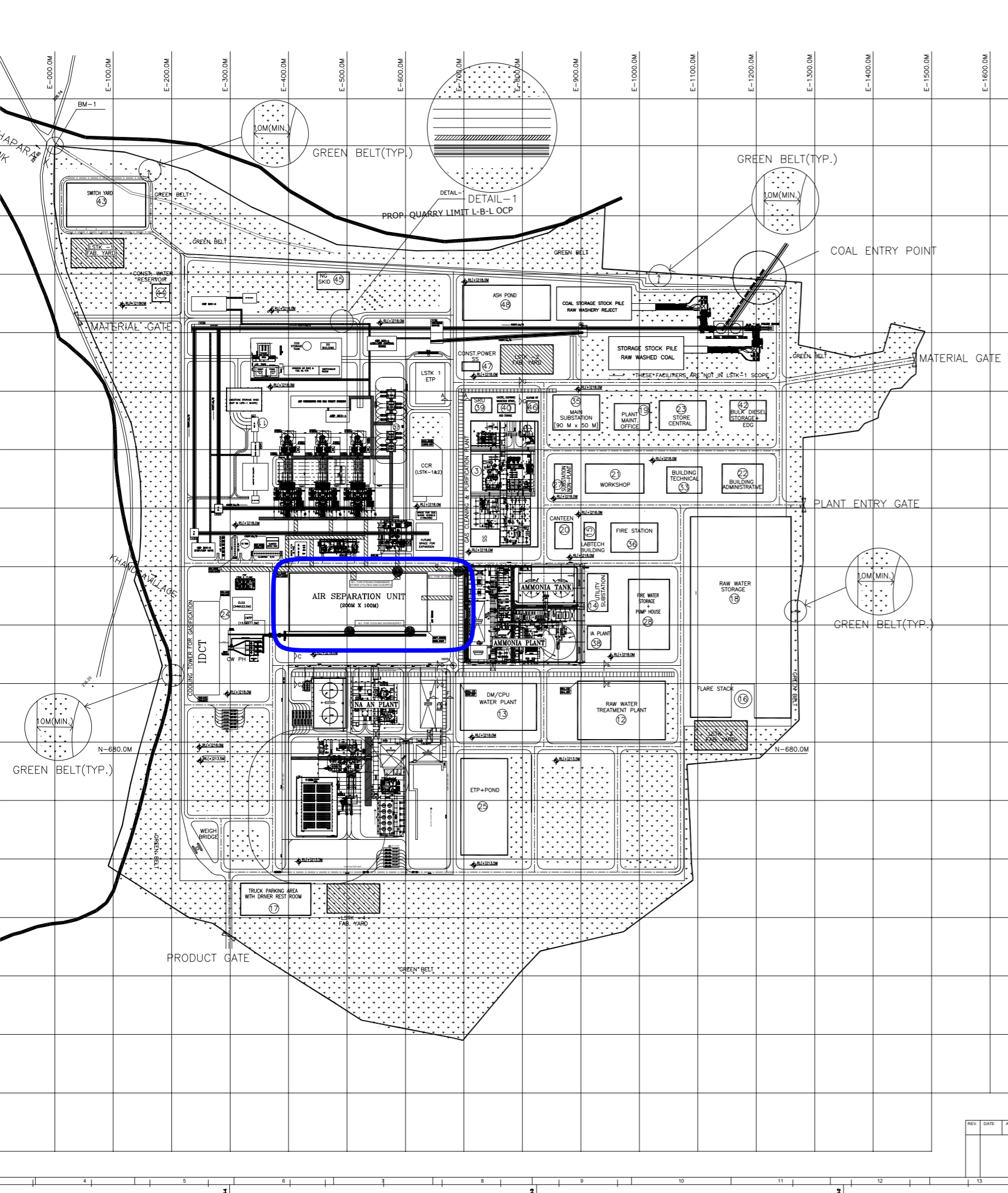
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S.No	Parameters	Units	Circulating Cooling Water
1	pH		8.5 @25 Deg.C
2	Turbidity	NTU	5
3	P-Alkalinity	Mg/l as CaCO ₃	70
4	M-Alkalinity	Mg/l as CaCO ₃	480
5	Calcium	Mg/l as CaCO ₃	410
6	Magnesium	Mg/l as CaCO ₃	190
7	Chloride	Mg/l as Cl	300
8	Reactive Silica	Mg/l as SiO ₂	70
9	Chemical oxygen Demand (COD)	Mg/l	90
10	Biological Oxygen Demand (BOD)	Mg/l	25
11	Equivalent Mineral Acid (EMA)	Mg/l	320
12	Total Suspended Solids (TSS)	Mg/l	15
13	Total Iron	Mg/l as Fe	2
14	KmnO ₄ NO	Mg/l	19.5
15	Dissolved Oxygen (DO)	Mg/l	35
16	TDS	Mg/l	1140
17	Total hardness		600
18	Conductivity		1710



SL.NO.	BLOCK DESCRIPTION	SIZE IN METER	REMARKS
1.	COAL & LIME STORAGE	PACKAGE	
2.	GASIFICATION PLANT	PACKAGE	
3.	GAS CLEANING & PURIFICATION PLANT	215 M x 115 M	
4.	AIR SEPARATION UNIT	250 M x 100 M	
5.	LSTK-3 (AMMONIA PLANT+AMMONIA STORAGE)	210 M x 165 M	
6.	NITRIC-ACID PLANT	-	
7.	AMMONIUM NITRATE PLANT WITH PRILLING	100 M x 80 M	
8.	NITRIC-ACID STORAGE	-	
9.	DELETED	-	
10.	LSTK-4 (WNA+AN PLANT+ CT+ ASSOCIATED FACILITIES)	355 M x 285 M	
11.	STEAM GENERATION PLANT	PACKAGE	
12.	RAW WATER TREATMENT PLANT	150 M x 100 M	
13.	DM/CPU WATER PLANT	130 M x 80 M	
14.	UTILITY SUBSTATION	65 M x 35 M	
15.	LAB TECH BUILDING	30 M x 20 M	
16.	FLARE STACK	R 90M	
17.	TRUCK PARKING AREA WITH DRIVER REST ROOM	120 M x 55 M	
18.	RAW WATER STORAGE	57000 SQM.	
19.	PLANT MAINT. OFFICE	60 M x 45 M	
20.	CANTEEN	45 M x 30 M	
21.	WORKSHOP	100 M x 50 M	
22.	ADMINISTRATIVE BUILDING	70 M x 50 M	
23.	CENTRAL STORE	80 M x 50 M	
24.	COOLING TOWER FOR GASIFICATION AND UTILITY	160 M x 100 M	
25.	ETP+POND	140 M x 100 M	
26.	DELETED	-	
27.	NON-TECH. SUBSTATION	50 M x 30 M	
28.	FIRE WATER STORAGE+FWPH	120 M x 70 M	
29.	DELETED	-	
30.	LOADING BAY-ANS	-	
31.	COOLING TOWER FOR AMMONIA, NITRIC ACID AND AN-PLANT	-	
32.	CENTRAL CONTROL ROOM	DELETED	
33.	TECHNICAL BUILDING	60 M x 45 M	
34.	ANP STORAGE, BAGGING & TRUCK LOADING	-	
35.	MAIN SUB-STATION	80 M x 60 M	
36.	FIRE STATION	80 M x 50 M	
37.	ASH SILO	PACKAGE	
38.	IA PLANT	40 M x 40 M	
39.	SRU UNIT	35 M x 25 M	
40.	MAGNESIUM NITRATE, CAUSTIC, SULPHURIC ACID STORAGE	30 M x 15 M	
41.	ANS STORAGE	-	
42.	BULK DIESEL STORAGE + EDG	-	
43.	SWITCHYARD	135 M x 75 M	
44.	CONSTRUCTION WATER RESERVOIR	30M x 30M	
45.	NG SKID	55 M x 30 M	
46.	SULPHUR PIT	20 M x 20 M	
47.	CONSTRUCTION POWER SUB-STATION	30 M x 15 M	
48.	ASH POND	150 M x 60 M	
49.	LOADING/UNLOADING BAY FOR NITRIC-ACID	-	
50.	LOADING/UNLOADING BAY FOR AMMONIA	48 M x 15 M	

NOTES:-

- ALL DIMENSIONS AND COORDINATES ARE IN METERS UNLESS OTHERWISE SPECIFIED.
- REFERENCE BENCH MARK (BM) POINTS IS W.R.T GLOBAL CO-ORDINATES HAVING N-2405091.480 & E-793109.852 (GRID COORDINATES N-1700.0M, E-000.0M).
- BLOCK SIZE OF FACILITIES ARE TO BE FINALIZED AFTER GETTING VENDOR INFO.
- * INDICATES HOLD.

LEGEND :-

- OFFSITE FACILITIES
- LSTK-1 FACILITIES
- LSTK-2 FACILITIES
- LSTK-3 FACILITIES
- LSTK-4 FACILITIES
- GREEN BELT AREA

TOTAL PLANT AREA WITH GREEN BELT = 350.00 ACRE (APPROX.)
 PLANT AREA = 195.00 ACRE (APPROX.)
 GREENBELT AREA = 155.00 ACRE (APPROX.)

PROJECT: COAL TO 2000 TPD AMMONIUM NITRATE PROJECT OF M/S BCGL AT LAKHANPUR (ODISHA) INDIA.

CUSTOMER: Bharat Coal Gasification and Chemicals Limited

CONSULTANT: PROJECTS & DEVELOPMENT INDIA LIMITED

BHARAT HEAVY ELECTRICALS LTD
 POWER SECTOR
 PROJECT ENGINEERING MANAGEMENT
 NOIDA

JOB NO. 544
STATUS CONTRACT
DISTRIBUTION

TITLE
 GENERAL LAYOUT OF COAL BASED AMMONIUM NITRATE PLANT

DEPT. SCALE 1:2500
DRAWING NO. PE-DG-544-100-M001
SHEET 1 OF 1
REV. 00

REV	DATE	ALTD	CHD	APPR	REV	DATE	ALTD	CHD	APPR

DEPT	DRN	NAME	SSGN	DATE
M	DESIGN	MSJ		02.03.2008
	CHECK	MSJ		02.03.2008
	APPRO	BKA		02.03.2008



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Notice Inviting Tender for cryogenic ASU

Enq. No:
1802600063

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DEFINITION OF TERMS AND INTERPRETATION

In the CONTRACT, unless the context otherwise requires, the following expressions shall have the following meanings. The singular shall include the plural and the plural include the singular except where the context otherwise requires and the words 'he', 'him', and 'his' shall be taken to mean 'she', 'her' and 'hers' where appropriate.

1. 'APPROVAL' shall mean and include the written approval by the PURCHASER of a documents, drawing or other particulars in relation to this CONTRACT.
2. 'BATTERY LIMIT' shall mean the outer limits of boundaries of the areas within which the Plants and associated facilities shall be located.
3. 'BID' shall mean the proposal/document that the BIDDER submits in the requested and specified form in the specification in response to this NIT.
4. 'BIDDER' or 'SUPPLIER' shall mean the Sole Bidder who shall submit or who have submitted the Bid.
5. 'COMMERCIAL USE' shall mean that use of the PLANT, which the CONTRACT contemplates or of which it is commercially capable.
6. 'COMMISSIONING' shall mean the putting into operation of PLANT by CONTRACTOR with the assistance from PURCHASER'S Personnel.
7. 'CONTRACT' shall mean written agreement made between the PURCHASER and the CONTRACTOR for the execution of the WORK, and shall include all Contract Documents set out under Article 1 of each Contract Agreement, including all attachments and Annexure thereto and all documents incorporated reference therein.
8. 'CONTRACTOR' shall mean the successful sole Bidder whose bid has been accepted by the PURCHASER and who has been selected by the PURCHASER for the award of Works and shall include his heirs, legal representatives, successors and permitted assigns.
9. 'CONTRACT PERIOD' shall mean the time period (as extended by the PURCHASER from time to time wherever appropriate) during which the CONTRACT shall be executed as agreed to between CONTRACTOR and the PURCHASER in the CONTRACT.



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10. 'CONTRACTOR'S WORKS' OR 'MANUFACTURER'S WORKS' shall mean the place or places of work used by the CONTRACTOR/SUB-CONTRACTOR or their collaborator (s) for the manufacture of EQUIPMENT or performance of WORKS.
11. 'COST' means the cost properly incurred by the Contractor in carrying out any of his obligations under the Contract, and 'Costs' shall be construed accordingly.
12. 'DEFECT' means any work done or any Material or the Plant or any part of it which does not comply with the CONTRACT.
13. 'DOCUMENT(S)/DOCUMENTATION' means any relevant documents in paper or electronic form, including drawings, technical software, images, designs, manuals or records.
14. 'EFFECTIVE DATE OF CONTRACT' shall mean the calendar date on which Letter of Acceptance (LOA) is issued by PURCHASER.
15. 'EQUIPMENT' OR 'STORES' shall mean the equipment, machinery and structure of any kind which the CONTRACTOR is obliged to design, supply, deliver, unload, store at site, erect, set to work and test under the CONTRACT.
16. 'FINAL COMPLETION' shall mean the completion of guarantee tests and handing over of the PLANTS and facilities to OWNER.
17. 'INITIAL OPERATION' shall mean the first integral operation of the complete EQUIPMENT covered under the CONTRACT with sub-systems and supporting equipment in service or available for service and shall be undertaken as part of COMMISSIONING after completion of start up activities.
18. 'MANUFACTURER' shall mean a person or firm who is the producer and supplier of material and/ or designer and/or fabricator of equipment to either the PURCHASER, the CONTRACTOR or both under the CONTRACT.



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19. 'MATERIALS' means machinery, plant and other items of equipment and materials intended to form part of the PLANT and other things needed for its operation, to be supplied by the CONTRACTOR.

20. "MECHANICAL COMPLETION" shall mean completion of erection to such an extent that the PLANT is ready for commissioning. This shall happen when:

- a. The EQUIPMENT capable of producing to rated capacities are installed, aligned and grouted (wherever applicable) in accordance with drawings, specifications as per finally approved P&I Diagrams after HAZOP Studies and in accordance with all applicable codes, and laws.
- b. All pressure EQUIPMENT are hydrostatically or pneumatically tested once either in CONTRACTOR'S shop or in the field in accordance with Technical Specifications.
- c. All Catalyst/adsorbents are charged in the respective reactors.
- d. All Tower packing & internals are installed.
- e. Compressor, Pumps, Machinery etc. are cold aligned. Couplings are assembled and guards installed.
- f. Instruments, control system, instrument cable, safety interlock are installed, inspected and such non-operating checks are made as to ensure operability in the manner required for the process application. Instrument air lines are checked for correct hook up. Air lines are leak tested.
- g. Relief valves are installed prior to this; they will have been checked by the CONTRACTOR in the CONTRACTOR's shop.
- h. Piping is hydrostatically or pneumatically tested in accordance with the specifications. Special treatment such as chemical cleaning is done as required by drawing or specifications. Suction screens are installed and test blinds are removed. Spring support anchors and guide are checked for removal of all shipping locks.
- i. The electric system is installed and tested in accordance with and to the extent required by electrical specifications. All wiring is checked for correct hook up. Motor rotation is checked. All power system protective devices are set.
- j. Insulation and drying out are completed to the extent necessary to permit start of commissioning and start up.
- k. Pipe support system installed as per drawings.
- l. Painting is completed.
- m. EQUIPMENT /MACHINERY, piping duly marked and labelled.
- n. Safety equipment, systems are installed and checked for operations.



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- o. All chemical & lubricants are charged into the system.
- p. PRECOMMISSIONING has been completed.
- q. The PLANT is ready to take feed
- r. All packing and bed support materials are installed.

Liquidation of all punch list applicable for achieving MECHANICAL COMPLETION.
Balance items of punch list, if any, shall be liquidated as mutually agreed

Temporary constructions facilities are removed to extent necessary to permit start of commissioning of Plant.

21. 'LETTER OF AWARD (LOA)'/ NOTICE OF AWARD (NOA) /'LETTER OF INTENT (LOI' shall mean the official notice issued by the PURCHASER notifying the CONTRACTOR that his bid has been accepted, subject to such conditions as may have been stated therein as agreed on between CONTRACTOR and PURCHASER and that the CONTRACTOR is required to sign the CONTRACT Agreement and LETTER OF AWARD / NOTICE OF AWARD / LETTER OF INTENT shall constitute legally binding contract between the PURCHASER and CONTRACTOR.
22. 'NOTICE IN WRITING', 'WRITTEN NOTICE' shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post/ Speed Post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post, it would have been delivered. Fax with Post copy confirmation.
23. 'OTHER CONTRACTOR/OTHERS' shall mean any person(s) having a contract with the PURCHASER to design, supply, erect, set to work, or do any other thing to or in connection with any other plant and shall include there, heirs, legal representatives, successors and permitted assigns.
24. 'OWNER' shall mean CIL- **BHEL JV** (M/s Bharat Coal Gasification and Chemicals Limited) having its registered office at Sambalpur, Odisha.
25. 'PURCHASER' shall mean BHEL having its registered office at Siri Fort, New Delhi - 110049.
26. 'PERFORMANCE & GUARANTEE TESTS RUN (PGTR)' shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics and proving guarantees as specified in the CONTRACT documents.
27. 'PLANT' shall mean the process unit(s) as defined in the technical specification for ASU



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28. 'PRELIMINARY ACCEPTANCE' shall mean that following milestones have been achieved

- (i) MECHANICAL COMPLETION has occurred,
- (ii) PRECOMMISSIONING and COMMISSIONING of the PLANT have been accomplished
- (iii) The Sustained plant operation has been established successfully
- (iv) PGTR has been conducted, the Performance Guarantees as specified in the Contract are attained and accepted by PURCHASER or PGTR has been conducted, the Performance Guarantees are within the limits for application of LIQUIDATED DAMAGES which CONTRACTOR opts to pay (Cl. No. 11 of Commercial Terms Part-II) and accepted by PURCHASER
- (v) All statutory approvals in the scope of Contractor, required to operate and maintain the PLANT have been obtained
- (vi) PURCHASER has received all documents required hereunder to start up, operate and maintain the PLANT
- (vii) PURCHASER has received all operations, maintenance, and spare parts manuals and instruction book necessary to operate and maintain the PLANT in a safe, efficient and effective manner
- (viii) all special tools and spare parts purchased by CONTRACTOR as provided herein have been delivered to PURCHASER; and
- (ix) CONTRACTOR has completed the training program of PURCHASERS personnel as required under this CONTRACT
- (x) All demonstration runs have successfully completed

29. "PRE-COMMISSIONING" shall mean preparation of PLANT so that it is capable of operating on a continuous basis at or near rated capacity for carrying out COMMISSIONING activities.

30. 'PROJECT' shall mean the Project specified in the Technical specification.

31. 'PROJECT MANAGER' shall mean the person designated by the PURCHASER and shall include those who are expressly authorised by the PURCHASER to act for and on his behalf for operation of this CONTRACT.

32. 'REGULATIONS' shall mean

- a. All relevant Indian Acts, and Rules and Regulations made there under;
- b. Indian Employees Provident Fund Act,



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- c. Pollution Control norms of INDIA
 - d. Contract Labour
 - e. Minimum Wages Act
 - f. Any other labour laws of INDIA applicable during execution of contract.
 - g. Any other codes/standards specified in the contract documents
33. 'SITE' shall mean and include the land and other places on, into or through which the EQUIPMENT and related facilities shall be erected and any adjacent land, paths, streets or reservoirs which may be allocated or used by the PURCHASER or CONTRACTOR in the performance of the CONTRACT.
34. 'SPECIFICATION' shall mean collectively all the terms and stipulations in Conditions of the CONTRACT, the Technical Specifications, schedules, detailed descriptions, statement of Technical Data, performance characteristics, standards & codes etc., and subsequent addenda issued thereto before the date of closing of bid and all written agreements made or to be made pertaining to the method and manner of performing the Work or to the quantities and the qualities of the materials to be furnished under this CONTRACT.
35. 'START UP' shall mean bringing the equipment covered under the CONTRACT from an inactive condition, when construction is essentially complete, to the state ready for initial operation. The start-up shall include preliminary inspection and checkout of EQUIPMENT and supporting sub-systems; perform calibration and corrective action and chemical cleaning of the plant/system/equipment covered under the CONTRACT.
36. 'SUB-CONTRACTOR' shall mean any person or persons, or firm(s) including his/ their, heirs, legal representatives, successors and permitted assigns selected by the CONTRACTOR with prior written approval of the PURCHASER for undertaking any part of the Works under the CONTRACT or to whom any part of the CONTRACT is sublet by the CONTRACTOR with the consent in writing of the PURCHASER.
37. 'TOTAL LSTK PRICE / TOTAL CONTRACT PRICE/ CONTRACT PRICE' shall comprise of the price of material/supplies, services (including E&C), spares, packing and forwarding along with requisite insurance coverage, inclusive of duties and taxes excluding GST.
38. 'WORK' OR 'WORKS' means the design, engineering and other services to be provided by the Contractor including, but not limited to, the provision and construction of the PLANT and any Temporary Works and the subsequent dismantling or removal of the Temporary Works when no longer required, and any other works to be carried out by the CONTRACTOR in accordance with the CONTRACT.
39. 'NOTICE INVITING TENDER (NIT)/ INVITATION TO BID (ITB)/ BIDDING DOCUMENT' means Tender as originally issued and any Addendum / Amendment(s) issued thereafter.



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BIDDING DOCUMENTS

The bidder is expected to examine the bidding documents, including all instructions, Pre-Qualification Criteria, Forms, Annexures, terms and conditions of Contract, specifications, drawings and other documents and to fully familiarize itself with the requirements of the bidding documents. Failure to furnish all the information required by the Bidding Documents or the submission of a bid not substantially responsive to the Bidding Documents in every respect may result in the rejection of the Bid.

1. AMENDMENT OF BIDDING DOCUMENTS

Bidders shall examine the Bidding documents thoroughly and inform the PURCHASER of any apparent conflict, discrepancy or error.

At any time prior to the deadline for submission of bids, the PURCHASER may, for any reason whether at its own initiative or in response to a clarification or modification requested by any prospective Bidder(s), modify the Bidding documents, if required.

Any Amendment to the bidding document (Corrigenda/Addenda/Amendment/extension in bid due date/ Clarifications etc.) if any, shall be hosted on NIC Portal (<https://eprocurebhel.co.in/>).

Bidders are therefore advised to visit the Portal regularly for downloading the details of amendment to bidding document. The Bidders will be required to acknowledge notification of any such amendment to the Bidding documents. Bidders shall confirm the inclusion of Addendum/Corrigendum in their bid and shall follow the instructions issued along with addendum/corrigendum

2. LANGUAGE OF THE BID

The bid prepared by the bidders and all correspondence and documents relating to the Bid exchanged by the Bidder and the Company shall be written in the English language and all units shall be in Metric system. In case a document, certificate, printed literature, etc furnished by the bidder is in a language other than English, the same should be accompanied by an English Translation, duly authorized by the Chamber of Commerce of the Bidders' country, in which case, for the purpose of interpretation of the bid, the English translation shall govern.



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3. COMPLETION PERIOD / MILESTONE

Bidder shall be required to complete the WORK under the CONTRACT so as to achieve the completion, in accordance with the following milestones:

a) Mechanical Completion	21 Months from Effective Date of Contract
b) Preliminary Acceptance	24 Months from Effective Date of Contract
c) Supply of spares	1 year from the date of PRELIMINARY ACCEPTANCE/PROVISIONAL READINESS

The material supplies/services shall be in adherence to the list of items along with delivery schedules that will be finalised during the Kick off meeting with the CONTRACTOR in line with GUARANTEED COMPLETION DATE.

The “**Effective Date of Contract**” shall be the date of issuance of LOA (LETTER OF ACCEPTANCE)/PURCHASE ORDER by the PURCHASER.

4. SIGNATURE ON BIDS

The Bid must contain the name, designation and place of business of the person or persons making the Bid and must be signed and sealed, on each page, by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature. The Bidder shall submit authority letter / Power of Attorney/ Board Resolution in favour of the authorized signatory(s) of the Bid. The Bidder's name stated on the proposal shall be the exact legal name of the Bidder

Bids by bodies corporate/ limited Companies must be signed with the legal name of the Corporation/Limited Company by the President, Managing Director or by the Company

Secretary or any other person or persons holding Power of Attorney for signing their Bid.

In case of a Single Bidder, Power of Attorney issued by the Board of Directors/ CEO / CHAIRMAN/ MD / C&MD /Company Secretary of the Bidder/ all partners in case of Partnership firm/Proprietor in favour of the authorised employee(s) of the Bidder, in respect of the particular tender for signing the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and to act and take any and all decision on behalf of the Bidder, is to be submitted.

The authorized employee(s) of the Bidder shall be signing the Bid and any consequence resulting due to such signing shall be binding on the Bidder.

Power of Attorney shall be as per law of land; Format of POA as per **Annexure 15**



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Bid shall contain no cuttings, erasures or overwriting except as necessary to correct errors made by the Bidder in which case each such corrections or other changes in the Bid documents shall carry the initials of the person(s) signing the Bid.

5. PRE-BID MEETING

The bidder may submit any queries/clarification/information pertaining to bidding documents in writing delivered by hand or by E-mail so as to reach BHEL not later than the date specified in the Letter Inviting Bid. Queries/ Clarifications/ Information sought in any other manner shall not be responded to.

The bidder or his authorised representative(s), is advised to attend a pre-bid meeting as indicated in the Letter Inviting Bid. The purpose of the meeting will be to clarify issues and to answer questions on any matter pertaining to the Tender conditions that may be raised at that stage by Bidders.

The PURCHSER's responses to Bidder's queries/clarifications raised will be furnished as expeditiously as possible. Any modification of the Bidding Documents which may become necessary as a result of the pre-bid meeting/conference shall be issued as Addendum/Amendment/Corrigendum.

Non-attendance of Bidders at the pre-bid conference will not be a cause for disqualification of the Bidder and it shall be presumed that the Bidder does not require any clarification.

6. EARNEST MONEY DEPOSIT (EMD)

Bidders shall submit Earnest Money Deposit (EMD) along with the bids (amount indicated in the salient features of bidding document). Micro and Small Enterprises (MSEs) or Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT) are exempted from payment of EMD.

MSE vendors shall submit UDYAM registration certificate for claiming exemption for EMD. Medium Enterprises, graduated from its original category (Micro/Small) within the period of 3 years from the date of graduation is also eligible for EMD exemption.

EMD shall not carry any interest.



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Any Bid not accompanied with EMD shall be rejected by the PURCHASER as being non-responsive.

Modes of deposit:

a) The EMD may be accepted only in the following forms:

- I. Electronic Fund Transfer credited in BHEL account (before tender opening)- Online Payment procedure for EMD amount attached (Annexure – EP) for vendors' reference.
- II. Banker's cheque/ Pay order/ Demand draft, in favour of BHEL, Trichy-14 payable at Trichy (along with offer).
- III. Fixed Deposit Receipt (FDR) issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Bidder, a/c BHEL)
- IV. Bank Guarantee in the format as per Annexure-16 from any of the banks mentioned in the Annexure-16.
- V. Insurance Surety Bonds.

b) The EMD shall remain valid for a period of 45 (forty-five) days beyond the final bid validity period. The Bank Guarantee shall be extended suitably if there is a delay in awarding the contract. The relevant extension shall be on Bidders' account.

FORFEITURE OF EMD:

- A bidder's EMD will be forfeited if the bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the bid or if the successful bidder fails to furnish the required 10% of the contract security cum performance bank guarantee within the specified period mentioned in the Tender in case of award of contract
- EMD by the tenderer will be withheld in case of any action on the bidder is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ Contractors" and forfeited/ released based on the action as determined under these guidelines.

Bid securities of the unsuccessful bidders will be returned to them at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract. However, in case of two packet or two stage bidding, bid securities of unsuccessful bidders during first stage i.e. technical evaluation etc. will be returned within 30 days of declaration of result of first stage i.e. technical evaluation etc.



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Bid security will be refunded to the successful bidder on conclusion of the order and receipt of a performance security/ Contract Security Cum Performance Guarantee.

7. COST OF BIDS

The Bidder shall bear all costs associated with the preparation and submission of the Bid and PURCHASER will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

8. MODIFICATION AND WITHDRAWAL OF BIDS

In case any clarifications are sought by the PURCHASER after opening of tenders, then the replies of the bidder should be restricted to the clarification sought. Any bidder who modifies his bid (including a modification which has the effect of altering the value of his offer) after opening of Technical and Commercial bids without specific reference by the PURCHASER shall render the bid liable to be rejected without notice and without further reference to the Bidder.

No bid may be withdrawn in the interval between the deadline for the submission of bids and the validity period of bids or agreed extension of validity period duly agreed by the bidder.

9. INFORMATION REQUIRED WITH THE BID

Any bid not containing sufficient descriptive material to describe accurately the process details, functioning of various sections of the Plants, equipment proposed and other necessary details may be treated as incomplete and hence rejected. Such descriptive material and drawings submitted by the Bidder will be retained by the PURCHASER. Any major deviation from these drawings and descriptive material submitted will not be permitted during the execution of the Contract without specific written permission of the PURCHASER.

Standard catalogue pages and other documents of the Bidder may be used in the bid to provide additional information and data as deemed necessary by the bidder.

10. LOCAL CONDITIONS

It will be imperative on each Bidder to fully inform himself of all local conditions and factors which may have any effect on the execution of the works covered under these specifications



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and documents. Bidder shall inspect the site, examine and obtain at its cost and responsibility, all information required and satisfy himself regarding all matters and things such as access to site, communications, transport, right of way, the type and number of equipment and facilities required for the work, availability of local labour, materials and their rates, local working conditions, weather, flood levels, sub-soil conditions, natural drainage, and all information that may be necessary for preparing its Bid, performance of work and other obligations and related matters. By submitting the Bid, the Bidder shall be deemed to have acknowledged and agreed that ignorance of the site and other said conditions shall not be basis for any claim for compensation or extension of time or loss of profits etc. and the PURCHASER shall not be liable on account thereof in any manner whatsoever to the Bidder or any person claiming through or under the Bidder.

Bidders must before submission of their Bids, acquaint themselves with all applicable regulatory and other legal requirements pertaining to insurance and health, safety and environment requirement in INDIA and rules related to work permit and visa requirements in INDIA or in any way or manner affecting the performance of Scope of Work, the Contractor and the Plant operation and performance including social security, safety, pollution control, permits, licenses, and the other statutory requirements and regulations. The submission of a Bid by the Bidder will be construed as evidence that such an examination was made and the Bidder shall not raise at any time later any claims/disputes against the PURCHASER and the PURCHASER shall not be liable for the same in any manner whatsoever.

In their own interest, the foreign bidders are particularly requested to familiarize themselves with the Income Tax Act 1961, the Companies Act, 2013, the Customs Act, 1962, including any amendments thereof and other related acts and laws prevalent in India.

The PURCHASER shall not entertain any request for clarification from the bidder, regarding such local conditions.

The Bidder shall be deemed to have prepared the Bid on the basis of its independent judgment and to have made all necessary allowances and provisions to ensure that the PLANT will meet all technical specification prescribed hereunder including the specified performance requirements and guarantees and be entirely suitable for the purpose for which it is intended. Accordingly, at the time of submission the Bid Price will, without extra price and/or extension of time, be held to include everything implicitly or otherwise required or necessary for the proper and timely completion of the WORK including ACCEPTANCE OF PLANT in accordance with the CONTRACT. Further, in case of any contract awarded under these specifications and documents, neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the PURCHASER, which are based on the lack of such clear information or its effect on the cost of the works to the Bidder.



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Visit to site is optional and at BIDDER's cost and expense.

11. BID PRICE & CURRENCY OF BIDS

Bidder expecting to incur a portion of its expenditure in more than one currency and wishing to be paid accordingly shall so indicate in the Bid. In such cases the Bid shall be expressed in different currencies (maximum **5 (five) currencies namely USD, EURO, GBP, JPY and INR**) and the respective amounts in each currency together making up the Bid Price.

The Bidders shall quote in their price for the entire scope of work as per **Annexure-BOQ** in the price schedule format and the price break-up as a percentage in the annexure BOQ.

It shall be the duty of the CONTRACTOR to duly observe and perform all laws, rules, regulations, orders and formalities applicable under GST, Customs Duty, etc. on the import, manufacture, sale and/or supply of any material to the PURCHASER and performance of the works under the CONTRACT. The CONTRACTOR shall keep the PURCHASER indemnified from and against any and all claims, demands, prosecutions, actions, proceedings, penalties, damages, demurrages and/or other levies whatsoever made or levied by any Court, Tribunal or the Customs or other Authorities with respect to any alleged breach, evasion or infraction of such duties, taxes, charges or levies or any breach or infraction of any applicable laws, rules, regulations, orders or formalities concerning the same and from the consequence thereof attributable to the CONTRACTOR.

The price of materials is divided into two parts, the Foreign Currency component and the Indian Rupee component.

Payment for indigenous materials to the extent indicated in the Bill of Materials shall be made on the basis of CONTRACTOR's invoice

All bank charges of bidder's bankers shall be to the Bidder's account and all Bank charges of PURCHASER's bankers shall be to PURCHASER's account.

12. TAXES AND DUTIES

CONTRACTOR shall be entirely responsible for all taxes, stamp duties, licence fees and other such levies applicable, on performance of WORK under CONTRACT, outside PURCHASER's country. CONTRACTOR shall also be responsible for payment of all taxes, duties and levies such as custom duty, GST, (including those taxes payable on reverse charge mechanism) income tax, etc. as applicable on performance of WORK under CONTRACT, in India.



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Any changes in statutory rules and regulations under GST regime shall be followed by CONTRACTOR.

Except as specifically provided to the contrary in any other clauses of this tender,

- (i) The CONTRACTOR shall within the price of materials and scope of supply be liable to pay and bear any and all duties, taxes, levies and cesses lawfully payable on any goods, equipment or materials imported into India or within any local limits for permanent incorporation in the work(s), and on materials sold and supplied to the PURCHASER pursuant to the CONTRACT.
- (ii) The CONTRACTOR shall within the price of services and scope of services be liable to pay and bear any and all duties, taxes, levies and cesses lawfully payable on any goods or equipment imported into India or within any local limits for use in the performance of the work(s), and on services performed pursuant to the CONTRACT.
- (iii) The CONTRACTOR shall be liable for and shall pay any and all Indian fees, taxes, duties, levies and cesses including education cess etc., assessable against CONTRACTOR in respect of or pursuant to the CONTRACT.
- (iv) In addition, the CONTRACTOR shall be responsible for payment of all Indian duties, levies, and taxes etc., assessable against the CONTRACTOR or CONTRACTOR'S employees or SUB-CONTRACTOR'S whether corporate or personal or applicable in respect of property.

TAXES, DUTIES AND LEVIES IN FOREIGN COUNTRIES

The CONTRACTOR shall accept full and exclusive liability at his own cost for the payment of any and all taxes, duties, cesses and levies howsoever designated, as are payable to any government, local or statutory authority in any country other than India as are now in force or as are hereafter imposed, increased or modified and as are payable by the CONTRACTOR, his agents, SUB-CONTRACTORS and Suppliers and its/their respective employees for or in relation to the performance of this CONTRACT. The CONTRACTOR shall be deemed to have been fully informed with respect to all such liabilities and shall further be deemed to have consideration and included the same in his bid and the lump sum Price shall not be varied in any way on this account.

TAX INDEMNITY

It will be the duty of the CONTRACTOR to duly observe and perform all laws, rules, regulations, orders and formalities applicable to Customs Duty/GST on the manufacture, sale, import and/or supply of any material to PURCHASER and/or applicable under GST on the services performed by the CONTRACTOR pursuant hereto. The CONTRACTOR shall keep the



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PURCHASER indemnified for and against any and all claims, demands, prosecutions, penalties, damages, demurrages and/or other levies whatsoever made or levied by the Court or Customs Authorities with respect to any alleged breach, evasion or infraction of such duties, taxes, charges or levies or any breach or infraction of such laws, rules, regulations, orders or formalities concerning the same and from the consequence thereof.

The CONTRACTOR confirms that it has included all taxes, duties, levies etc., as applicable at prevailing rates, in its CONTRACT PRICE. In case, CONTRACTOR has not included any such taxes, duties, levies etc., at all and/or at prevailing rates and CONTRACTOR has to pay such taxes, duties, levies etc., PURCHASER shall not be liable for payment of such liabilities and/or PURCHASER shall not reimburse such taxes, duties, levies etc. to CONTRACTOR.

The CONTRACTOR shall be responsible for payment of any tax levied on the transfer of property and goods involved with relevant GST act and rules made there under including amendments, if any. The CONTRACTOR shall be liable to ensure to have registered with the respective tax authorities and to submit self-attested copy of such registration certificate(s) and any taxes/ duties/ levies being charged by the CONTRACTOR would be claimed by issuing proper tax invoice/challan indicating details/ elements of all taxes charged and necessary requirements as prescribed under the respective tax laws and also to mention correct and valid registration number(s) on all tax invoices raised to PURCHASER.

Any other taxes / duties not considered by the CONTRACTOR, at the time of bidding, in relation to this CONTRACT, which in terms of relevant legislation is the liability of CONTRACTOR, is discharged by PURCHASER, PURCHASER reserves the right to recover the same from the CONTRACTOR bills or otherwise as deemed fit along with the applicable overheads @5% and interest on the total value (i.e. amount paid by PURCHASER + overhead).

In case of award of CONTRACT to a foreign Contractor, the CONTRACTOR shall take all reasonable steps available to it and comply with all formalities to get the CONTRACT registered with the appropriate Indian custom authorities

In case of award of CONTRACT to a foreign Contractor, the CONTRACTOR shall be responsible on completion of CONTRACT or whenever required to undertake customs reconciliation work with Indian custom authorities and finalise the customs assessment by furnishing the necessary technical documents, technical information etc. to the said authorities.

INCOME TAX

CONTRACT PRICE shall be inclusive of any and all Indian Income Tax payable in India. PURCHASER shall deduct Indian Income Tax or any other tax and surcharge as applicable as



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per rates prescribed for such contracts from time to time, from the payments due to CONTRACTOR and issue tax deducted at source certificate to CONTRACTOR. It is the responsibility of the CONTRACTOR to file proper income tax return and pay taxes thereon if any, or claim refund thereof if any. The CONTRACTOR shall give PURCHASER all necessary documents relating to its income tax assessments and to keep the PURCHASER informed about their assessments.

Personal income tax payable, if any, in respect of salary and perquisites of CONTRACTOR's personnel / SUB-CONTRACTOR's personnel in India shall be payable by the individual so deputed by CONTRACTOR or SUB-CONTRACTOR. It is the responsibility of the individual or CONTRACTOR to file proper income tax return and pay taxes thereon if any, or claim refund thereof if any.

13. CUSTOM DUTY

Notwithstanding anything mentioned regarding custom duty in any other portion of this tender, the following provisions regarding custom duty shall apply under this Contract.

- (i) **Customs Duty on merit rate basis** for imports of materials shall be shown separately under section of taxes and duties in BOQ and the same shall be subject to the provisions as indicated in SCHEDULE OF PRICES (Annexure BOQ).
- (ii) CONTRACTOR shall be responsible for all customs clearance and related expenses at his cost.
- (iii) CONTRACTOR shall be responsible for payment of customs duty with applicable surcharges, Anti-dumping duty, Counter-vailing duty on subsidised articles, Safeguard duty etc. and any other tax including GST, levies, cess etc. applicable on such additional duties, if imposed on Plant and Equipment including Type Test and Mandatory Spares/ Recommended Spares.
- (iv) CONTRACTOR shall pay the Customs Duties on the assessable value of materials envisaged to be imported for the purpose of permanent incorporation in the Works. The IGST shall be paid by the CONTRACTOR on the CIF value and the Customs Duties both taken together.
- (v) The CONTRACTOR shall be fully responsible for Port and Customs clearance including stevedoring, handling, unloading, loading and storage and for satisfying all Port and Customs formalities for the clearance of the goods, including preparation of the Bill(s) of Entry and other documents required for import and/or clearance of the goods. The CONTRACTOR shall also be fully responsible for any delays, penalties, demurrages, shortages and other charges and losses, if any, in this regard. The customs duty and other import duties payable on the CIF value of materials imported and IGST payable calculated



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on the CIF value and Customs Duties, taken together for the purpose of permanent incorporation in the work shall be paid directly by the CONTRACTOR and are shall be reimbursable at actuals based on the production of Bills of Entry upon receipt of materials at the PURCHASER end.

- (vi) CONTRACTOR shall provide the PURCHASER with all necessary documents like Bill of lading, Bill of Entry, Invoices etc. These documents should have reference that “the material imported is intended for use of “COAL TO AMMONIA NITRATE Project of OWNER,” in case OWNER is entitled to avail any exemption and/or reduced custom duty and the benefit towards the same to be passed on the PURCHASER and the CONTRACTOR shall provide all the necessary documents in this regard.
- (vii) CONTRACTOR shall appoint a Customs House Clearing Agent of good standing and ensure speedy customs clearance.
- (viii) CONTRACTOR shall be responsible to register the Import License with Customs Authorities at the Port of Import, and to answer and sort out technical queries (if any) raised by Customs Authorities in regard to any import(s).
- (ix) All imported materials shall be ‘billed to and shipped to’ in the name of CONTRACTOR.
- (x) As the above statutory provisions are frequently reviewed by Government of India (GOI), the CONTRACTOR is advised to check the latest position in their own interest and OWNER will not bear any responsibilities for any incorrect assessment of statutory levies by the CONTRACTOR.
- (xi) For any tax benefits if available on imports (as published by Govt. of India from time to time) shall be as per NIT. Necessary statutory documents will be furnished by PURCHASER, based on the request with supporting document from the Contractor. Such financial benefits should be passed on to the PURCHASER by the Contractor in the quoted price.
- (xii) Import content with list of items, quantity, foreign currency, Country of origin etc., shall be submitted by the bidder as part of Price bid.

14. GST

The price/ rate to be quoted by the BIDDER shall be exclusive of GST which will be paid at actual applicable rates at the time raisal of invoice, subject to the variation in taxes and duties clause. The BIDDER shall indicate the present applicable GST rate in the annexure BOQ.

The CONTRACTOR shall pay all (save the specific exclusions as enumerated in this clause) taxes, fees, license, charges, deposits, duties, tools, royalty, commissions, other charges, etc.



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which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case PURCHASER is forced to pay any of such taxes/duties, PURCHASER shall have the right to recover the same from his bills or otherwise as deemed fit along with the applicable overheads @5% and interest on the total value (i.e. amount paid by PURCHASER + overhead).

However, provisions regarding GST on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.

Reimbursement of GST is subject to compliance of following terms and conditions. PURCHASER shall have the right to deny payment of GST and to recover any loss to PURCHASER on account of tax, interest, penalty etc. for non-compliance of any of the following condition.

The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between PURCHASER & its CONTRATOR. PURCHASER shall not consider GST on any transaction other than the direct transaction between PURCHASER & its CONTRACTOR.

CONTRACTOR shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, PURCHASER shall have the right to adopt the appropriate one considering the amount of tax liability on PURCHASER/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by PURCHASER shall be binding on the Contractor for discharging the obligation of PURCHASER in respect of the tax liability to the CONTRACTOR.

CONTRACTOR has to submit GST registration certificate of the concerned state. CONTRACTOR also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.

CONTRACTOR has to issue Invoice/Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.

CONTRACTOR has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, PURCHASER reserves the right of denial of GST payment if there occurs any hardship to PURCHASER in claiming the input thereof. In case of goods, CONTRACTOR has to provide scan copy of invoice & GR/LR/RR to PURCHASER before movement of goods starts to enable PURCHASER to meet its GST related compliances. Special care should be taken in case of month end transactions.



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CONTRACTOR has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed.

Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the CONTRACTOR: -

- a) Supply of goods and/or services have been received by PURCHASER.
- b) Original Tax Invoice has been submitted to PURCHASER.
- c) CONTRACTOR has submitted all the documents required for processing of bill as per contract/ purchase order/ work order.
- d) In cases where e-invoicing provision is applicable, CONTRACTOR is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder.
- e) CONTRACTOR has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return.
- f) Respective invoice has appeared in PURCHASER's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been reported by the contractor along with status of ITC availability as "YES" in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is
- g) available to adjust the financial impact in case of any default by the CONTRACTOR.
- h) CONTRACTOR has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to PURCHASER.

Any financial loss arises to PURCHASER on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to PURCHASER, shall be deducted from CONTRACTOR's bill or otherwise as deemed fit.

TDS as applicable under GST law shall be deducted from CONTRACTOR's bill.

CONTRACTOR shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permits, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the CONTRACTOR.

CONTRACTOR shall be solely responsible for discharging his GST liability according to the provisions of GST Law and PURCHASER will not bear or entertain any claim of



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GST/interest/penalty or any other liability on account of failure of CONTRACTOR in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.

In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/altered/deleted on GSTN portal which results in any adverse financial implication on PURCHASER, the financial impact thereof including interest and/or penalty shall be recovered from the CONTRACTOR's due payment.

Any denial of input credit to PURCHASER or arising of any tax liability on PURCHASER due to non-compliance of GST Law by the CONTRACTOR in any manner or delayed submission of invoice by the CONTRACTOR, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the CONTRACTOR or in any other mode.

In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on PURCHASER, PURCHASER's decision shall be final and binding on the CONTRACTOR.

Variation in Taxes & Duties:

Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to PURCHASER. However downward variation shall be subject to adjustment as per actual GST applicability.

In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by PURCHASER at actual. The reimbursement under this clause is restricted to the direct transaction between PURCHASER and its CONTRACTOR only and within the contractual delivery period only.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by PURCHASER for reimbursement of tax or reassessment of offer.

Income Tax:

TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from CONTRACTOR's bill.

In case of orders for supply of goods, the BIDDER must submit the E-Way Bill (with Part-B filled) generated in the E-Way Bill portal, used for transportation of goods for the respective tax invoice.



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15. BIDDING DOCUMENTS AND DEVIATION

Bidders shall confirm compliance to Bidding Documents.

It is expected that bidders will submit bids based strictly on the terms and conditions and specifications contained in the bidding documents and will not stipulate any deviations. PURCHASER reserves the right to reject as non-responsive any bid containing deviation(s).

Bidder's authorized representative(s) shall attend the pre bid meeting on the prescribed day at the given venue specified in NIT. During the pre-bid meeting, all the technical and commercial issues shall be discussed and concluded to ensure that the bid received subsequent to pre bid meeting shall be without any deviations to terms and conditions. Hence, bidders shall treat the pre bid meeting as utmost important and depute competent & senior person capable of taking on the spot decision to sort out all the technical and commercial issues.

However, in case any bidder does not attend the pre bid meeting, it shall be understood that the bidder has a clear understanding of the scope, terms & conditions of the bidding document and does not have any comments/ deviations to the requirements of the bidding document.

In order to ensure fruitful discussions during pre-bid meeting, the bidder is requested to submit any queries/clarification/information pertaining to Bidding document in writing delivered by hand or by e-mail in the format provided in Bidding Forms so as to reach two days prior to Pre-bid meeting. These queries shall be replied during pre-bid meeting. The editable soft copies of the queries shall also be e-mailed to concerned persons specified in tender, to enable Purchaser to prepare replies to the queries in the same format expeditiously.

The bidders are required to participate in the pre-bid meeting after going through the entire bidding document along with PQC. Bidder shall come with all technical and commercial points on which they need clarifications and also to ensure that they possess all the supporting documentation for meeting the PQC (if any). In case of any doubt, they may discuss the same during the meeting to avoid any techno-commercial clarifications/ discussions post bid.

Any modification of the Bidding Document, which may become necessary as a result of the pre-bid discussion, shall be intimated to all bidders through the issue of an Addendum/Amendment at the Portal.



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Technical/ Commercial queries (TQ/CQ) shall not be issued once the bids have been opened. However, wherever CQ/ TQ are unavoidable, the same may be raised (Only once in case of Pre-Qualification Criteria) and the cut-off date given for CQ/ TQ replies shall be adhered to.

Offers shall be evaluated based on the information available up to cut-off date for CQ/ TQ replies. Bidder shall not submit any Price against TQ/ CQ raised unless specifically sought in writing by Purchaser.

Bidder is advised to visit and examine the Project Site and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for execution of the Works. All costs towards the same including the cost of visiting the Site shall be at the bidder's own expense.

Bidder and any of its personnel will be granted permission by Owner to enter upon its premises and lands/ Project Site for the purpose of such visit, but only upon the express condition that the bidder and its personnel will relieve and indemnify Owner and its personnel from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

Examination of bids and determination of responsiveness

The PURCHASER's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the PURCHASER will determine whether each Bid: -

- (a) Meets the "Pre-Qualification Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Is accompanied by the required 'Earnest Money';
- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the PURCHASER may require to determine responsiveness.

A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose PURCHASER defines the foregoing terms below: -

- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.



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c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document.

A material deviation, reservation or omission is one that,

a) If accepted would,

(i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.

(ii) Limit, in any substantial way, inconsistent with the Tender Document, the PURCHASER's rights or the tenderer's obligations under the proposed Contract.

b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

The PURCHASER shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.

16. SUBMISSION OF BIDS

The Bid shall be submitted in electronic format (through NIC portal) as per given time schedule.

17. INSTRUCTION FOR ONLINE SUBMISSION OF BID

This Tender is hosted in NIC portal & offer to be submitted through NIC portal only. You are requested to submit your 2 parts offer before due date & time of the enquiry through NIC (<https://eprocurebhel.co.in>) only.

Offer is to be submitted in TWO part bids system (Techno-commercial bid & Price bid) in the E-Procurement NIC PORTAL (<https://eprocurebhel.co.in>) ONLY.

At its option, BHEL may consider extending the due date/s for the tender openings. Sufficient notice would be given by BHEL for such extensions and it will be published as corrigendum in following websites,

<https://eprocurebhel.co.in>

<http://www.bhel.com/tender/>



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However, in addition to submission of e-bids as above, bidders are required to submit **original the documents for EMD and Power of Attorney**

The documents shall be in a sealed envelope which should reach on or before the e-Bid Submission Due Date and time at the address mentioned below.

Titled as **“Original Documents for NIT No..... and Name of the Project**

.....”

4th floor, 24 Building,

BHEL Trichy Complex

Trichy.

Attention:

R Srijamole

Manager (MM/BOI)

E-mail: srija@bhel.in/ evenkat@bhel.in

The Bid shall be submitted **in two (02) COVERS** in respective folders provided in the e-procurement website.

Bidders to upload the documents strictly in the respective folders at the designated place in the e-tendering website. Non Compliance to the same may lead to rejection of their offer.

Bidder is required to upload in e-tendering portal the scanned copy of the following documents along with the e-bid:

COVER- 1 – It shall contain the Pre-Qualification Criteria (Annexure-PQC), Technical & Unpriced Commercial Bid related documents.

i.	Letter of submission and synopsis of the proposal
ii.	Organization Profile covering (a) Name & address of the organization with telephone, fax, email nos. with contact persons (b) history & structure of the organizations with names of directors & chief executives of bidder
iii.	a) Copy of Article of Association of the Company or Board Resolution mentioning Chairman/ Chief Executive Officer / Managing Director of the Company of bidder. b) Authorization letter indicating the division of work and undertaking for the guarantee of offered system from the OEM (if applicable)



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	c) Business dealing Agreement (if applicable)
iv.	Copies of documentary proof, verified and certified by any of the reputed independent third party inspection agency, in support of “Technical Criteria” as per Prequalification Criteria (PQC) requirement.
v.	Financial details, verified and certified by any of the reputed independent third party inspection agency, in support of “Financial Criteria” as per Pre-Qualification Criteria (PQC) requirement.
vi.	All the filled up and signed Annexures as referred in Annexure-1 (Check list)
vii.	Indigenous supplier should submit audited copies of annual reports (Balance Sheet, Profit & Loss statement) for the last 3 years or from the date of incorporation whichever is less and GST certificate. Foreign supplier should submit the latest reports from reputed third party business rating agencies like Dun & Bradstreet, Credit reform etc.
viii.	Detailed schedule of supplies in tabular/chart format for the materials and execution of the services (<i>May ensure all items listed under annexure BOQ is included in the supply schedule</i>)
ix.	Earnest Money Deposit (EMD)
x.	Format for authorisation to DSC holder as per Annexure-DSC
xi.	Complete Bidding Document and all technical and commercial amendments/addendums if any issued, digitally signed as a token of having received and read all parts of the bidding document and having accepted and considered the same in preparing their bid
xii.	Technical Details/ documents specified under “Technical specification for cryogenic ASU” and Annexure TD
xiii.	Filled up Annexure-BOQ with percentage price break up and taxes and duties



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xiv.

Any other information required in the Bidding Documents or considered relevant by the Bidder.

In case of non-submission of above documents or submission of incomplete documents, the PURCHASER reserves the right not to evaluate such offers further and not to enter into correspondence in this regard after opening the Techno-commercial Unpriced Bid.

COVER- 2 – PRICE BID

The Prices are to be submitted strictly as per the Schedule of Prices (Excel document). All the prices quoted in the Schedule of prices shall be exclusive of GST, customs duty, CESS/SURCHARGE, SWS ETC. on Customs duty.

GST, customs duty, CESS/SURCHARGE, SWS etc. on Customs duty shall be indicated in percentage (not absolute value) in Annexure-BOQ which is submitted in Cover-1

18. OPENING OF BIDS

The Bids shall be opened and evaluated in two stages:

Stage-I: Opening & Review of EMD, Pre-Qualification Bid, Technical and Un-Priced Commercial Bids (Cover-1)

The PURCHASER will review the Bank Guarantee (BG)/DD/Banker's Cheque submitted by Bidder against EMD, with respect to:

- a) its value,
- b) validity
- c) issuing Bank.
- d) The format attached with the tender document.
- e) Whether the BG has been issued in favour of the bidding company

In case, the Bidder has not submitted the EMD or the BG submitted by the Bidder is not as per the requirement of tender with respect to the above mentioned parameters, the Bids submitted by them may be rejected.

Thereafter, PURCHASER will open Pre-Qualification Bid, technical and un-priced commercial Bids of those Bidders, whose EMD, is found to be in order as described here above.



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PURCHASER will first review Pre-qualification bid. Technical and Un-Priced Commercial Bids shall be evaluated only for those bidders whose bid is found to be Prequalified based on the Pre-Qualification Criteria.

Stage – II: Opening of Price Bid (Cover-2)

The date of the opening of the Price Bid shall be intimated to technically and commercially acceptable Bidders via e-procurement Portal.

The evaluation of the priced Bids shall be done as described under Clause No. 21.0 of this document.

If the Bids as judged by the PURCHASER are unresponsive, the tender may be declared void and a new procedure for selection of CONTRACTOR as deemed appropriate by PURCHASER may be adopted.

19. VALIDITY OF BID

The bids should be kept valid for acceptance for a period of **120 days from the last date of opening of Unpriced Technical and Commercial Bids.**

Under the exceptional circumstances, prior to expiry of the original Bid period, the PURCHASER may request the Bidder for a specified extension in the period of validity. The request and the responses thereto shall be made in writing or by E-mail.

In the event of PURCHASER seeking extension of period of validity of the Bids, the validity of EMD shall also be suitably extended by the bidders

A Bidder agreeing to the request of PURCHASER seeking extension shall not be permitted to modify his bid, and will be required to extend the validity of his EMD correspondingly. The provisions regarding forfeiture of EMD shall continue to apply during the extended period of Bid Validity

In the event of PURCHASER's CUSTOMER/OWNER covering this tender being cancelled /placed on hold / otherwise modified, PURCHASER would be constrained to accordingly cancel / hold / modify the tender at any stage of execution.



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20. EVALUATION AND COMPARISON OF BIDS

The financial L1- comparison shall be as follows

Total landed cost (including all cost up to destination and taxes* and duties) of items quoted (as per file BOQ for schedule of prices file and annexure – BOQ)

Plus (+)

Loading towards utility consumption (Power, Steam and Cooling water) over the useful life of the plant, computed on a NPV basis.

Plus (+)

Other applicable loadings as per the tender document

Currency of evaluation shall be INR. Rate quoted in Foreign currencies will be converted to INR by multiplying with the Exchange rate (SBI TT Selling rate) as on the techno-commercial bid opening date. If the date of opening happens to be a bank holiday, then the forex rate as on previous bank (SBI) working day shall be taken.

*** Taxes for which input tax credit is unavailable will only be considered**

Basis for NPV Calculation of utilities

- a) Utility consumption indicated in BOQ will be considered for the loading calculation.
- b) Computation will be made considering 330 days per year for a period of 25 years starting from 3 years after the issue of LOA.
- c) Discount rate of 10% p.a will be used for the computation
- d) The lowest value of individual utility consumption rate from among the bids will form the basis for working out the loading.
- e) Cost of individual utility to be considered for loading will be as follows

Item Description	Unit Price in INR	Unit
Cooling water	35.75	M3
Power	7.02	KWh
Steam (at 40 kg/cm ² (g) & 380 °C)	1400	MT



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21. AWARD OF CONTRACT

The PURCHASER will shortlist the Bidder whose Technical and Commercial bid has been determined to be substantially responsive and Price Bid to be the lowest evaluated Bid, further provided that the Bidder is determined to be qualified to perform the CONTRACT satisfactorily.

After selection, LETTER OF ACCEPTANCE (“LOA”)/PURCHASE ORDER shall be released by the PURCHASER to the selected Bidder.

The Bidder shall enter into a Contract Agreement with the PURCHASER as per clause 23, failing which the Bid Security/EMD is liable to be forfeited.

PURCHASER reserves the right to vary the quantity of any of the Spares and/or delete any item of Spares altogether at the time of Award of Contract.

The mode of contracting with the successful bidder will be a Single contract on “**Total Package**” basis.

The subject job is not splittable / divisible

22. SIGNING OF CONTRACT AGREEMENT

The date of issue of LOA shall be considered as EFFECTIVE DATE of the CONTRACT. Thereafter a contract agreement shall be executed between the PURCHASER and the BIDDER within fifteen (15) days from date of acceptance of LOA, CONTRACTOR shall sign the CONTRACT and return it to the PURCHASER. The copy of the CONTRACT shall be signed by an authorised officer of the CONTRACTOR in whose name Power of Attorney has been issued.

23. INTEGRITY PACT

Bidders are required to unconditionally accept the "Integrity Pact (IP)", as per Annexure 8, (executed on plain paper) and submit the same duly signed on all pages by the bidder's authorized signatory along with the bid.

24. PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) POLICY

For this procurement, Public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products is applicable for this tender. The local content to



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categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non- Local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

Class-I and Class-II suppliers shall submit along with Part-I bid 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 and the place of value addition in format attached (Annexure-MII)

25. PROVISION FOR PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA

Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

“Bidder” (including the term ‘tenderer’, ‘consultant’ or ‘service provider’ in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

“Bidder from a country which shares a land border with India” for the purpose of this Clause means: -

- a. An entity incorporated established or registered in such a country; or
- b. A subsidiary of an entity incorporated established or registered in such a country; or
- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

The beneficial owner for the purpose of (III) above will be as under:



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1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation

- “Controlling ownership interest” means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.
 - “Control” shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder’s agreements or voting agreements.
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.
 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
 - i. The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-13.
 - ii. Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids

27.BREACH OF CONTRACT, REMEDIES AND TERMINATION

27.1 The following shall amount to breach of contract:

- I Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.
- II The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.
- III The Supplier/Vendor delivers equipment/ material not of the contracted quality.
- IV The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.



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- V Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.
- VI Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- VII Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.
- VIII Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.
- IX Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.
- X Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.

Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.

In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract

27.2 Remedies in case of Breach of Contract.

- i) Wherein the period as stipulated in the notice issued under clause 14.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.
- ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.
- iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the



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balance amount, as the case may be, will be recovered in all or any of the following manners

- iv) In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor
- v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:
 - a. from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.
 - b. If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.
- vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.
- vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.
- viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.

Note:

1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:

(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.

(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.

LD against delay in executed supply in case of Termination of Contract:

LD against delay in executed supply shall be calculated in line with LD clause no. 18.0 below, for the delay attributable to Supplier/Vendor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract.

Method for calculation of “LD against delay in executed supply in case of termination of contract” is given below.



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- i. Let the time period from scheduled date of start of supply till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed supply till the time of termination of contract= X
- iii. Let the Total Executable Value of supply for which inputs/fronts were made available to Supplier/Vendor and were planned for execution till termination of contract = Y
- iv. Delay in executed supply attributable to Supplier/Vendor i.e. $T2=[1-(X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 18.0) of the Contract for the delay attributable to Supplier/Vendor taking “X” as Contract Value and “T2” as period of delay attributable to Supplier/Vendor.

28. SUSPENSION OF BUSINESS DEALINGS

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.

If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award /execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860(Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage:

http://www.bhel.com/vender_registration/vender.php

29.MSE VENDOR PREFERENCE

- i. If L1 vendor is an MSE vendor entire project package will be ordered on L1 vendor.
- ii. If a Non MSE vendor is coming as L1, then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing, purchase order will be awarded for full/complete supply of total tendered value to MSE.
- iii. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on.
- iv. Finally if none of the MSE vendor in the price band is not accepting it will be ordered on L1 non MSE vendor.



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Payment for MSE Indigenous vendors will be as per MSMED Act, 2006

Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	UDYAM No	SC/ST Owned	Women Owned	Others (Excluding SC/ST/Women)
Micro				
Small				

Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.

MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.

Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry, in case of any deficiency in the above required documents or in case the documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal even if submitted earlier.

30.FRAUD PREVENTION POLICY

Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

31.CARTEL FORMATION

The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the



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bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines

32.RESOLUTION OF DISPUTES

If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not.

If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per Clause 21.1

- **Conciliation:**

Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “Dispute”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in - “Procedure for conduct of conciliation proceedings” (as available in www.bhel.com)).

Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding “Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause “Settlement of Disputes” shall be modified accordingly as and when the Mediation Act 2023 gets notified.



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• **ARBITRATION:**

Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 14.1 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Madras High Court, Arbitration Centre (MHCAC) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.

A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.

After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institution- Madras High Court, Arbitration Centre (MHCAC)- and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to Madras High Court, Arbitration Centre (MHCAC)- for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.

The Arbitration proceedings shall be in English language and the seat of Arbitration shall be Trichy.

Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Trichy.



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Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.

It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.

In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.

In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 14.2.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.

In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution)

- **JURISDICTION**

Subject to the arbitration as Provided above, the Civil Court having original Civil Jurisdiction at Tiruchirappalli, Tamil Nadu shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.



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• **GOVERNING LAWS**

The contract shall be governed by the Law for the time being in force in the Republic of India.

33.FORCE MAJEURE CLAUSE

"Force Majeure" shall mean circumstance which is:

- a) beyond control of either of the parties to contract,
- b) either of the parties could not reasonably have provided against the event before entering into the contract,
- c) having arisen, either of the parties could not reasonably have avoided or overcome, and
- d) not substantially attributable to either of the parties and Prevents the performance of the contract, such circumstances include but shall not be limited to:
 - War, hostilities, invasion, act of foreign enemies.
 - Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war.
 - Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors.
 - Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors.
 - Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity.
 - Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc.
 - Epidemic, pandemic etc.

The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.

If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.

The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of



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Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.

Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not

I. Constitute a default or breach of the Contract.

II. Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.

BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.

34.SET OFF CLAUSE

BHEL shall have the right to recover any money which in the sole opinion of BHEL is due from the supplier from any money due to the supplier under this Contract or any other contract or from the Security Deposit/BG furnished by the supplier under this Contract or any other contract.

35.CONFLICT OF INTEREST AMONG BIDDERS/AGENTS

Treatment of cases regarding conflict of interest:

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;
- The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.



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- A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

36. RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC.

The following are the responsibilities of the contractor in respect of observance of local laws, employment of personnel, payment of taxes etc. The subcontractor shall fully indemnify BHEL against any claims of whatsoever nature arising due to the failure of the contractor in discharging any of his responsibilities hereunder:

- a. As far as possible, Unskilled Workers shall be engaged from the local areas in which the work is being executed.
- b. The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.
- c. The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations, Notifications etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Fund and Miscellaneous Provisions Act, 1952, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970, Payment of Bonus & Gratuity Act, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996, The Building and Other Construction Workers' Welfare Cess Act 1996 and other Acts, Rules, and Regulations for labour/workers as applicable and as may be enacted by the State Government



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and Central Govt. during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also comply with provisions of and give all such notices to the local Governing Body, Police and other relevant Authorities as may be required by the Law. The Contractor shall without any fail maintain all the registers/records in proper formats as per all the Acts, Rules and Regulations mentioned in this clause 2.8.3.

- d. The Contractor shall obtain independent License under the Contract Labour (Regulations and Abolition) Act, 1970 for engaging contract labour as required from the concerned Authorities based on the certificate (Form- V or as applicable) issued by the Principal Employer/Customer. Form V is issued by the Principal Employer/End Customer and, therefore, may not be provided to any sub-contractor of the successful bidder, including consortium partners (if any). BHEL shall not be responsible for issuance or provision of Form V to any such sub-contractor. Gate pass shall also be issued only in the name of the agency to whom the labour license has been granted. The bidder shall submit its bid after duly considering the same and shall not raise any claim or dispute on this account at a later stage.
- e. The contractor shall pay and bear all taxes, fees, license charges, Cess, duties, deposits, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.
- f. While BHEL would pay the inspection fees and Registration fees of Boiler/Electrical Inspectorate, all other arrangements for site visits periodically by the Inspectorate to site, Inspection certificate etc. will have to be made by contractor. However, BHEL will not make any payment to the Inspectorate in connection with contractor's Welders/Electricians qualification tests etc.
- g. Contractor shall be responsible for provision of Health and Sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract
- h. The contractor shall be responsible for proper accommodation including adequate medical facilities for personnel employed by him.
- i. The contractor shall be responsible for the proper behaviour and observance of all regulations by the staff employed by him.
- j. The contractor shall ensure that no damage is caused to any person/property of other parties working at site/company premises. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.
- k. All the properties/equipment's/components of BHEL/their Client/customer loaned with or without deposit to the contractor in connection with the contract shall remain properties of BHEL/their Client/customer.
- l. The contractor shall use such properties for the purpose of execution of this contract. All such properties/equipment's/components shall be deemed to be in good condition when received by the contractor unless he notifies within 48



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hours to the contrary. The contractor shall return them in good condition as and when required by BHEL/their Client. In case of non-return, loss, damage, repairs etc. the cost thereof as may be fixed by BHEL Engineer will be recovered from the contractor.

- m. In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon if the item rates are not mentioned in existing contract.
- n. Any delay in completion of works/or non-achievement of periodical targets/non execution of contract due to the reasons attributable to the contractor, the same may have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than one shift. All these are to be carried out by the contractor at no extra cost.
- o. The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.
- p. All safety rules and codes applied by the Customer/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract.
The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.

Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per directions given by BHEL/Customer. The contractor has to assist in HSE audit by BHEL/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of BHEL/Customer.

- q. The contractor shall be directly responsible for payment of wages to his workmen/labours before the expiry of seven days from the last day of wage period and to ensure disbursement of wages in the presence of the representative from BHEL. A pay roll sheet giving all the payments given to the workers and duly signed by the contractor's representative should be



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furnished to BHEL site for the purpose of maintaining the records for compliance.

Contractor shall create awareness amongst their workforce by helping & encouraging in opening bank accounts and to encourage them to adopt digital mode of transactions. While releasing wages/ salary to their workers/ supervisors/ staff, Contractor shall comply with the GOI's guidelines for maximizing such transactions through Non-Cash / digital means.

- r. In case of any class of work for which there is no such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.
- s. Also, no idle charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour and Tools & Plants being rendered idle due to any reason at any time.
- t. The contractor shall take all reasonable care to protect the materials and work till such time the plant/equipment has been taken over by BHEL or their Customer whichever is earlier.
- u. The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and dealt with accordingly.
- v. The contractor shall keep the area of work clean and shall remove the debris etc. while executing day-to-day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The contractor will also demolish all the hutments, sheds, offices etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Engineer and the expenses recovered from the contractor.
- w. The contractor shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/ or as per the instructions of the Engineer.
- x. The Contractor to note that some of BHEL's T&Ps/MMDs may not be insured. The Contractor will take necessary precautions and due care to protect the same while in his custody from any damage/ loss till the same is handed over back to BHEL. In case the damage / loss is due to carelessness/ negligence on the part of the contractor, the Contractor is liable to get them repair/ replaced immediately and in case of his failure to do so within a reasonable time, BHEL shall to recover the loss from the contractor.



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y. For all works having contract value of Rs. 5,00,000/- or above, BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.

1. Victim: Any person who suffers permanent disablement or dies in an accident as defined below.
2. Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project Sites.
3. Compensation in respect of each of the victims:
 - In the event of death or permanent disability: Rs. 10,00,000/- (Rs. Ten Lakh).
 - resulting from Loss of both limbs
 - In the event of other permanent disability: Rs.7,00,000/- (Rs. Seven Lakh)
4. Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to section 2 (I) of the Employee's Compensation Act, 1923.

z. Contractor shall be fully responsible for the safety of their T&Ps and other material mobilized at site. In any case, BHEL shall not be liable for any damage/loss/misuse of any item(s) belong to the contractor. Contractor will ensure that the work/job is executed through his/her employees on and under no circumstances, the contractor shall subcontract the job without prior written permission from BHEL.

The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.



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1. SITE FACILITIES

The proposed project will be located in Lakhanpur area of Mahanadi coalfields Limited (MCL) Odisha. The total land area of the site is -350- acres. Plant site is located at Lakhanpur in Jharsuguda district of Odisha on the National Highway NH-49. NH-49 is passing at about 10 km from the site. The nearest railway station Belpahar is 10 km from the site. Nearest airport, Veer Surenda Sai Airport, 38 km, approx 1.5 hours journey by road/ rail. Nearest sea port Paradip is 450 km by rail/road from the site.

PURCHASER shall provide the following SITE facilities:

- Organisation and personnel for general co-ordination of site activities.
- General safety and security services.
- Unrestricted access to SITE

PURCHASER shall NOT provide any accommodation and facilities for travelling to and from SITE to the place of residence to the personnel of CONTRACTOR, deputed at SITE for performing WORK under CONTRACT, personnel of SUBCONTRACTOR and VENDOR.

Area for making shed/covered storage for storing EQUIPMENT will be provided by the PURCHASER, however, the construction of shed will be under CONTRACTOR scope. CONTRACTOR should ensure the received materials are safely stored in a closed shed.

Construction Water and Construction Power shall be provided at one point within battery limit on chargeable basis (presently at ₹ 10.08 /m³ (approx.) for Construction Water and ₹ 7.02/KWH (approx.) for Construction Power. In case of any escalation by statutory authorities in the unit rates during execution of Contract, the same shall be borne by Contractor).

For PRE-COMMISSIONING / COMMISSIONING/ START-UP phase, PURCHASER shall provide the following at defined Battery Limit;

Steam, Power and Cooling water shall be made available to the CONTRACTOR at one point of ASU battery limit 1 month prior to the end of Mechanical Completion period for Pre-commissioning by PURCHASER at ASU battery limit.

Note:

1. Even if CONTRACTOR completes MECHANICAL COMPLETION before the scheduled period, PURCHASER shall provide raw materials and utilities for the operation of the plant/project as per the contractual mechanical completion date. CONTRACTOR shall not claim any compensation on account of such early MECHANICAL COMPLETION and PURCHASER shall not be held liable for any time or cost implications owing to such early completion.

2. Storage insurance will be in PURCHASER's scope



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2. ACCEPTANCE OF PLANTS AND FACILITIES

CONTRACTOR's liabilities for the Performance Guarantees given for the PLANTS and Facilities in respect of capacity, consumption, product quality and pollution level shall be discharged only when the PERFORMANCE AND GUARANTEE TESTS as stipulated in Clauses 14 of the Technical specification for cryogenic ASU of the NIT and parameters specified in Annexure - TD, have been successfully carried out as per acceptance criteria specified below.

PLANT ACCEPTANCE CRITERIA

Subject to fulfilling PERFORMANCE AND GUARANTEE TESTS stipulated in Clause 14 of the Technical specification for cryogenic ASU of the NIT and parameters specified in Annexure-TD, PURCHASER shall be in readiness to accept the PLANTS. CONTRACTOR shall take all steps to fulfil the provisions of the CONTRACT for PURCHASER to issue PRELIMINARY ACCEPTANCE CERTIFICATE. No deviations from the parameters specified in sub clauses 3.2 and 3.3 of the technical specification is acceptable and the CONTRACTOR is liable to rectify the system to meet the specified end product requirement.

ISSUANCE OF PRELIMINARY ACCEPTANCE CERTIFICATE

Within 30 (thirty) DAYS from completing successfully PERFORMANCE & GUARANTEE TESTS by the CONTRACTOR, and CONTRACTOR fulfilling all the obligations under the provision of the CONTRACT, PURCHASER shall issue PRELIMINARY ACCEPTANCE CERTIFICATE to CONTRACTOR.

LABOUR AND STAFF

The CONTRACTOR shall make his own arrangement for labour, erection and COMMISSIONING engineers and all other staff required for carrying out the CONTRACT. The necessary permissions from Government of India regarding work permit and visa requirement shall be obtained by the CONTRACTOR.

The CONTRACTOR shall make his own arrangements for providing canteen service to his labour and staff. Open space for this purpose may be provided by PURCHASER. The CONTRACTOR shall at his own cost provide office and other accommodation for his staff and workmen. The CONTRACTOR shall also provide communication, transport, insurance coverage and medical facilities to his staff and workmen.

The CONTRACTOR shall be responsible for all statutory obligations and any other laws in this regard in force from time to time regarding the employment or conditions of service of CONTRACTOR's labour, workman or employees.

The CONTRACTOR shall observe all safety rules as required under various rules, regulations and laws in India and shall also strictly adhere to safety regulations of PURCHASER.



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3. CURRENCIES OF BID AND PAYMENT

For the purpose of this clause and any other relevant provisions in these documents, Foreign Currency (**maximum 5 (five) currencies namely USD, EUR, GBP, JPY and INR**) shall mean as quoted by the bidders.

Foreign Bidders may quote prices for MATERIALS to be imported into India either in Indian Rupees or in the Foreign Currencies or in a combination of Indian Rupees and the Foreign Currencies.

Bidders shall quote the price for MATERIALS and services to be procured from India and for expenses to be incurred in India only in Indian Rupees.

Indian bidders may quote the prices for materials to be imported into India in the Foreign Currency. Such bidders quoting in foreign currency shall separately indicate in a list the materials to be imported into India and the same shall be paid as per Terms of payment. (Clause 6)

Services shall be quoted only in INR by both Indian and Foreign Bidders.

The CONTRACTOR shall not be entitled to switch the quoted foreign currency to another foreign currency

The price quoted by the CONTRACTOR shall be gross of Indian Income Tax, and price(s) shall be deemed to include Indian Income Tax.

The CONTRACTOR shall submit billing schedule which is to be approved by the PURCHASER. The CONTRACTOR shall submit all invoices for a particular month under a single covering letter (once in a month) based on the billing schedule duly certified by PURCHASER with related documents.

Due Date for Payment

PURCHASER will make progressive payments as and when the payment is due as per the terms of payment set forth in the CONTRACT. Payment will become due and payable by PURCHASER within 90 days for NON MSE, 60 Days for MEDIUM and 45 Days for MSE CONTRACTOR'S, except Final Payment, from the date of receipt of CONTRACTOR'S bill/invoice by PURCHASER provided the documents submitted are complete in all aspects and are submitted as per billing schedule.



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4. PRICE VARIATION CLAUSE

Prices quoted by the Bidder for Materials and services in Indian Rupees shall be subject to price adjustment with ceiling of (+) 10% during performance of the Contract to reflect changes in the cost of material & labour, in accordance with the procedures specified below. No ceiling in case of reduction in prices.

4.1 For Material supply

$$V = P \times \left[F + A \left(\frac{A1}{A0} \right) + B \left(\frac{B1}{B0} \right) + L \left(\frac{L1}{L0} \right) \right]$$

4.2 For Services

$$V = P \times \left[F + L \left(\frac{L1}{L0} \right) \right]$$

Where,

V = Adjusted Price (in Rupees) to be paid.

P = Base Price (excluding taxes and duties) of supplies/materials and services quoted in INR at the time of bidding, as per Annexure BOQ.

For Item A, B & L

Suffix "0" – Base date for respective Index (April'2026)

Suffix"1" – Date of Actual Shipment or Schedule Date of shipment whichever is earlier

A1 = Index applicable as on 60 days prior to Date of Actual Shipment or Scheduled Date of shipment whichever is lower.

B1 = Index applicable as on 60 days prior to Date of Actual Shipment or Scheduled Date of shipment whichever is lower.

L1 = Index applicable as on 30 days prior to Date of Actual Shipment or Scheduled Date of shipment whichever is lower.



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S. No.	Item	Value of Co-Efficient	Name of published index and Origin	Value of Base date Indices (April'2026)
1	F= Fixed Portion	0.20 – For supply 0.50 – For services		
2	A = Index for "Hot Rolled (HR) Coils & Sheets, including Narrow Strip" under sub-group of "Mild Steel –Flat Products" under Group of "Manufacture of Basic Metals" as published by Ministry of Commerce and Industry, GOI	0.30	Economic Adviser / RBI Bulletin	A0=143.8
3	B = Index for "Manufacture of structural metal products" under Group of "Manufacture of Fabricated metal products, except Machinery and Equipment" as published by Ministry of Commerce and Industry, GOI	0.35	Base Year 2011-12 = 100	B0=131.7
4	L = Consumer price index for industrial workers (All India General) as published by Labour Bureau, Shimla	0.15 – For supply 0.50 – For services	Labour Bureau Shimla / RBI Bulletin Base Year 2016=100	L0= Will be informed Later

Upward price variation will be payable for the entire approved extended completion period (*) considering the applicable indices as per the above formula. Accordingly, in case of delay by the contractor beyond contractual delivery date for reasons attributable to contractor, no upward price variation shall be payable.

However, downward/ negative price variation shall be applicable for the actual completion period.

() Approved extended completion period shall mean the justified extension in completion period.*

For example: If Schedule date of Shipment is May'25 and the actual completion date is December'25 out of which extension up to October'25 is not attributable to the contractor, the upward price variation shall be payable only till October'25. However, downward price variation shall be applicable till December'25.



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5. STATUTORY VARIATION IN TAXES AND DUTIES

No variation on account of taxes and duties, statutory or otherwise, shall be payable by PURCHASER to CONTRACTOR except for GST, BOCW Cess and custom duty with applicable Cess/Surcharge. However, any such statutory variation for GST, Custom Duty with applicable Cess/Surcharge and BOCW Cess shall be payable up to GUARANTEED COMPLETION DATE against documentary evidence.

Any reduction in the amount of GST, BOCW Cess and Custom Duty with applicable Cess/Surcharge resulting from a reduction in the rate of GST, and Custom Duty with applicable Cess/Surcharge or remission or exemption from GST, BOCW Cess and Custom Duty with applicable Cess/Surcharge with respect to Goods and Services provided to the PURCHASER shall be deducted from contract price within the GUARANTEED COMPLETION DATE and also during the delayed contractual Project completion, if any.

Any new taxes, duties, cess, levies notified or imposed after the submission of Price Bid but before GUARANTEED COMPLETION DATE shall be to PURCHASER's Account.

In case the GUARANTEED COMPLETION DATE is extended for reasons solely attributable to PURCHASER, then any increase on account of statutory changes in GST, BOCW Cess and Custom duty with applicable Cess/Surcharge until the extended period shall be borne by PURCHASER. Further, any new taxes, duties, cess, levies notified or imposed after the submission of Price Bid during such extended GUARANTEED COMPLETION DATE shall be to PURCHASER's Account.

In case any such benefits are published by GOI during execution of the contract, the PURCHASER shall submit the required documents to the contractor to avail such benefit, however the benefit so received is to be passed on to the PURCHASER by the Contractor. Alternatively, such benefits will be recovered by PURCHASER from the contractor's bill.

6. TERMS OF PAYMENT

A. FOR SUPPLY OF MATERIALS

I. AGAINST APPROVAL OF DOCUMENTS

10% (Ten percent) direct EFT payment on approval of Documents (CAT-I / II / CATREL) and BG as stated below:



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Receipt Document	% of Pay
<ul style="list-style-type: none">• Project Schedule• Process flow Diagram• Process description• Material and Heat Balance• Civil Load Data• Plot Plan	5
<ul style="list-style-type: none">• Detailed dimensional general arrangement drawing of the total system with cross sectional details.• The drawing showing the supporting arrangement on floor including static & dynamic loading details at each support to be submitted for purchaser's approval.• Building drawings.• Hazardous area classification.• Instrument control philosophy.• List of bought out items & their specifications.• Material Selection data.	5

This payment shall be released after submission of Bank Guarantee for 100% of the value. This Bank Guarantee shall be valid up to 3 months after receipt of all MATERIALS at SITE and acceptance of same. The value of BG can be reduced every six months to the extent completion of supplies.

Note: If the seller/ contractor opts not to avail payments against drawing/ documents/ completion of milestones, then the above 10% amount shall be payable along with payment against receipt of material (receipted LR) at site. Under this condition, bank guarantee for equivalent amount stated above will not be required to be submitted.

II. AGAINST RECEIPT OF MATERIAL AT SITE

78% (Seventy Eight percent) direct EFT payment along with all applicable taxes and duties for the materials indicated in the Annexure BOQ from the date of Certificate of Verification and Good Condition of material at site by PURCHASER against the submission of below mentioned documents (Sub Clause (ii)). For imported materials, payment shall be on CAD basis from the date of receipt of documents, specified below (Sub Clause (i)) at BHEL bank. Respective bank charges to respective account.

If CONTRACTOR insists for L/C for foreign supplies portion (CIF value), only Usance L/C with 120 days credit will be opened one month prior to material readiness. Hence,



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CONTRACTOR shall intimate the material readiness accordingly for opening of LC. LC validity period will be 90 days and for any extension, applicable charges will be to supplier's account. Upon LC expiry the subsequent bills will be against CAD basis.

The bank charges relating to such Letter of Credit outside India, if any shall be to CONTRACTOR's account, while the charges payable to bankers in India shall be to PURCHASER account.

(i) DOCUMENTS TO BE SUBMITTED FOR IMPORTED MATERIALS

- a) Signed invoice(s)
- b) 2 of 3 original Bill of Lading and 4 (four) non-negotiable copies
- c) Certificate of country of origin issued by a competent authority
- d) Packing list
- e) Manufacturer's certificate of inspection for shipment duly approved by the CONTRACTOR in one original and one photocopy
- f) Third Party Inspection Release Note clearly indicating that equipment/ material has been inspected and accepted as per QAP approved by PURCHASER, or waiver certificate issued by PURCHASER
- g) Insurance Certificate
- h) Entry gate pass duly endorsed by PURCHASER's security for verification of physical entry of material to SITE.
- i) Certificate of Verification and Good Condition after receipt of material at site by PURCHASER.

(ii) DOCUMENTS TO BE SUBMITTED FOR INDIGENOUS MATERIALS

- a) Signed Invoice(s)
- b) Packing list.
- c) Manufacturer's certificate of inspection for shipment duly approved by the CONTRACTOR in one original and one photocopy
- d) Third Party Inspection Release Note clearly indicating that material has been inspected and accepted as per QAP approved by PURCHASER, or waiver certificate issued by PURCHASER.
- e) Railway Receipt/LR
- f) Insurance Certificate
- g) Entry gate pass duly endorsed by PURCHASER's security for verification of physical entry of material to SITE.
- h) Certificate of Verification and Good Condition after receipt of material at site by PURCHASER.



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III. AGAINST MECHANICAL COMPLETION CERTIFICATE

5 % (Five percent) for the materials indicated in the Annexure BOQ on issue of MECHANICAL COMPLETION Certificate

IV. AGAINST PRELIMINARY ACCEPTANCE CERTIFICATE

5 % (Five percent) for the materials indicated in the Annexure BOQ on issue of PRELIMINARY ACCEPTANCE CERTIFICATE

V. AGAINST CONTRACTOR'S CERTIFIED FINAL BILL

2 % (Two percent) for the materials indicated in the Annexure BOQ on completion of balance jobs, if any, against the CONTRACTOR'S Certified Final Bill, after issue of PRELIMINARY ACCEPTANCE CERTIFICATE.

Note for Indigenous bidders:

The payment of Foreign Currency price quoted by Indian bidders shall be paid only the Indian Rupee equivalent of the foreign currency cost of such materials in the converted INR with conversion rate (SBI TT Selling Rate) lower of below mentioned dates.

- Bill of Entry Date or proof of payment to sub vendor whichever is earlier.
- Schedule date of supply of the items/Mutually agreed date as finalized during kickoff meeting, in case of delayed supply.

B. FOR SERVICES

90% (Ninety Percent) of the Services Price component as per Annexure- BOQ, along with all applicable taxes and duties from the date of completion of the indicated services duly certified by the PURCHASER.

8 % (eight percent) for the materials indicated in the Annexure BOQ on issue of PRELIMINARY ACCEPTANCE CERTIFICATE

2 % (two percent) for the materials indicated in the Annexure BOQ on completion of balance jobs, if any, against the CONTRACTOR'S Certified Final Bill.

C. TRANSPORTATION & TRANSIT INSURANCE

100% (Hundred Percent) of Local Transportation charges (including port clearance, port handling and port charges etc., if applicable, and inland transit insurance charges) for the



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plant and equipment shall be paid to the Contractor pro-rata to the value of the equipment/commissioning spares received at site from the date of acknowledgement of completion of Activity by PURCHASER. The aggregate of all such pro-rata payments shall, however, not exceed the total amount identified in the Contract for Local Transportation (Annexure BOQ).

D. SUPPLY OF SPARES

100% (Hundred percent) direct EFT payment along with all applicable taxes and duties for the materials indicated in the Annexure MSP from the date of Certificate of Verification and Good Condition of material at site by PURCHASER against the submission of below mentioned documents (Sub Clause (ii)). For imported materials, payment shall be on CAD basis within 90 days from the date of receipt of documents, specified below (Sub Clause (i)) at BHEL bank. Respective bank charges to respective account.

If CONTRACTOR insists for L/C for foreign supplies portion (CIF value), only Usance L/C with 120 days credit will be opened one month prior to material readiness. Hence, CONTRACTOR shall intimate the material readiness accordingly for opening of LC. LC validity period will be 90 days and for any extension, applicable charges will be to supplier's account. Upon LC expiry the subsequent bills will be against CAD basis.

The bank charges relating to such Letter of Credit outside India, if any shall be to CONTRACTOR's account, while the charges payable to bankers in India shall be to PURCHASER account.

(i) DOCUMENTS TO BE SUBMITTED FOR IMPORTED MATERIALS

- a) Signed invoice(s)
- b) 2 of 3 original Bill of Lading and 4 (four) non-negotiable copies
- c) Certificate of country of origin issued by a competent authority
- d) Packing list
- e) Manufacturer's certificate of inspection for shipment duly approved by the CONTRACTOR in one original and one photocopy
- f) Third Party Inspection Release Note clearly indicating that equipment/ material has been inspected and accepted as per QAP approved by PURCHASER, or waiver certificate issued by PURCHASER
- g) Insurance Certificate
- h) Entry gate pass duly endorsed by PURCHASER's security for verification of physical entry of material to SITE.
- i) Certificate of Verification and Good Condition after receipt of material at site by PURCHASER.

(ii) DOCUMENTS TO BE SUBMITTED FOR INDIGENOUS MATERIALS

- a) Signed Invoice(s)
- b) Packing list.



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- c) Manufacturer's certificate of inspection for shipment duly approved by the CONTRACTOR in one original and one photocopy
- d) Third Party Inspection Release Note clearly indicating that material has been inspected and accepted as per QAP approved by PURCHASER, or waiver certificate issued by PURCHASER.
- e) Railway Receipt/LR
- f) Insurance Certificate
- g) Entry gate pass duly endorsed by PURCHASER's security for verification of physical entry of material to SITE.
- h) Certificate of Verification and Good Condition after receipt of material at site by PURCHASER.

Note:

As per extant provisions of Income Tax Act,1962 in India, foreign suppliers have to submit the following documents to avail benefits under DTAA at time of each dispatches, failing which TDS will be applicable considering Business Income in India. (Current TDS rate @ 40% as per the extant law provisions) plus applicable surcharge and cess is to be deducted u/s. 195 of I.T Tax Act

- Valid Tax Residency Certificate issued by Govt / Tax agency of country.
 - Form 10F duly filed signed.
 - No PE and No Business connection declaration in supplier's letter head.
 - Declaration of No Significant Economic Presence (SEP) in India as per Indian I.T Rule 11UD & indemnity to pay taxes at later stages on demand.
 - Self-declaration that Non-resident is eligible to obtain benefits of relevant DTAA between India and Supplier's country. (sample copy as per Annexure-DT)
 - Any deviation in the credit period of the payment term will attract loading as mentioned below.
- Repo Rate + 4% (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) shall be considered for loading for the period of relaxation sought by bidder's subject to competent authority approval.

Example of the same is provided below

Payment Terms	Relaxation period	Loading (Repo Rate 5.25% p.a. + 4%)
LC 90 days	30	0.76%
LC 60 days	60	1.52%
LC 30 days	90	2.28%

7. PROVISIONAL READINESS



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In case, COMMISSIONING and/or conductance of PERFORMANCE AND GUARANTEE TESTS of the PLANT is delayed by 15 months from MECHANICAL COMPLETION due to the reasons not attributable to CONTRACTOR, PLANT shall be considered as PROVISIONALLY READY with a DEFECT LIABILITY PERIOD of another 12 months from the date of PROVISIONAL READINESS. The Contract Security-Cum-Performance Bank Guarantee shall be extended, accordingly, by the CONTRACTOR.

Reasonable cost for Commissioning, and/or Sustained Load Test and/or conductance of Performance and Guarantee Tests and/or training of PURCHASER's personnel in PLANT shall be worked out mutually and shall be retained by PURCHASER. Payment against PRILIMINARY ACCEPTANCE less the aforesaid retention amount shall be released against submission of equivalent amount of separate Bank Guarantee (Valid upto DEFECT LIABILITY PERIOD plus 3 months.) by the CONTRACTOR upon PROVISIONAL READINESS of the PLANT. In case of any further delay in PGTR, BG shall be extended maximum 4 steps(each for 6 months duration). The bank guarantee already running as Contract Security-Cum-Performance Bank Guarantee shall be extended, by the CONTRACTOR so as to ensure its validity upto 06 months from the date of completion of DEFECT LIABILITY PERIOD.

This provision of PROVISIONAL READINESS shall not be applicable in case reasons for delay not attributable to the CONTRACTOR are resolved before the completion of 18 months from MECHANICAL COMPLETION date and COMMISSIONING and PERFORMANCE AND GUARANTEE TEST is started within 18 months from MECHANICAL COMPLETION date. In that case remaining activities including COMMISSIONING / PERFORMANCE AND GUARANTEE TESTS shall be completed as per the terms & conditions of the CONTRACT and security-cum-performance bank guarantee shall be extended, accordingly, by the CONTRACTOR so as to ensure minimum validity of 6 months from the expiry DEFECT LIABILITY PERIOD.

Even after the PROVISIONAL READINESS, CONTRACTOR shall not be absolved from his obligations of carrying out the remaining activities including COMMISSIONING / PERFORMANCE AND GUARANTEE TESTS.

The CONTRACTOR may, in consultation with the PURCHASER, demobilise the team from the Site. It shall remobilise when COMMISSIONING and/or conductance of PERFORMANCE AND GUARANTEE TESTS is called for by PURCHASER.

In case of PROVISIONAL READINESS, PURCHASER shall be responsible for care, custody and proper maintenance of the PLANT. However, PURCHASER, at its option, may retain the CONTRACTOR's services for watch, ward and preservation of the PLANT and reimburse the CONTRACTOR a mutually agreed reasonable cost incurred to do so.

After PROVISIONAL READINESS, on performance of PGTR by the CONTRACTOR, if the Guaranteed parameters are not achieved, then the CONTRACTOR shall furnish the



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Recommendation/Report for corrective action to be implemented by PURCHASER to achieve the desired Guaranteed parameters.

8. DEFECT LIABILITY PERIOD AND LATENT DEFECTS

The DEFECT LIABILITY PERIOD shall be for a period of 12 (Twelve) months from the date of PRELIMINARY ACCEPTANCE/PROVISIONAL READINESS.

(i) If at any time before the PRELIMINARY ACCEPTANCE or during the DEFECTS LIABILITY PERIOD stated below, the PROJECT MANAGER:

a. Claim that any matter is a DEFECT; and

b. as soon as reasonably practicable gives to the CONTRACTOR notice of the particulars of the DEFECT; the CONTRACTOR shall as soon as reasonably predictable make good the DEFECTS so notified and the PURCHASER shall so far as may be necessary place the PLANT at the CONTRACTOR's disposal for this purpose. The CONTRACTOR shall, if so required by the PROJECT MANAGER, submit his proposals for making good any DEFECT to the PROJECT MANAGER for his approval.

(ii) If the PURCHASER notifies any DEFECT arising from any breach of the CONTRACT by the CONTRACTOR, the CONTRACTOR shall bear his own cost of making good the DEFECT.

(iii) The performance guarantees are demonstrated only through the performance tests carried out before the achievement of the PRELIMINARY ACCEPTANCE CERTIFICATE.

(iv) CONTRACTOR shall carry out further test(s) on the repaired/replaced item during the DEFECT LIABILITY PERIOD having the sole purpose to verify that said item is capable of working in compliance with contractual requirements. Such test(s) shall not be intended as a repetition of the performance tests already performed.

(v) If DEFECT is made good after the issue of a PRELIMINARY ACCEPTANCE CERTIFICATE, the PROJECT MANAGER may require the CONTRACTOR to repeat any appropriate performance test for the purpose of establishing that the DEFECT has been made good. The CONTRACTOR shall be responsible for the cost of any repeat inspection or test in the event of an inspection or test failure.

(vi) If in the course of making good any DEFECT which arises during the DEFECTS LIABILITIES PERIOD and CONTRACTOR repairs, replaces or renew any part of the PLANT, Clause 8 of Commercial Terms Part-I shall apply to the repair or to that part of the PLANT so replaced or renewed and shall further apply until the expiry of a period of 12 months from the date of such repair, replacement or renewal (the extended DEFECTS LIABILITY PERIOD).



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- (vii) If the CONTRACTOR does not make good with a reasonable time any DEFECT which he is liable to make good under Sub-Clause (i), then the PURCHASER may, without prejudice to any other remedies or relief available to him under the CONTRACT, proceed to do the work, provided that the PURCHASER gives at least fourteen DAYS notice of his intention.
- (viii) If the PURCHASER reasonably requires that any DEFECT notified to the CONTRACTOR under Sub-clause (i) which arises during the DEFECT LIABILITY PERIOD be made good urgently and the CONTRACTOR is unable or refuses to comply within a reasonable time, the PURCHASER may, without prejudice to any other remedies or relief available to him under the CONTRACT, proceed to do the work in such a manner as the PROJECT MANAGER may decide, including the employment of a third party.
- (ix) If the PURCHASER has made good a DEFECT in accordance with Sub-clause (vii) or (viii), the CONTRACTOR shall reimburse the PURCHASER his reasonable cost along with overhead cost involved in doing so provided that the PURCHASER gives a notice to the CONTRACTOR of his intention and submits a claim supported by DOCUMENTS. The PROJECT MANAGER and the CONTRACTOR may agree the amount to be paid by the CONTRACTOR, or in the absence of agreement the PROJECT MANAGER shall decide such amount as may be reasonable. Such amount shall be:
- i. deducted from any money that would otherwise be payable under the CONTRACT;
 - or
 - ii. paid by the CONTRACTOR to the PURCHASER
- (x) If the PLANT cannot be used because of a DEFECT to which this Clause 8 applies, the DEFECTS LIABILITY PERIOD, or if applicable the extended DEFECTS LIABILITY PERIOD, shall be extended by a period equal to the period during which it cannot be used. Similarly, the DEFECTS LIABILITY PERIOD, or if applicable the extended DEFECTS LIABILITY PERIOD shall be extended by any period wherein the PLANT cannot be used by reason of the CONTRACTOR putting the PLANT into such condition that it passes any relevant performance test or attempting to do so.

LATENT DEFECTS

At the end of the Defect Liability Period, the contractor liability ceases except for latent defects. The contractor's liability for latent defects warranty shall be limited to a period of five (5) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the Defect Liability Period in this clause 8, but later



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9. FINAL ACCEPTANCE CERTIFICATE

Subject to Sub-clause 8.x and clause 9, as soon as DEFECT LIABILITIES PERIOD for the PLANT has expired or the CONTRACTOR has made good all DEFECTS that have within such period appeared in the PLANT or a Section in accordance with Clause 8, whichever is later, the PROJECT MANAGER shall issue a certificate (a 'FINAL ACCEPTANCE CERTIFICATE') to the CONTRACTOR stating that the PLANT or Section and any related work have finally been completed and the date of that completion

If Sub-clause 8.vi continues to apply to any part of the PLANT, the PROJECT MANAGER shall as soon as clause 9 is otherwise satisfied, issue a FINAL ACCEPTANCE CERTIFICATE for the remainder of the PLANT or Section in which the repair or part is included, provided that such repair or part is then free from DEFECTS which the CONTRACTOR is bound to make under Clause 9. Such repair or part shall then be treated as if it were a separate Section and shall be the subject of separate FINAL ACCEPTANCE CERTIFICATE.

The FINAL ACCEPTANCE CERTIFICATE shall constitute conclusive evidence for all purposes and in any proceedings whatsoever between the PURCHASER and the CONTRACTOR that the CONTRACTOR has completed that part of the PLANT and made good all DEFECTS therein in all respects in accordance with his obligations under the CONTRACT.

Where there is more than one FINAL ACCEPTANCE CERTIFICATE the last to be issued shall be identified as being the last FINAL ACCEPTANCE CERTIFICATE.

No FINAL ACCEPTANCE CERTIFICATE shall be conclusive as stated above if it or any other FINAL ACCEPTANCE CERTIFICATE was issued in reliance upon any fraudulent act, misrepresentation or concealment.

10. REPLACEMENT OF PARTS AND MATERIALS DEFECTIVE/DAMAGED/LOST DURING TRANSIT/ ERECTION AND COMMISSIONING)

If during the progress of the WORKS, the PURCHASER shall decide and inform in writing to the CONTRACTOR that the CONTRACTOR has manufactured any plant or part of the plant unsound or imperfect or has furnished any plant inferior to the quality specified, the CONTRACTOR on receiving details of such defects or deficiencies shall at his own expense, within seven (7) days of his receiving the notice or otherwise within such time as may be reasonably necessary for making it good, proceed to alter, reconstruct or remove such work and furnish fresh equipment up to the standards of the specifications. In case the CONTRACTOR fails to do so, the PURCHASER may on giving the CONTRACTOR seven (7) days' notice in writing of his intentions to do so, proceed to remove the portion of the works so complained of and at the cost of the CONTRACTOR perform all such work or furnish all such



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equipment provided that nothing in this clause shall be deemed to deprive the PURCHASER of or affect any rights under the CONTRACT which the PURCHASER may otherwise have in respect of such defects and deficiencies.

If the material/ equipment or any portion thereof is damaged or lost during transit and handling, storage, erection, commissioning at site, the replacements of such material / equipment shall be effected by the CONTRACTOR within a reasonable time to avoid unnecessary delay in the COMMISSIONING of the EQUIPMENT and without waiting for realisation of cost of damages from the insurance company, appointed by him for this purpose. This will not alter the schedule of commissioning & guarantee tests in any way.

11. LIQUIDATED DAMAGES (LD)

i. For Delay in Completion

- a) Time is the essence of the contract.
- b) The ordered items shall be delivered/erected/commissioned as per the delivery period mentioned in the CONTRACT. The material supplies/services shall be in adherence to the list of items along with delivery schedules that will be finalised during the Kick off meeting with the CONTRACTOR in line with GUARANTEED COMPLETION DATE.
- c) In case the CONTRACTOR supplies/erects/commissions the ordered items/services/spares beyond the delivery period specified, Liquidated Damages as detailed below shall be levied from the CONTRACTOR without prejudice to any other relief /compensation available to PURCHASER under any other condition of the contract/applicable legal provisions.
- d) Failure to dispatch the supplies/erect/commissions/render service in the time as per the delivery for the CONTRACT finalised as per sub clause (b) above would make the CONTRACTOR liable to a Liquidated Damages at the rate of 0.5% of the delayed value per week of the delay or part thereof
- e) Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).
- f) Indigenous: Date of reckoning LD shall be as below:
For Material Supply to Project Site: - Date of Certificate of Verification and Good Condition of material at site by PURCHASER.
For Services: - Date of completion of the indicated services duly certified by the PURCHASER.
- g) In the event the CONTRACTOR fails to attain the PRELIMINARY ACCEPTANCE within the GUARANTEED COMPLETION DATE due to the reasons for which CONTRACTOR is liable under CONTRACT then the CONTRACTOR shall pay to the PURCHASER as LD at the rate of 0.5 % of the TOTAL CONTRACT PRICE per week of delay or part thereof



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- h) Maximum value of LD as per sub-clause d) and g) will be limited of 10% of the TOTAL CONTRACT PRICE.
- i) Liquidated Damages, wherever referred under this Tender/Agreement, shall mean and refer to the damages, not in the nature of penalty, which the contractor agrees to pay in the event of delay in delivery of CONTRACTOR, breach of contract etc. as the case may be.
- j) Liquidated Damages, wherever referred under this Tender, shall mean and refer to the damages, not in the nature of penalty, which the contractor agrees to pay in the event of delay in delivery of supplies/services, breach of contract etc. as the case may be.

ii. For Failing to Meet Utility requirement

CONTRACTOR shall guarantee overall consumption of the utilities (Cooling Water, Power, Steam (at 40 kg/cm²(g) & 380 °C). The values shall be indicated by the CONTRACTOR in the Price BID BOQ (Excel Sheet). In the event of any of the utility consumption exceeding 100% but up to 102.5% of the Guaranteed Works, the CONTRACTOR will pay the PURCHASER Liquidated Damages as specified hereunder.

- a) For every 0.50% increase in any of the utility consumption specified in the Price BID BOQ(Excel), the CONTRACTOR will pay Liquidated Damages (LD) equal to 1.0% of the TOTAL CONTRACT PRICE.
- b) If the utility consumption as demonstrated during the performance test is more than 102.5% of the Guaranteed utility consumption, then the CONTRACTOR shall take corrective action irrespective of the cost involved. In case the Guaranteed utility consumption is more than 102.5% even after taking the corrective action, the same shall be considered as breach of Contract.

12. WARRANTY

It shall be a condition of the CONTRACT and the CONTRACTOR shall ensure and undertake that the plant shall achieve the requirement as set forth herein and as per Clause 14 of the technical specification for cryogenic ASU (Doc no: 3002) and Annexure-TD

The CONTRACTOR shall ensure and undertake that the Plants, Equipment and machineries will be new and in accordance with the CONTRACT documents and free from defects in design, material and workmanship and **shall give warranty for a period of Twelve (12) calendar months commencing immediately upon PRELIMINARY ACCEPTANCE.**

After the issue of the PRELIMINARY ACCEPTANCE CERTIFICATE, in the event of an emergency where, in the judgement of the PURCHASER, delay would cause serious loss or damage, repairs or adjustments may be made by the PURCHASER or a third party chosen by the PURCHASER without advance notice to the CONTRACTOR and the documented and direct



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cost of such work shall be paid by the CONTRACTOR but only to the extent that the repair or adjustment was due a defect attributable to CONTRACTOR as ascertained by PURCHASER.

The cost of any special or general overhaul rendered necessary during the warranty period due to defects for which CONTRACTOR is liable under CONTRACT in the PLANT or defective work carried out by the CONTRACTOR shall be borne by the CONTRACTOR.

The acceptance of the equipment by the PURCHASER shall in no way relieve the CONTRACTOR of his obligation under this clause.

In the case of those defective parts which are not repairable at site but are essential for the commercial use of the equipment and machineries, the CONTRACTOR shall mutually agree to a programme of replacement or renewal which will minimise interruption to the maximum extent, in the operation of the equipment and machineries.

At the end of the DEFECTS LIABILITY PERIOD or the extended DEFECTS LIABILITY PERIOD, the CONTRACTOR's liability ceases. In respect of goods supplied by the SUB-CONTRACTORS to the CONTRACTOR where a long guarantee (more than 12 months) is provided by such SUB-CONTRACTORS/ VENDOR(s)/SUB-VENDOR(s), the PURCHASER shall be entitled to the benefit of such longer guarantees.

During the guarantee period, the CONTRACTOR shall provide if required by the PURCHASER the services of operation engineers to advise the PURCHASER for such period and in such number as may be mutually agreed upon. The CONTRACTOR's operation engineers shall also train the PURCHASER's personnel, act as a liaison between the PURCHASER and the CONTRACTOR, assist the PURCHASER in ordering and obtaining spare parts, generally monitoring operation and maintenance and trouble shooting and supervising repair work under guarantee.

The provisions of cost of transport, insurance etc. shall be implemented at the CONTRACTOR's expenses.

Performance Guarantees

CONTRACTOR shall guarantee the performance of PLANTS and associated offsite utilities as specified in the Technical Documents. Guarantees shall be demonstrated as described in Clause 14 of the technical specification for cryogenic ASU (Doc no: 3002) and Annexure-TD

Design and Vendors'/ Sub-Contractors' Guarantees

CONTRACTOR shall guarantee the design and engineering work carried out by him against mistakes, errors, defective specifications, inadequacy and other such items which lead to the supply of inadequate PLANTS and Facilities. In case of detection of such mistakes, errors, deficiencies etc. the CONTRACTOR shall redo the design and/or engineering work to overcome all such mistakes, errors, deficiencies etc. at no extra cost to PURCHASER.



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CONTRACTOR shall be responsible for all the items of the EQUIPMENT procured by him from VENDORS/ SUB-CONTRACTORS. Further, CONTRACTOR shall replace or repair any item of EQUIPMENT which is demonstrated to be defective under normal operating conditions within DEFECT LIABILITY PERIOD.

13.CONTRACT SECURITY CUM PERFORMANCE BANK GUARANTEE (CS cum PBG)

13.1 Within 30 days after issue of LOA/Purchase Order, the CONTRACTOR shall furnish to the PURCHASER Contract Security cum Performance Guarantee for faithful completion of Project, as per terms and conditions of the Contract, issued by PURCHASER'S approved list of Scheduled Commercial Banks (Annexure 18) for an amount equivalent to 10% of the TOTAL CONTRACT PRICE.

13.2 Modes of deposit:

a) Contract security cum performance guarantee may be furnished in the following forms:

- i. Local cheques of Scheduled Banks (subject to realization)/ Pay Order/Demand Draft/ Electronic Fund Transfer in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ
- ii. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee should be in the prescribed format of BHEL.
- iii. Fixed Deposit Receipt (FDR) issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).
- iv. Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL).
- v. Insurance Surety Bond.

Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

b) In case of GTE tenders, the performance security should be in the same currency as the contract and must conform to Uniform Rules for Demand Guarantees (URDG 758) - an international convention regulating international securities.

13.3 The Performance Security shall not carry any interest.

13.4 There is no exemption of contract security cum performance guarantee submission for MSE Vendors.

13.5 The contract security cum performance guarantee will be forfeited and credited to BHEL's account in the event of a breach of contract by the Supplier/Vendor r as provided herein or elsewhere in the Contract/PO..

13.6 Contract security cum performance guarantee shall be refunded to the CONTRACTOR without interest, after the CONTRACTOR duly performs and completes the contract in all respects.



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The Contract Security cum Performance Guarantee will be invoked by the PURCHASER on CONTRACTOR's failure to complete their obligations under the CONTRACT without prejudice to any of the rights or remedies the PURCHASER may be entitled to as per terms and conditions of the CONTRACT. The proceeds of Contract Security cum Performance Bank Guarantee (CS cum PBG) shall be appropriated as compensation for any loss resulting from such failure of the CONTRACTOR. The CS cum PBG shall be denominated in the currency/currencies of the CONTRACT.

The contract security cum performance guarantee shall be valid up to DEFECTS LIABILITY PERIOD as covered in clause 8 above plus six months. The CONTRACTOR shall extend the validity of the CS cum PBG suitably if it is required due to change in the Defect Liability Period/Deemed Defect Liability Period at its own cost. The bank guarantee shall be suitably extended in event of repair/replacement of equipment or any part thereof during DEFECT LIABILITY PERIOD to take care of extended warranty period of repair/ replacement. The proforma for this bank guarantee is enclosed as Annexure-BG. The bank guarantee will be discharged by the PURCHASER after the CONTRACTOR's performance obligation including any warranty obligation under the CONTRACT. For any component replaced during DEFECT LIABILITY PERIOD, the component should work satisfactorily for a period of 12 months from the date of replacement.

NOTE:

- (i) Any bank guarantee may it be for Bid Security (EMD) or CS cum PBG shall be issued by PURCHASER'S approved list of Banks (Annexure 18).
- (ii) The non-judicial Stamp paper of appropriate value only or equivalent document value prevailing in the country of the CONTRACTOR shall have to be purchased in the name of the bankers executing the bank guarantee and not in the name of the CONTRACTORS.

Rights of the PURCHASER to invoke Contract Security-cum-Performance Bank Guarantee:

- I. Whenever any claim against the CONTRACTOR for the payment of a sum of money arises out or under the CONTRACT, the PURCHASER shall be entitled to recover such sum by invoking and appropriating in part or whole the Security-cum-Performance Bank Guarantee of the CONTRACTOR. In the event of the security being insufficient or if no security has been taken from the CONTRACTOR, then the balance or the total sum recoverable, as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the CONTRACTOR. The CONTRACTOR shall pay to the PURCHASER on demand any balance remaining due.
- II. All compensation or other sums of money payable by the CONTRACTOR to the PURCHASER under terms of this CONTRACT may be deducted from or paid by the invoking/encashment of a sufficient part of his Security-cum-Performance Guarantee or from any sums which may be due or may become due to the CONTRACTOR by the



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PURCHASER of any account whatsoever and in the event of his Rights of the PURCHASER to forfeit Security-cum-Performance Guarantee as per the terms of this tender.

14. SUBMISSION OF CIVIL INPUT BY CONTRACTOR

Data for civil design/ foundation details along with civil load data shall be submitted by CONTRACTOR. Six-month time period is required by PURCHASER to complete the civil work. CONTRACTOR shall submit the Civil Design/Foundation details accordingly so that the MECHANICAL COMPLETION and PRELIMINARY ACCEPTANCE time lines are achieved.

Commissioning of PLANT on account of delay in submitting the Data for civil design/ foundation details along with civil load data shall be attributable to the contractor and extension of time shall not be entertained.

ANNEXURE- 1**CHECK LIST**

NOTE: - Suppliers are required to fill in the following details in their Letterhead and no column should be left blank

A	Name and Address of the Supplier		
B	GSTN No. the Supplier (Place of Execution of Contract / Purchase Order)		
C	Details of Contact person for this Tender	Name: Mr./ Ms. Designation: Telephone No: Mobile No: Email ID:	
D	EMD DETAILS	Not applicable	
E	DESCRIPTION	APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
i.	Whether Pre - Qualification Criteria is understood and provided proper supporting documents.	Applicable/ Not Applicable	YES / NO
ii.	Whether all pages of the Tender documents including annexures, appendices etc. are read and understood	Applicable/ Not Applicable	YES / NO
iii.	Audited Balance Sheet and profit & Loss Account for the last three years	Applicable/ Not Applicable	YES / NO
iv.	Copy of PAN Card & GST registration for Indigenous suppliers	Applicable/ Not Applicable	YES / NO
v.	Submission of MSE certificate as specified in Tender	Applicable/ Not Applicable	YES / NO
vi.	Offer forwarding letter / tender submission letter as per Annexure 2	Applicable/ Not Applicable	YES / NO
vii.	Submission of Certificate of No Deviation as per Annexure 3	Applicable/ Not Applicable	YES / NO
viii.	Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings as per Annexure 4	Applicable/ Not Applicable	YES / NO
ix.	Declaration by Authorized Signatory as per Annexure 5	Applicable/ Not Applicable	YES / NO
x.	Declaration by Authorized Signatory regarding Authenticity of submitted Documents Annexure 6	Applicable/ Not Applicable	YES / NO
xi.	Submission of Non-Disclosure Certificate as per Annexure 7	Applicable/ Not Applicable	YES / NO

xii.	Submission of Integrity Pact as specified in Tender as per Annexure 8	Applicable/ Not Applicable	YES / NO
xiii.	Declaration confirming knowledge about Site Conditions as per Annexure 9	Applicable/ Not Applicable	YES / NO
xiv.	Declaration reg. Related Firms & their areas of Activities as per Annexure 10	Applicable/ Not Applicable	YES / NO
xv.	Declaration for relation in BHEL as per Annexure 11	Applicable/ Not Applicable	YES / NO
xvi.	Declaration reg. minimum local content in line with revised public procurement as per Annexure 12	Applicable/ Not Applicable	YES / NO
xvii.	Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 as per Annexure 13	Applicable/ Not Applicable	YES / NO
xviii.	Bank Account Details for E-Payment as per Annexure 14	Applicable/ Not Applicable	YES / NO
xix.	Power of Attorney for submission of tender as per Annexure 15	Applicable/ Not Applicable	YES / NO
xx.	Proforma of Bank Guarantee for Earnest Money as per Annexure 16	Applicable/ Not Applicable	YES / NO
xxi.	Bank guarantee for performance security as per Annexure 17	Applicable/ Not Applicable	YES / NO
xxii.	List of consortium bank as per Annexure 18	Applicable/ Not Applicable	YES / NO

NOTE: Strike off 'YES' or 'NO', as applicable. Tender not accompanied by the prescribed above applicable documents are liable to be summarily rejected.

DATE:

Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE - 2

OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:

Date:

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Submission of Offer against Enq No:

Having examined the tender documents against your Enq Bid No.

_____ dated _____ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with

_____ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us and as per the indicated delivery schedule.

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Performance Security' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

Authorized Representative of Bidder

Signature:

Name:

Address:

Place:

Date:

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

Manager/MM/BOI – BHEL TRICHY 620014

Dear Sir,

Subject: **No Deviation Certificate**

Ref: 1) ENQUIRY NO:-----

2) All other pertinent issues till date

Description	Cryogenic Air Separation Unit (ASU)	
Drawings/ specification/ data sheet / type test requirements	<ul style="list-style-type: none"> • Technical Specification for Cryogenic Air Separation Unit (ASU) (Doc no: TCG -007 ASU) • Annexures- TD to Technical Specification • Annexure F: Instrumentation & Control System Philosophy • Annexure C- Datasheet - Air Separation Unit • Annexure G- Scope Matrix between BHEL and ASU vendor • Annexure MSP • ANNEXURE J – COOLING WATER REQUIREMENTS • Plot plan with boundary limits and terminal point details • Cooling water analysis • Commercial Terms Part-I • Commercial Terms Part-II • Definition of Terms and Interpretation 	
Document reference	BHEL enquiry called for	Firm's alternative offer

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Yours faithfully,

**(Signature, date & seal of authorized
representative of the bidder)**

Date:

Place:

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE- 4

UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

Manager/MM/BOI – BHEL TRICHY 620014

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: Enquiry No : -----

I/We, _____
declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

**Sign. of the AUTHORIZED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE 5

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration by Authorised Signatory

Ref: 1) Enquiry No:

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

**(Signature, Date & Seal of Authorized
Signatory of the Bidder)**

Date:

Enclosed: Power of Attorney

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

Manager/MM/BOI – BHEL TRICHY 620014

Dear Sir,

Sub: **Declaration by Authorised Signatory regarding Authenticity of submitted documents.**

Ref: 1) Enquiry No. & Date: -----

2) All other pertinent issues till date

I/We, hereby certify that all documents submitted by us in support of possession of "Qualifying Requirements" are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

**(Signature, Date & Seal of Authorized
Signatory of the Bidder)**

Date:

NON-DISCLOSURE CERTIFICATE

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

I/We understand that BHEL TRICHY is committed to Information Security Management System as per their Information Security Policy.

Hence,

I/We

M/s

.....
who are submitting offer for providing services to BHEL TRICHY against Enquiry No -----Here by undertake to comply with the following in line with Information Security Policy of BHEL TRICHY.

- To maintain confidentiality of documents & information which shall be used during the execution of the Contract.

- The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL TRICHY.

(Signature, date & seal of Authorized Signatory of the bidder)

Date:

Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders / Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SL	IEM	Email
1.	Dr. Sarat Kumar Acharya, Ex-CMD, NLC	iem1@bhel.in
2.	Shri R. Mukundan, IRPS (Retd.)	iem2@bhel.in
3.	Shri Madan Lal Meena, IAS (Retd.)	iem3@bhel.in

(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) departments officials whose contact details are provided below.

Details of contact person(s): -

(1)

Name: R Srijamole

Deptt: MM/BOI

Address: 24 Building, BHEL,
Trichy

Phone: 0431-2577872

Email: srija@bhel.in

(2)

Name: S Sujit

Deptt: MM/BOI

Address: 24 Building, BHEL,
Trichy

Phone: 0431-257 5576

Email: ssujit@bhel.in

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE 9

DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration confirming knowledge about Site conditions

Ref: 1) Enquiry No:

2) All other pertinent issues till date

I/We, _____ hereby declare and confirm that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

**(Signature, Date & Seal of Authorized
Representative of the Bidder)**

Date:

Place:

ANNEXURE 10**DECLARATION**

Date: _____

To,

Manager/MM/BOI – BHEL TRICHY 620014

Dear Sir/ Madam,

Sub: **Details of related firms and their area of activities**

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable)

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
...		

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,

(_____)

From: M/s _____

Supplier Code: _____

Address: _____

DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration for relation in BHEL

Ref: 1) Enq No:

I/We hereby submit the following information pertaining to relation/relatives of Proprietor/Partner(s)/ Director(s) employed in BHEL

Tick (✓) any one as applicable:

1. The Proprietor, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprietor, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

i.

ii.

(Signature, Date & Seal of Authorized Signatory of the Bidder)

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.

DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH

REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND SUBSEQUENT ORDER(S)

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) Enq No:

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (specify the name of the organization here) has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

1. _____
2. _____
3. _____
4. _____

...

Thanking you,

Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the
Bidder)**

** - Strike out whichever is not applicable.

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE 13

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref: 1) Enquiry No:-----

2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that _____ (SPECIFY THE NAME OF THE ORGANIZATION HERE), is not from such a country/ has been registered with the Competent Authority (attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT)).

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,

Yours faithfully,

(Signature, Date & Seal of

Authorized Signatory of the Bidder)

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

ENQUIRY NO: 1802600063

ITEM: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

PROJECT: Bandhabal, Jharsuguda district, Odisha (India)

ANNEXURE 14

BANK ACCOUNT DETAILS FOR E-PAYMENT

(To be given on Letter head of the Company /Firm of Bidder, and ENDORSED (SIGNED & STAMPED)

BY THE BANK to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS)

-
1. Beneficiary Name :

 2. Beneficiary Account No. :

 3. Bank Name & Branch :

 4. City/Place :

 5. 9 digit MICR Code of Bank Branch :

 6. IFSC Code of Bank Branch :

 7. Beneficiary E-mail ID :
(for payment confirmation)

NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, kindly submit photocopy of the same

POWER OF ATTORNEY for SUBMISSION OF TENDER

(To be typed on non-judicial stamp paper of minimum Rs. 100/- and Notarized)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr. , whose signature given below herewith to be true and lawful Attorney of M/s..... hereinafter called 'Company', for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Central Procurement Cell (CPC), in connection with.....vide GeM Bid No: _____, dated _____.

And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF, the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document.

Dated at _____, this _____ day of _____

Director/CMD/Partner/Proprietor

Signature of Mr. (Attorney)

Attested by: Director/CMD/Partner/Proprietor

Witness

Notary Public

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY

(On non-Judicial paper of appropriate value)

Bank Guarantee No.....

Date.....

To

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....¹(Tender Conditions), M/s. having its registered office at² (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....³ invited by⁴(name of the Employer) through its Unit at(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of⁵ is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the[Name & address of the Bank]

..... having our Registered Office at

.....(hereinafter referred to as the Bank) being the Guarantor under this

Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs.

.....⁵ (in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....⁶ and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the⁷ we shall be discharged from all liabilities under this Guarantee.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....⁵
- b. This Guarantee shall be valid up to⁶

- c. Unless the Bank is served a written claim or demand on or before _____⁷ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Date.....

Place of Issue.....

¹ *Details of the Invitation to Bid/Notice Inviting Tender*

² *Name and Address of the Tenderer*

³ *Details of the Work*

⁴ *Name of the Employer*

⁵ *BG Amount in words and Figures*

⁶ *Validity Date*

⁷ *Date of Expiry of Claim Period*

Notes:

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Contractor/sub-contractor /vendor/ Bank issuing the guarantee.
3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
4. **In Case of Bank Guarantees submitted by Foreign Vendors-**
 - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e., Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**

b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

BANK GUARANTEE FOR PERFORMANCE SECURITY

(On non-Judicial paper of appropriate value)

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____² hereinafter referred to as the 'Vendor / Contractor / Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----) / FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

We,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs -----⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or

Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/ satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

WeBANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the⁸ we shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....⁶
- b. This Guarantee shall be valid up to⁷
- c. Unless the Bank is served a written claim or demand on or before⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER i.e., Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.
3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
4. **In Case of Bank Guarantees submitted by Foreign Vendors-**
 - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e.

Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

LIST OF CONSORTIUM BANK

SI. No.	NAME OF THE BANK
1	State Bank of India
2	Canara Bank
3	IDBI Bank Limited
4	ICICI Bank Limited
5	HDFC Bank Limited
6	Axis Bank
7	IndusInd Bank Limited
8	Bank of Baroda
9	Exim Bank
10	Indian Bank
11	Punjab National Bank
12	Union Bank of India
13	Yes Bank Limited
14	RBL Bank Ltd.
15	Standard Chartered Bank
16	Indian Overseas Bank
17	Kotak Mahindra Bank Limited
18	Federal Bank Limited
19	Hongkong and Shanghai Banking Corporation Ltd

INTEGRITY PACT**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Bharatiya Nyaya Sanhita (BNS) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process, terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above, the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non-binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.

- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.

- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract.

R. Sujith

For & On behalf of the Principal
(Office Seal)

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place _____ **R. SRIJA MOLE**
 Date _____ **Manager / Purchase / BO**
Materials Management
Bharat Heavy Electricals Limited
 Witness: **Tiruchirappalli, Tamil Nadu - 620 014**
 (Name & Address) _____

Witness: _____
 (Name & Address) _____

S. SUJIT
Sr. Manager / Purchase / BO
Materials Management
Bharat Heavy Electricals Limited
Tiruchirappalli, Tamil Nadu - 620 014

DECLARATION REGARDING BANNED/BLACKLISTED/DELISTING AND LIQUIDATION, COURT RECEIVERSHIP (On Bidder's Letter Head)

To,
.....

SUB:

Dear Sir,

We hereby confirm that we have not been banned or blacklisted or de-listed or put on Holiday by any Government / Quasi-Government / Public Sector Undertaking / Private Firm / Financial Institutions on due date of submission of bid.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

If it is found at a later date that the Contractor has secured the contract by furnishing wrong information or by suppressing facts in the bid submitted, OWNER reserves the right to cancel the contract and forfeit the EMD/ Security cum Performance Guarantee and put the CONTRACOR on Holiday / Banned / Blacklist for a period of two years by Owner (CIL, BHEL) and PDIL.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to OWNER by us.

Place: [Signature of Authorized Signatory of Bidder]

Date: **Name:**

Designation:
Seal:

Annexure-CFI

Declaration of sister / common business / management units in same / similar line of business for the quoted items in this tender.

Bidder details:

NIT Reference:

Sl. No.	Name of Sister Concern / Common business / Management Units	Relationship with Bidder	Nature of Business with BHEL

signature and Seal for bidder

FORM NO. 10F

[See sub-rule (1) of rule 21AB]

Information to be provided under sub-section (5) of section 90 or sub-section (5) of section 90A of the Income-tax Act, 1961

I, *son/daughter of Shri..... in the capacity of (designation) do provide the following information, relevant to the previous year..... *in my case/in the case of..... for the purposes of sub-section (5) of *section 90/section 90A:—

<i>Sl.No</i>	<i>Nature of information</i>	<i>:</i>	<i>Details #</i>
(i)	Status (individual, company, firm etc.) of the assessee	:	
(ii)	Permanent Account Number or Aadhaar Number of the assessee if allotted	:	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)	:	
(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident	:	
(v)	Period for which the residential status as mentioned in the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A is applicable	:	
(vi)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (v) above, is applicable	:	

2. I have obtained a certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A from the Government of (name of country or specified territory outside India)

Signature:

Name:

Address:

Permanent Account Number or Aadhaar Number

Verification

I do hereby declare that to the best of my knowledge and belief what is stated above is correct, complete and is truly stated.

Verified today the day of.....

.....
Signature of the person providing the information

Place:

Notes :

1. *Delete whichever is not applicable.
2. #Write N.A. if the relevant information forms part of the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A.

ANNEXURE- DT2

We do not wholly or partly carry on business in the Republic of India through a Permanent Establishment in India. Further we do not constitute any Permanent Establishment in India in accordance with the Article No. 5 of the DTAA between India and _____ (Supplier country name)

We also declare No Significant Economic Presence (SEP) in India as per Indian IT Rule 11UD and self-declare that No-resident is eligible to obtain benefits of relevant DTAA between India and _____

We do not have a business connection¹ in the Republic of India as per Section 9(1)(i) of the Act.

As and whenever we will constitute / establish any Permanent Establishment/ business connection in India or deemed to have a Permanent Establishment / business connection in India or in case it is held by Indian Income Tax Authorities that we have a Permanent Establishment / business connection in India (referred as 'event'), we will bring this to the knowledge of Bharat Heavy Electricals Limited before any subsequent payments are released by Bharat Heavy Electricals Limited or within 5 working days of any such event, whichever is earlier.

We hereby declare that whatever is stated above is true and correct. In the event there is any change in any of the facts stated above, we will bring this to the knowledge of Bharat Heavy Electricals Limited before any subsequent payments are released by Bharat Heavy Electricals Limited or within 5 working days of any such event, whichever is earlier.

Where any tax, interest, penalty is levied on Bharat Heavy Electricals Limited for non/lower withholding of taxes on account of the above declarations being incorrect, we, Name of vendor , hereby undertake that we shall reimburse Bharat Heavy Electricals Limited such amounts as would be demanded by the Tax Authorities along with Interest and Penalty.

Explanation in foot mark

^{1 1} The term 'business connection' shall include significant economic presence ("SEP") of a non-resident in India, w.e.f. 1 April 2021. As per Explanation 2A to Section 9(1)(i) of the Act read with Notification no. 41 of 2021, SEP for this purpose, shall mean:- (a) transaction in respect of any goods, services or property carried out by a non-resident with any person in India including provision of download of data or software in India, for which aggregate payments

ANNEXURE-EP

E-PAYMENTS

- This annexure to the techno-commercial bid explains how to make e-payments to BHEL- Tiruchirappalli through SBI e-collect.
- Vendors (EMD and SD Payments payable by others) can utilise this facility.
- Payments can be made using Internet Banking, Debit Cards/Credit Cards etc.
- SBI Charges a minimum amount (Service Charge) for every transaction. This may vary according to the MODE selected.

STEP BY STEP PROCEDURE:

Login to <https://www.onlinesbi.com>

1. Select State Bank Collect available on the top (pre login page)
2. Accept the terms and conditions and click "PROCEED"
3. Select State "TAMILNADU "and Institution type "INDUSTRY ".
4. Select "BHEL TRICHY under "INDUSTRY".
5. In the next page, Select APPROPRIATE category, fill details correctly & click "SUBMIT".
6. If all details entered are correctly populated, click "CONFIRM "to proceed.
7. Make payment as per your convenience. (Options available are payment of fees through SBI Net Banking, State Bank ATM cum Debit Cards / Other Bank Debit / Credit Cards and through SBI Branches).
8. SAVE & Keep the copy of receipt for future reference.

HOW TO TAKE RECEIPT FOR A PAYMENT MADE, EVEN ON A LATER DATE:

(PLEASE CHECK THE STATUS BEFORE MAKING PAYMENT SECOND TIME)

1. Login to www.onlinesbi.com
2. Select State Bank Collect available on the top (pre login page)
3. Accept the terms and conditions and click "PROCEED"
4. Select "PAYMENT HISTORY "option available on the left side of screen.
5. Using two options as mentioned below, you can get the receipt:
 - a. Type the same Date of Birth, Mobile Number which you have entered at the time of making payment through SB collect. Select the date range and submit.
 - b. It you know the payment reference number, then enter the Reference number (DU...) along with anyone information (Date of Birth / Mobile number, which you have entered at the time of making payment). Select the date range and submit.
6. In the next page, take print out of receipt.

Annexure-RD

BRIEF PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS

1. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided herein:
2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counter-claims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings.
3. The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores
Conciliation shall be carried out by 3 Conciliators nominated by BHEL.
5. The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
6. The first meeting of the IEC shall be convened by the IEC by sending appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.

7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within 15 days from the date of conclusion of the last hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case within 1 month from the date of conclusion of the last hearing.
8. Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC.
9. In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
10. Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft Settlement Agreement in terms of the recommendations.
11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract.
12. In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
13. Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its

recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.

14. In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.
15. The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.
16. Before submitting the draft settlement agreement to BHEL's Competent Authority viz. the Board Level Committee on Alternative Dispute Resolution (BLCADR) for approval, concurrence of the other party's Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
17. In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
18. A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the

same out of complete freewill and consent, without any pressure, undue influence.

19. The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
20. Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.
21. Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.
22. The proceedings of Conciliation under this Scheme may be terminated as follows:
 - a. On the date of signing of the Settlement agreement by the Parties; or,
 - b. By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
 - c. By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - d. By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration.
 - e. On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.

23. The Conciliator(s) shall be entitled to following fees and facilities:

Sl No	Particulars	Amount
1	Sitting fees	Each Member shall be paid a Lump Sum fee of Rs 75,000/- for the whole case payable in terms of paragraph No. 27 herein below.
2	Towards drafting of settlement agreement	In cases involving claim and/or counter-claim of up to Rs 5crores. Rs 50,000/- (Sole Conciliator)

Sl No	Particulars	Amount
		In cases involving claim and/or counter-claim of exceeding Rs 5 crores but less than Rs 10 crores. Rs 75,000 (per Conciliator) In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator) Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.
3	Secretarial expenses	Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC. Where Conciliation is by multi member Conciliators –Rs 30,000/- (one time)- to be paid to the IEC

4	Travel and transportation and stay at outstation i) Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL)	As per entitlement of the equivalent officer (pay scale wise) in BHEL.
	Others	As per the extant entitlement of whole time Functional Directors in BHEL.
Sl No	Particulars	Amount
		Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class.
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region / Business Group of BHEL. Without prejudice to the seat/venue of the Conciliation being at the location of concerned BHEL Unit / Division / Region / Business Group, the IEC after consulting the Parties may decide to hold the proceedings at any other place/venue to facilitate the proceedings. Unless, Parties agree to conduct Conciliation at BHEL premises, the venue is to be arranged by either Party alternately.

24. The parties will bear their own costs including cost of presenting their cases/evidence/witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
25. If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties.
26. The other expenditures/costs in connection with the Conciliation proceedings as well as the IEC's fees and expenses shall be shared by the Parties equally.
27. Out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove.
28. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 3 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
29. The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement, except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/ regulatory body, as the case may be.
30. The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:

- a. Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - b. admissions made by the other party in the course of the Conciliator proceedings;
 - c. proposals made by the Conciliator;
 - d. The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
31. The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
32. None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
33. The Parties shall not initiate, during the Conciliation proceedings, any arbitral or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.
34. The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language.

Appendix I

**FORMAT FOR SEEKING CONSENT FOR REFERRING THE DISPUTES
TO CONCILIATION THROUGH IEC**

To,

M/s. (Stakeholder's name)

Sub: Resolution of the Disputes through conciliation by Independent Expert Committee (IEC).

Ref: Contract No/MoU/Agreement/LOI/LOA& date _____.

Sir,

With reference to above referred Contract/MoU/Agreement/LOI/LOA, you have raised certain Disputes/claims. Vide your letter dated____ you have requested BHEL to refer the Disputes/claims to IEC for Conciliation.

We are enclosing herewith Format (3) for giving consent and the terms and conditions of BHEL Conciliation Scheme, 2018 governing conciliation through IEC. You are requested to give your unconditional consent to the said terms and conditions of the Scheme by returning the same duly sealed and signed on each page. On receipt of your consent, matter will be put to the Competent Authority for consideration and decision.

Please note that BHEL has also certain claims against you (if applicable). BHEL reserves its right to agree or not to agree conciliation of the said disputes through BHEL and this letter is being issued without prejudice to BHEL's rights and contentions available under the contract and law.

Yours faithfully,

Representative of BHEL

**FORMAT FOR GIVING CONSENT BY
CONTRACTOR/VENDOR/CUSTOMER/COLLABORATOR/CONSORTIUM PARTNERS FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC**

To,

BHEL

.....

Sub: Resolution of Disputes through Conciliation by Independent Expert Committee (IEC).

Ref: Contract/MoU/Agreement/LOI/LOA No & date____

With reference to above referred contract, our following bills/invoices/claims submitted to BHEL are still unpaid giving rise to Disputes:

SL. no.	Claim Description	Bill submitted to BHEL (no. and date)	Amount of the bill/claim	Amount received from BHEL	Outstanding Amount

Accordingly we request you to kindly refer the Disputes in respect of above claims to IEC for Conciliation.

We hereby agree and give our unconditional consent to the terms and conditions of BHEL Conciliation Scheme, 2018 governing conciliation through IEC. We have signed the same on each page and enclosed it for your consideration.

Yours faithfully,

(Signature with stamp)

**Authorized Representative of Contractor
Name, with designation
Date**

Appendix III

STATEMENT OF CLAIMS/COUNTER CLAIMS TO BE SUBMITTED TO THE IEC BY BOTH THE PARTIES

1. Chronology of the Disputes
2. Brief of the Contract/MoU/Agreement/LOI/LOA
3. Brief history of the Disputes:
4. Issues:
5. Details of Clam(s)/Counter Claim(s):

SI. No.	Description of claim(s)/Counter Claim	Amount (in INR)Or currency applicable in the contract	Relevant contract clause

6. Basis/Ground of claim(s)/counter claim(s) (along with relevant clause of contract)

Note– *The Statement of Claims/Counter Claims may ideally be restricted to maximum limit of 20 pages. Relevant documents may be compiled and submitted along with the statement of Claims/Counter Claims. The statement of Claims/Counter Claims is to be submitted to all IEC members and to the other party by post as well as by email.*

Tender Inviting Authority: Manager/MM/BOI

Name of Work: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

Enquiry No: 1802600063 dated 22.05.2026

Name of the Bidder/ Bidding Firm / Company :	
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PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only) Schedule of Prices
 Note: All the prices quoted in the column M shall be exclusive of GST, customs duty, CESS/SURCHARGE, SWS ETC. on Customs duty.
 GST, customs duty, CESS/SURCHARGE, SWS etc. on Customs duty shall be indicated in percentage (not absolute value) in Annexure-BOQ which is submitted in Cover-1 . Any taxes, duties, license fees, levies, etc other than specified in this Annexure BOQ shall be included in the basic price quoted by the CONTRACTOR.

NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Item Code / Make	Quantity	Units	Quoted Currency in INR / Other Currency	UNIT RATE in Figures To be entered by the Bidder in Corresponding Currency	TOTAL AMOUNT in Corresponding Currency	TOTAL AMOUNT In Words
1	2	3	4	5	12	13	53	55
1	Package-A: Main Supply Package							
1.01	Price of materials/supplies in INR (Includes Mechanical, Electrical, Instrumentation, valves & piping, consumables, chemicals, catalysts, construction/commissioning spares, tools & tackles, Insulation, Painting, etc...)	NA1	1	SET	INR		0.0000	INR Zero Only
1.02	Price of materials/supplies in USD (Includes Mechanical, Electrical, Instrumentation, valves & piping, consumables, chemicals, catalysts, construction/ commissioning spares, tools & tackles, Insulation, Painting, etc...)	NA2	1	SET	USD		0.0000	USD Zero Only
1.03	Price of materials/supplies in EUR (Includes Mechanical, Electrical, Instrumentation, valves & piping, consumables, chemicals, catalysts, construction/ commissioning spares, tools & tackles, Insulation, Painting, etc...)	NA3	1	SET	EUR		0.0000	EUR Zero Only
1.04	Price of materials/supplies in GBP (Includes Mechanical, Electrical, Instrumentation, valves & piping, consumables, chemicals, catalysts, construction/ commissioning spares, tools & tackles, Insulation, Painting, etc...)	NA4	1	SET	GBP		0.0000	GBP Zero Only
1.05	Price of materials/supplies in JPY (Includes Mechanical, Electrical, Instrumentation, valves & piping, consumables, chemicals, catalysts, construction/ commissioning spares, tools & tackles, Insulation, Painting, etc...)	NA5	1	SET	JPY		0.0000	JPY Zero Only
1.06	Price of services in INR (Includes erection, commissioning, trial run, performance guarantee, technical documentation and training, etc.)	NA6	1	SET	INR		0.0000	INR Zero Only
1.07	Price of spares in INR (As per the list in annexure MSP)	NA7	1	SET	INR		0.0000	INR Zero Only
1.08	Price of spares in USD (As per the list in annexure MSP)	NA8	1	SET	USD		0.0000	USD Zero Only
1.09	Price of spares in EUR (As per the list in annexure MSP)	NA9	1	SET	EUR		0.0000	EUR Zero Only
1.1	Price of spares in GBP (As per the list in annexure MSP)	NA10	1	SET	GBP		0.0000	GBP Zero Only
1.11	Price of spares in JPY (As per the list in annexure MSP)	NA11	1	SET	JPY		0.0000	JPY Zero Only
1.12	Transportation & transit Insurance in INR (includes P&F)	NA12	1	SET	INR		0.0000	INR Zero Only
1.13	Transportation & transit Insurance in USD (includes P&F)	NA13	1	SET	USD		0.0000	USD Zero Only
1.14	Transportation & transit Insurance in EUR (includes P&F)	NA14	1	SET	EUR		0.0000	EUR Zero Only
1.15	Transportation & transit Insurance in GBP (includes P&F)	NA15	1	SET	GBP		0.0000	GBP Zero Only
1.16	Transportation & transit Insurance in JPY (includes P&F)	NA16	1	SET	JPY		0.0000	JPY Zero Only

Tender Inviting Authority: Manager/MM/BOI

Name of Work: Cryogenic Air Separation Unit (ASU) for proposed Coal to Ammonium Nitrate (2000 TPD) Project

Contract No: 1802600063 dated 22.05.2026

Name of the Bidder/ Bidding Firm / Company :	
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Utiliy values (To be provided by supplier for normal mode oprn)

NUMBER #	TEXT #	TEXT #	NUMBER #
Sl. No.	Item Description	Units	Values to be filled up by Bidder
1	2	5	13
1	Utiliy values (To be provided by supplier for normal mode oprn)		
1.01	Cooling Water	m3/hr	
1.02	Steam (40 kg/cm2g & 380°C)	Metric tons/hr	
1.03	Power	kWh	



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ANNEXURE – BOQ

Important Note:

- All values in this annexure-are to be mentioned as % and no absolute values are to be indicated
- Loading towards utility consumption (Power, HP Steam and Cooling water) over the useful life of the plant, computed on a NPV basis will be added to the above LSTK/contract price to evaluate the lowest bid price. Details mentioned under clause 21 of commercial terms-part I
- Total price of SUPPLIES **shall not exceed 80%** of the TOTAL CONTRACT PRICE.
- SUPPLIES shall include but not limited to the Price of all materials complete in all respect including spares & consumables etc. up to PRILIMINARY ACCEPTANCE.
- The GST on the Material Supplies/services in INR will be paid at the prevailing rate at the time of dispatch. Customs duty and related cess, surcharge and GST shall be paid at actuals based on the submission of the proof by CONTRACTOR for Foreign currencies. Any taxes, duties, license fees, levies, etc other than specified in this Annexure BOQ shall be included in the basic price quoted by the CONTRACTOR.

I. Break-up of materials/supplies

**a. Percentage Price Break-up for the price quoted against BOQ SI. No. 1.01
(Price of materials/supplies in INR)**

S. No.	Main Supply Package for ASU	% Price Break up
1	Material-1	
2	Material-2	
3	Material-3	
4		
5		
	May add required no of rows	
	TOTAL	100%

**b. Percentage Price Break-up for BOQ SI. No. 1.02, 1.03,1.04 and 1.05
(Price of materials/supplies in USD/EUR/GBP/JPY)**

S. No.	Main Supply Package for ASU	% Price Break up
1	Material-1	
2	Material-2	
3	Material-3	
4		
	May add required no of rows	
	TOTAL	100%



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II. Break-up of services

**a. Percentage Price Break-up for the price quoted against BOQ SI. No. 1.06
(Price of services in INR)**

The below listed items are not exhaustive and BIDDERS may indicate further break-up as required by adding more rows.

S. No.	Main Supply Package for ASU	% Price Break up
1	Erection	
2	Pre-commissioning	
3	Commissioning	
4	Trial operation	
5	Furnishing technical documentation	
6	Training	
	May add required no of rows	
TOTAL		100%

III. Break-up of spares (To be ensured that all the items indicated in Annexure-MSP should get covered in sections III a. to III e. below)

**a. Percentage Price Break-up for the price quoted against BOQ SI. No. 1.07
(Price of materials/supplies in INR)**

S. No.	Main Supply Package for ASU	% Price Break up
1	Material-1	
2	Material-2	
3	Material-3	
4		
5		
	May add required no of rows	
TOTAL		100%

b. Percentage Price Break-up for BOQ SI. No. 1.08, 1.09, 1.10 and 1.11 (Price of materials/supplies in USD/EUR/GBP/JPY)

S. No.	Main Supply Package for ASU	% Price Break up
1	Material-1	
2	Material-2	
3	Material-3	
4		
5		
	May add required no of rows	
TOTAL		100%



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IV. Break of Transport and Insurance.

a. Percentage Price Break-up for the price quoted against BOQ SI. No. 1.12

S. No.	Main Supply Package for ASU	% Price Break up
1	Inland Freight	
2	Insurance	
3		
	May add required no of rows	
TOTAL		100%

a. Percentage Price Break-up for the price quoted against BOQ SI. No. 1.13 to 1.16

S. No.	Main Supply Package for ASU	% Price Break up
1	Air/Ocean Freight	
2	Insurance	
3		
	May add required no of rows	
TOTAL		100%

V. Break-up of taxes and Duties

a. Taxes and duties for items quoted against BOQ SI. No. 1.01 (Supply)
(To be specified as % of basic material cost)

S. No.	Item Description	CGST %	SGST %	IGST %
1	Material-1			
2	Material-2			
3	Material-3			
4				
5				
	May add required no of rows			



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b. Taxes and duties for items quoted against BOQ SI. No. 1.02 ,1.03, 1.04 and 1.05 (Supply)

S. No.	Item Description	BASIC CUSTOM DUTY (BCD) %	CESS/SURC HARGE, SWS ETC. ON BCD %	CGST % (on assessable value)	SGST % (on assessable value)	IGST % (on assessable value)
1	Material-1					
2	Material-2					
3	Material-3					
4						
	May add required no of rows					

c. Taxes and duties for items quoted against BOQ SI. No. 1.06 (Services)

S. No.	Item Description	CGST %	SGST %	IGST %
1	Erection			
2	Pre-commissioning			
3	Commissioning			
4	Trial operation			
5	Performance testing and guarantee demonstration			
6	Furnishing technical documentation			
7	Training			
	May add required no of rows			

d. Taxes and duties for items quoted against BOQ SI. No. 1.07 (Spares) (To be specified as % of basic material cost)

S. No.	Item Description	CGST %	SGST %	IGST %
1	Material-1			
2	Material-2			
3	Material-3			
4				
5				
	May add required no of rows			



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**e. Taxes and duties for items quoted against BOQ SI. No. 1.08, 1.09, 1.10 and 1.11
(Spares)**

S. No.	Item Description	BASIC CUSTOM DUTY (BCD) %	CESS/SURCHARGE, SWS ETC. ON BCD %	CGST % (on assessable value)	SGST % (on assessable value)	IGST % (on assessable value)
1	Material-1					
2	Material-2					
3	Material-3					
4						
5						
	May add required no of rows					

f. Taxes and duties for items quoted against BOQ SI. No. 1.12 to 1.16 for Transport and Insurance

S. No.	Item Description	BASIC CUSTOM DUTY (BCD) %	CESS/SURCHARGE, SWS ETC. ON BCD %	CGST % (on assessable value)	SGST % (on assessable value)	IGST % (on assessable value)
1	Items quoted against BOQ SI. No. 1.12	-NA-	-NA-			
2	Items quoted against BOQ SI. No. 1.13					
3	Items quoted against BOQ SI. No. 1.14					
4	Items quoted against BOQ SI. No. 1.15					
5	Items quoted against BOQ SI. No. 1.16					
	May add required no of rows					