

939329/2022/PS-PEM-MAX

PROJECT: 1 X 800MW NORTH CHENNAI TPS - FGD

PE-PQ-485-555-A001



**PRE-QUALIFICATION REQUIREMENT –  
COMPRESSED AIR SYSTEM**

DATE 02/07/2022

REV NO 00

|     |  |
|-----|--|
| 1.0 | <p>The bidder is required to meet the provneness criteria and / or qualification requirement for Compressed Air System package as per criteria stipulated below:</p> <p>The bidder should have designed, manufactured, supplied and erection &amp; commissioning of at least One (1) number Oil free screw type air compressor of capacity not less than 15 Nm<sup>3</sup>/min. at rated discharge pressure of 8 kg/cm<sup>2</sup> (g) which should have been in successful operation for at least One (1) year as on date of techno-commercial bid opening.</p> |
| 2.0 | <p>The supplier has to submit following supporting documents meeting above mentioned pre-qualifying requirement</p> <p>Copy of one (1) performance certificate in English from end user along with copy of related Purchase Order (PO) or letter of intent (LOI) or letter of award (LOA) or work order (WO) in support of PQR clause mentioned at S. No. 1.0 above.</p>   |
| 3.0 | Bidder shall submit other relevant documents to substantiate technical parameters specified in PQR, if the same is not mentioned in performance certificate/purchase order.  |
| 4.0 | Minimum one (1) no. Purchase order shall be submitted which should not be more than ten (10) years old as on date of bid submission, for establishing continuity in business. This is over and above the requirement of PO mentioned at S. No. 2.0 above.  |
| 5.0 | Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.   |
| 6.0 | Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/ collaborator to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.  |
| 7.0 | Consideration of offer shall be subject to customer's approval of bidder, if applicable.   |
| 8.0 | After satisfactory fulfilment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all other terms of the tender.   |
| 9.0 | The bidder shall meet PQR based on its own credentials. Bid from joint venture (JV) company / Consortium bid is not acceptable.  |

Prepared By

Reviewed By

Approved By

K. K. K.

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02/07/2022

S. K. Bhanu  
02/07/2022



## PRE - QUALIFYING REQUIREMENTS

ENQUIRY NO:

PROJECT:

1 X 800 MW TANGEDCO NORTH CHENNAI-III FGD

PACKAGE:

COMPRESSED AIR SYSTEM

### CRITERIA FOR EVALUATION - FINANCIAL :

|   | Amount (in Rs.) |
|---|-----------------|
| Average annual financial turnover during the last Three Financial Years should not be less than<br>RUPEES FIFTY FIVE LAKHS ONLY | 55,00,000       |

#### Notes:-

a) The bidder has to submit financial accounts (audited, if applicable comprising of Audit report, Balance Sheet, Profit & Loss A/c Statement and Notes/Schedules pertaining to Turnover/Sales/Revenue), for last three years (or from the date of incorporation, whichever is less) as on tender due date to review the above criteria. In case the incorporation of vendor is less than 3 years, average annual financial turnover shall be calculated based on available information as below:-

i) If the accounts are available for  $\leq 1$  Financial Year, the Average Annual Turnover shall be calculated based on available information divided by 1 (One).

ii) If the accounts are available for  $>1$  but  $\leq 2$  Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 2 (Two).

iii) If the accounts are available for  $>2$  but  $\leq 3$  Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 3 (Three).

b) Foreign bidder is to submit a latest report from reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. in addition to the documents mentioned at point (a) above for review of above criteria.

c) Other Income shall not be considered for arriving at Annual Turnover/Sales. For evaluation purpose, turnover figure excluding taxes shall be considered.

d) For evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part-I bid in case of two part bid) shall be considered.

| <b>NAME OF BIDDER :</b>         |   |  |     |                                 |              |               |  |   |
|---------------------------------|---|--|-----|---------------------------------|--------------|---------------|--|---|
| <b>NAME OF PROJECT:</b>         |   | 1X800MW NORTH CHENNAI TPS Stage-III (FGD SYSTEM) |     |                                 |              |               |  |   |
| <b>NAME OF PACKAGE:</b>         |   | COMPRESSED AIR SYSTEM                            |     |                                 |              |               |  |   |
| <b>TECHNICAL SPECIFICATION:</b> |   | PE-TS-485-555-A001                               |     |                                 |              |               |  |   |
| <b>TENDER ENQUIRY NO :</b>      |   |  |     |                                 |              |               |  |   |
| Sl. No.                         | DESCRIPTION   | UNIT   | QTY | Total Price excluding GST (INR) | Freight in % | Total Freight | Total FOR Site Price Including Freight but excluding GST (INR) | Total FOR Site Price Including Freight but excluding GST in Words |
| 1.0                             | Total lump sum firm price for Supply part, Services part including Mandatory Spares, comprising of design (i.e. preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants & consumables, mandatory spares along with spares for erection, start up and commissioning as required, forwarding, proper packing, shipment and delivery at site, unloading, handling, transportation & storage at site, in-site transportation, assembly, erection & commissioning, final painting at site, minor civil work, trial run at site, preparation of layout drawings and carrying out Performance guarantee tests at site, training of customer/client and O&M staff and handover in flawless condition of the package to the end customer complete with all accessories and AMC for one year for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order. | Lot  | 1   | ₹ -                             |              | ₹ -           | ₹ -  | -   |
| 2.0                             | <b>MAJOR BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE.</b>   |  |     |                                 |              |               |  |   |
| 2.1                             | Total lump sum price for <b>Supply</b> part comprising of design (i.e.preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants & consumables alongwith spares for erection as required, startup and commissioning spares, forwarding, proper packing, shipment and delivery at site, preparation of layout drawings for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order. (Break-up as per Annexure-I)   | Lot  | 1   | ₹ -                             |              | ₹ -           | ₹ -  | -   |
| 2.2                             | Total lumpsum prices for <b>Services</b> part comprising of unloading, handling, transportation & storage at site, in-site transportation, assembly, erection & commissioning, final painting at site, minor civil work, trial run at site and carrying out Performance guarantee / Functional / Demonstration tests at site (As applicable), training of customer/client O&M staff and handover in flawless condition of the package to the end customer complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order.  | Lot  | 1   |                                 |              | NA            | ₹ -  | -   |
| 2.3                             | Total lumpsum price for <b>Mandatory Spares</b> comprising of manufacture, fabrication, assembly, inspection / testing (as applicable) at vendor's & sub-vendor's works, painting, forwarding, proper packing, shipment, delivery at site & guarantee as per tender technical specification above, amendment & agreements till placement of order. (Price break up of Mandatory Spares is to be furnished as per Annexure- II)  | Lot  | 1   | ₹ -                             |              | ₹ -           | ₹ -  | -   |
| 2.4                             | Total lumpsum price for <b>AMC (Annual Maintenance Contract)</b> for one (1) years from the date of handover of the complete system to the end customer or as agreed mutually with the construction manager and the successful bidder. (as per section VII, vol III of technical specification)   | Lot  | 1   |                                 |              | NA            | ₹ -  | -   |

## ANNEXURE-I

| NAME OF BIDDER:          |  | FILL IN MAIN SHEET                               |          |                                 |                                  |
|--------------------------|--|--|----------|---------------------------------|----------------------------------|
| NAME OF PROJECT:         |  | 1X800MW NORTH CHENNAI TPS Stage-III (FGD SYSTEM) |          |                                 |                                  |
| NAME OF PACKAGE:         |  | COMPRESSED AIR SYSTEM                            |          |                                 |                                  |
| TECHNICAL SPECIFICATION: |  | PE-TS-485-555-A001                               |          |                                 |                                  |
| TENDER ENQUIRY NO :      |  | 0  |          |                                 |                                  |
|                          |  | SUPPLY   |          |                                 |                                  |
| SI. No.                  | DESCRIPTION  | Unit   | Quantity | Unit Ex-works duly packed (INR) | Total Ex-works duly packed (INR) |
| 2.1                      | BREAK-UP OF ITEMS MENTIONED AT S. NO. 2.1 OF MAIN SHEET  |  |          |                                 |                                  |
| 2.1.1                    | Air Compressors (Oil Free Screw type) each of minimum 15 NM3/Min capacity @ 8.5 kg/cm2 (min.) discharge pressure with suction filter with silencer, inter cooler and after cooler with moisture separators, automatic drain traps, instruments, control system, cable lugs, glands and other accessories including electric motor drive. | Nos.   | 2        |                                 | ₹ -                              |
| 2.1.2                    | Air Drying Plants Heat of compression (HOC) Rotary type/ Twin Tower Type of min. 15 NM3/min. capacity for Instrument Air Compressor with all instruments, flow meter, control panels and other accessories as specified.   | Nos.   | 2        |                                 | ₹ -                              |
| 2.1.3                    | Air Receivers required for Compressed Air System of minimum 02 Cu.M capacity each with instruments, relief valve, isolation valve, drain connection with automatic trap stations (zero purge air loss type) and other accessories as specified.  | Nos.   | 4        |                                 | ₹ -                              |
| 2.1.4                    | Inter connecting cooling water, drain piping and compressed air piping as specified including fittings and valves etc. for complete Compressed air system.   | Lot  | 1        |                                 | ₹ -                              |
| 2.1.5                    | Field instruments, junction box, Tools & Tackles etc. for complete Compressed air system.  | Lot  | 1        |                                 | ₹ -                              |
| 2.1.6                    | Sequential Panel for equal no. of running hours  | No.  | 1        |                                 | ₹ -                              |
| 2.1.7                    | Operational spares for complete Compressed air system.   |  |          |                                 |                                  |
| a                        | Lube oil (Qty. for 1 Lot in Ltr. shall be as per oil tank capacity for One Compressor)   | Lot  | 2        |                                 | ₹ -                              |
| b                        | Lube oil filters with seals  | Nos.   | 4        |                                 | ₹ -                              |
| c                        | Air filters with gaskets   | Nos.   | 4        |                                 | ₹ -                              |
| d                        | Service kit including seals, washers and rings for intercooler   | Nos.   | 2        |                                 | ₹ -                              |
| e                        | Service kit including seals, washers and rings for after cooler  | Nos.   | 2        |                                 | ₹ -                              |
| <b>Total</b>             |  |  |          |                                 | ₹ -                              |

**ANNEXURE-II (Mandatory Spares)**

| <b>NAME OF BIDDER:</b>          |  | <b>FILL IN MAIN SHEET</b>                                |   |
|---------------------------------|--|--|---|
| <b>NAME OF PROJECT:</b>         |  | <b>1X800MW NORTH CHENNAI TPS Stage-III (FGD SYSTEM)</b>  |   |
| <b>NAME OF PACKAGE:</b>         |  | <b>COMPRESSED AIR SYSTEM</b>                             |   |
| <b>TECHNICAL SPECIFICATION:</b> |  | <b>PE-TS-485-555-A001</b>                                |   |
| <b>TENDER ENQUIRY NO :</b>      |  | <b>0</b>   |   |
| <b>Sl. No.</b>                  | <b>DESCRIPTION</b>   | <b>Quantity</b>  | <b>Total Ex-works<br/>duly packed (INR)</b> |
|                                 | BREAK-UP OF ITEMS MENTIONED AT S. NO. 2.3 OF MAIN SHEET  |  |   |
| 1.0                             | Oil free Screw Air Compressor  |  |   |
| 1.1                             | H. P. Stage<br>Complete HP Stage assembly consisting of high pressure element, Bearing for male and female rotors (drive end), Bearing for male and female rotors (non-drive end), Timing gears, Graphite ring shaft for compressor chamber seals or white metal labyrinth, suction valve, discharge valve, packing set, Axial thrust bearing, Labyrinth oil seal or radial seals or double acting seals for drive shafts. | 1 Set of each type/rating                                |   |
| 1.2                             | L. P. Stage<br>Complete LP Stage assembly consisting of high pressure element, Bearing for male and female rotors (drive end), Bearing for male and female rotors (non-drive end), Timing gears, Graphite ring shaft for compressor chamber seals or white metal labyrinth, suction valve, discharge valve, packing set, Axial thrust bearing, Labyrinth oil seal or radial seals or double acting seals for drive shafts. | 1 Set of each type/rating                                |   |
| 1.3                             | Motor Bearings   | 2 Sets   |   |
| 1.4                             | LP stage Gear and Pinion   | 1 Set  |   |
| 1.5                             | HP stage Gear and Pinion   | 1 Set  |   |
| 1.6                             | Air Intake Filter Element With Gaskets   | 4 Sets   |   |
| 1.7                             | Oil Filter Element With Gaskets & Seals  | 4 Sets   |   |
| 1.8                             | Safety Valve Springs and Gaskets for HP stage  | 1 Set  |   |
| 1.9                             | Safety Valve Springs and Gaskets for LP stage  | 1 Set  |   |
| 1.10                            | Valves (within the compressor house with actuators)  | 2 nos of each type/ ratings/ size.                       |   |
| 1.11                            | Oil Pump/Motor   |  |   |
| 1.11.1                          | Oil Pump and Motor complete assembly   | 1 Set  |   |
| 1.11.2                          | Pump impeller/rotor with shaft   | 1 Set  |   |
| 1.11.3                          | Set of bearings  | 2 Set  |   |
| 1.11.4                          | Set of Seals   | 2 Set  |   |
| 1.12                            | Drain / Moisture Trap  | 2 Set of each type/size.                                 |   |
| 1.13                            | Oil Cooler Gaskets & Seals   | 2 sets   |   |
| 2.0                             | AIR DRYING PLANT (Twin tower type) FOR IA SYSTEM (As applicable)   |  |   |
| 2.1                             | Pre filter element   | 2 sets   |   |
| 2.2                             | After filter element(Ceramic candle or as applicable)  | 2 sets   |   |
| 2.3                             | Heater element(if applicable)  | 1 sets   |   |
| 2.4                             | Blower bearing(if applicable)  | 1 sets   |   |
| 2.5                             | Blower motor bearing(if applicable)  | 2 sets   |   |
| 2.6                             | Valves & Valve Actuators (pneumatic/hydraulic)   | 2 sets   |   |
| 2.7                             | Heater coil for temperature stabilization (for HOC type)(as applicable)  | 2 sets   |   |
| 3.0                             | Rotary drum type Air drying plant for Instrument Air system (As applicable)  |  |   |
| 3.1                             | Drive assembly consisting of motor, gear boxes, drive shaft & coupling   | 1 set  |   |
| 4.0                             | Motor for air compressor   | 1 no.  |   |
| 5.0                             | <b>MEASURING INSTRUMENTS</b>   |  |   |
|                                 | <b>1. Electronic Transmitters</b>  |  |   |
| (i)                             | Transmitters of all types, ranges and model no. (for the measurement of Pressure, differential pressure flow, level, etc.)   | 10% or 1 No. of each type and model, whichever is more   |   |
|                                 | <b>2. Temperature elements</b>   |  |   |
| (i)                             | RTD's* of each type and length   | 10% or 2 Nos. of each type and length Which ever is more |   |
| ii)                             | Thermocouples of each type like K-type, R-type, metal etc. and length *  | 10% or 2 Nos. of each type and length Which ever is more |   |

|       |  |  |          |
|-------|--|--|----------|
| (iii) | Thermowell for application like mill outlet temperature and SH/RH/Eco/ true gas temp. in furnace   | 10% or 2 Nos. of each type and length Which ever is more   |          |
|       | 3. Local Indicators like temperature gauges, pressure gauges, differential pressure gauges, flow gauges flow meters etc.,  | 5% or 1 No. of each make, model and type whichever is more (to be divided to various ranges in proportion to main of all make,                         |          |
|       | 4. Process Actuated Switch Devices Includes all types of Pressure, differential pressure, flow, temperature, differential temperature, level switch Devices                  | 5% or 1 No. of each type and model whichever is more   |          |
|       | 5. Dew Point meters  | 5% or 1 No. of each type and model whichever is more   |          |
| 6.0   | <b>MICROPROCESSOR BASED/PLC BASED CONTROL/ ELECTRONIC BASED CONTRAL PANEL (IF APPLICABLE)</b>  |  |          |
| 1     | Fully programmed controller of electronic modules of each type (as applicable)   | 10% or 1 no. whichever is more   |          |
| 2     | Power supply module (if applicable)  | 10% or 1 no. whichever is more   |          |
| 7.0   | 1.1 Limit switches for isolation valves  | 2 nos. of each type  |          |
|       | 1.2 Local Indicators like temperature gauges, pressure gauges, differential pressure gauges, flow gauges, flow meters etc.,  | 5% or 1 no. of each make, model and type whichever is more (to be divided to various ranges in proportion to main of all make, model, type population) |          |
|       | 1.3 Process Actuated Switch Devices Includes all types of Pressure, differential pressure, flow, temperature, differential temperature, level switch Devices                 | 5% or 1 no. of each type and model whichever is more   |          |
| 8.0   | <b>PROCESS CONNECTION PIPING (For Impulse Piping / Tubing and Air Supply Piping as Applicable)</b>   |  |          |
|       | 1. Valves of all types and models  | 10% or 1 no. of each type, class, size and model whichever is more.  |          |
|       | 2. 2 way, 3way, 5way valve manifolds   | 10% or 1 no. of each type, class, size and model whichever is more.  |          |
|       | 3. Fittings  | 10% or 1 packet of each type, class, size and model whichever is more.   |          |
|       | 4. Purge meters  | 5% of each model or 1 no. whichever is more.   |          |
|       | 5. Filter regulators   | 20% of each model or 2 nos. whichever is more.   |          |
| 9.0   | <b>CONTROL VALVES, ACTUATORS &amp; ACCESSORIES (Following items shall be provided under this clause for all modulating control valves being supplied under this package)</b> |  |          |
|       | 1. Pneumatic and electro-hydraulic actuator assembly   | 10% or 1 no. of each type, model and rating, whichever is more.  |          |
|       | 2. Valve trim (including cage, plug, stem, seat rings, guide bushings etc.)  | 1 set for each type of control valve.  |          |
|       | 3. Diaphragms, O' rings, seals etc. of all types make etc.   | 100%   |          |
|       | 4. Pressure Gauges of all types, make, rating etc.   | 10% or 2 nos. of each type whichever is more   |          |
|       | 5. Solenoid valves (if applicable)   | 10% or 2 nos. of each type whichever is more   |          |
|       | 6. Positioner units (complete unit) & accessories (link assembly)  | 10% or 1 no. of each type whichever is more  |          |
|       | 7. Pneumatic air-filter/Regulator of each type, make rating etc.   | 10% or 2 Nos., whichever is more   |          |
|       | 8. Air lock relays   | 10% or 2 nos. of each type whichever is more   |          |
|       | <b>Total</b>   |  | <b>0</b> |

**NOTES:-**

- 1) Wherever set is mentioned, one set of the spares of that item shall be for complete replacement of that particular item for one equipment.
- 2) Any fraction of a item shall mean the next higher integer.
- 3) Wherever quantity has been specified as percentage (%), the quantity of mandatory spares to be provided by contractor shall be the specified percentage (%) of the total population of the plant. In case the quantity so calculated happens to be fraction, the same shall be rounded off to next higher whole number.
- 4) Wherever the quantities have been indicated for each type, size, thickness, material, radius, range etc., these shall cover all the items supplied and installed and the breakup for these shall be furnished in the bid.
- 5) In case spares indicated in the list are not applicable to the particular design offered by the bidder, the bidder should offer spares applicable to offered design with quantities generally in line with the approach followed in the above list.

| <b>ANNEXURE-III</b>   |   |  |           | Doc No:  | PE-PF-485-555-A001 |                               |
|---|---|--|-----------|--|--------------------|-------------------------------|
| <b>Guaranteed Power Consumption For Compressed Air System</b> |   |  |           | Rev No:  | 0                  |                               |
| NAME OF PROJECT:  |   | 1X800MW NORTH CHENNAI TPS Stage-III (FGD SYSTEM) |           |  |                    |                               |
| NAME OF PACKAGE:  |   | COMPRESSED AIR SYSTEM                            |           |  |                    |                               |
| TECHNICAL SPECIFICATION:                                      |   | PE-TS-485-555-A001                               |           |  |                    |                               |
| S.No. (1)   | Description of Equipments (2)   | Nos. of Equipments (3)                           |           | Total Guaranteed Power Consumption for Each Equipment at Motor Input Terminals & control Panel (4) | Duty Factor (5)    | Total (KW) (6) = (3A)*(4)*(5) |
|   |   | Working A  | Standby B |  |                    |                               |
| 1   | Air Compressors (Oil free Screw type) of capacity 15 NM3/min.   | 1  | 1         | to be filled by bidder   | 0.7                | to be filled by bidder        |
| 2   | HOC Air Dyrer of capacity 15 NM3/min.   | 1  | 1         | to be filled by bidder   | 0.7                | to be filled by bidder        |
| Note :  |   |  |           |  | <b>TOTAL</b>       | to be filled by bidder        |
| 1   | Estimated Power Consumption Figure for the compressed air system (For Working Drives Only) considered is <b>107 KW</b> .  |  |           |  |                    |                               |
| 2   | Bidders Guaranteed power consumption at motor input terminal at rated duty of Air Compressor considering motor efficiency as confirmed by motor OEM including Air Drying Plant (Heater and Blowers, as applicable) as furnished in guranteed schedule shall be demonstrated by the successful bidder during performance testing at works/site.          |  |           |  |                    |                               |
| 3   | The price quoted by the bidder shall be loaded @ INR 2,35,361 /- for every additional KW increase in consumption from the base figure indicated at Note no. 1.0 above.  |  |           |  |                    |                               |
| 4   | In case the successful bidder fails to establish / prove the guaranteed values of power consumption (base figure of auxiliary power consumption or the GPC quoted by bidder, whichever is higher) on actual performance testing at the manufacturing works / site, penalty INR 2,35,361 /- per KW increase in power consumption figure shall be levied. |  |           |  |                    |                               |
| 5   | If the contract currency is other than US dollars, then the liquidated damages shal be in equivalent amount in contract currency based on Bill selling exchange rate of State Bank of India prevailing on the date as on <b>23.02.2021</b> .  |  |           |  |                    |                               |

**ANNEXURE-II DEVIATION SHEET (COST OF WITHDRAWAL)**

| <b>PROJECT:-</b>          |                             |          |            |  |                                   | 1X800MW NORTH CHENNAI TPS Stage-III (FGD SYSTEM)               |  |   |                               |
|---------------------------|-----------------------------|----------|------------|--|-----------------------------------|--|--|---|-------------------------------|
| <b>PACKAGE :-</b>         |                             |          |            |  |                                   | COMPRESSED AIR SYSTEM  |  |   |                               |
| <b>TENDER ENQUIRY :-</b>  |                             |          |            |  |                                   | 0  |  |   |                               |
| <b>NAME OF THE BIDDER</b> |                             |          |            |  |                                   | FILL IN MAIN SHEET   |  |   |                               |
| Sl. No.                   | Volume/Section              | Page No. | Clause No. | Technical Specification/Tender Document No | Complete Description of Deviation | Cost of withdrawal of deviation to be entered by the bidder in | Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable | Nature of cost of withdrawal of deviation (Positive/Negative) | Reasons for quoting deviation |
| 1                         | <b>TECHNICAL DEVIATION</b>  |          |            |  |                                   |  |  |   |                               |
| 1.01                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.02                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.03                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.04                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.05                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.06                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.07                      |                             |          |            |  |                                   |  |  |   |                               |
| 1.08                      |                             |          |            |  |                                   |  |  |   |                               |
| 2                         | <b>COMMERCIAL DEVIATION</b> |          |            |  |                                   |  |  |   |                               |
| 2.01                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.02                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.03                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.04                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.05                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.06                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.07                      |                             |          |            |  |                                   |  |  |   |                               |
| 2.08                      |                             |          |            |  |                                   |  |  |   |                               |

**NOTES:**

1. Cost of Withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
2. All the bidders have to list out all their technical & commercial deviations (if any) in details in the above format.
3. Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
4. Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable. In absence of same, such deviation(s) shall not be considered and offer shall be considered in total compliance to NIT.
5. Bidder shall furnish price copy of above format along with price bid.
6. The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
7. Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VII of GCC, Rev-07 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.
9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
11. Cost of withdrawal is to be given separately for each deviation. In no event bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.
12. In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
13. In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

**PRICE ADJUSTMENT FOR SUPPLY AND MANDATORY SPARES**

- (i) The Contract price shall be subject to price adjustment during performance of the Contract to reflect changes in the cost of labour and material components in accordance with the provisions described below:
- (ii) The price adjustment provisions shall be applicable separately for price components relating to Supply of Equipment as per price break-up furnished by the Contractor.
- (iii) Only following components of the Contract Price will be subject to Price adjustment:
  - (a) Ex-Works supply price of Plant and Equipment including commissioning spares, Mandatory spares.
- (iv) Price adjustment amounts towards aforesaid components of Contract Price shall be paid in the respective currencies of Contract (INR).
- (v) The indices for price adjustment shall be as elaborated hereunder.
- (vi) The price adjustment formula for the components of the Contract Price, as mentioned at Sl.No. (iii) above, shall be as stipulated hereinafter.
- (vii) **Ex-Works Price Component of Plant and Equipments including commissioning spares, Mandatory Spares and**

It is understood that the price component of the equipments for any shipment/despatch comprises of a fixed portion (designated as 'F' and the value of which is specified hereunder) and a variable portion linked with the indices for various materials and labour (description and co-efficient as enumerated below).

The amount of price adjustment towards variable portion payable/recoverable on each shipment/despatch shall be computed as under:

$$EC = EC1 - EC0$$

EC1 will be computed as follows:

$$EC1 = EC0 \{F + a \times A1/ A0 + Lb \times L1/ L0\}$$

Where

EC = Adjustment to Ex-Works supply Price Component expressed in the currency of The Contract (INR) payable to the contractor for each shipment/despatch.

EC1 = Adjusted Amount of Ex-Works supply Price Component expressed in the currency of the Contract (INR) payable to the Contractor for each shipment/despatch.

EC0 = Ex-Works supply Price for the plant and equipments in the currency of the Contract (INR), shipment/despatch wise.

- F shall be fixed portion of the Ex-Works Component of the Contract and shall be considered as 0.15.

- a shall be co-efficient of major materials/items involved in the Ex-Works Component of the Contract Price and shall be considered as 0.6.

- 'A' shall be published price indices of corresponding major materials/items. For this purpose, indices available for Steel, Copper and Aluminium based on JPC and LME (as per following websites) have been considered:

JPC

<https://trichyintras.bhel.in/mm/JPC/JpcArchives091019.html>

LME

<https://www.lme.com/en/Metals/Non-ferrous/LME-Aluminium#Price+graphs>

Further, for constitution of system wrt steel and copper, please refer S. no. 2 mentioned in the e-mail body. Same is reproduced below:

| S. no | Material | % in Compressed Air System |
|-------|----------|----------------------------|
| 1     | Steel    | 80                         |
| 2     | Copper   | 20                         |

- 'Lb" shall be co-efficient for labour component in the Ex-Works Component of the Contract Price which shall be considered as 0.25.

'L' shall be consumer price index number for industrial workers (All India average) as published by Labour Bureau, Shimla/RBI Base year 2016=100.

For the indices, subscript '0' refers to indices as on date of completion of delivery as per LOA.

Subscript '1' refers to indices as on date of shipment/despatch.

Note:

- 1) PVC shall be applicable only beyond original overall completion schedule as per LOA. PVC shall be applicable only if the delay is not attributable to contractor/ vendor. However even if the delay is attributable to vendor then also the negative price variation shall be passed on to BHEL.
- 2) The price variation shall be limited to (+) 10% of Ex-Works Supply Price including commissioning spares, Mandatory spares .

### **PRICE ADJUSTMENT FOR SERVICE PART (E&C)**

- (i) The Contract price shall be subject to price adjustment during performance of the Contract to reflect changes in the cost of labour in accordance with the provisions described below:
- (ii) The price adjustment provisions shall be applicable for price components relating to service part (E&C) as per price break-up furnished by the Contractor.
- (iii) Only following components of the Contract Price will be subject to Price adjustment:
  - (a) Service part (E&C) component of Contract Price.
- (vi) The indices for price adjustment shall be as elaborated hereunder.
- (v) The price adjustment formula for the components of the Contract Price, as mentioned at Sl.No. (iii) above shall be as stipulated hereinafter.

#### **a) Indian Rupee Portion of the Installation Services**

ER = ER1 – ER0

ER1 will be computed as follows:

**ER1 = ER0 (0.15 + L<sub>b</sub> x (L<sub>1</sub>/ L<sub>0</sub>))**

Where:

ER = Adjustment to Erection & Commissioning price component of contract price expressed in Indian Rupees payable to the contractor for each billing.

ER1 = Adjusted amount of Erection & Commissioning price component of contract price expressed in Indian Rupees payable to the Contractor.

ER0 = Value of the Erection & Commissioning work done in the billing period, which shall be calculated as under:

For the purpose of computing ER0, each Erection & commissioning bill (service part) during the E & C period up to the 'Completion of the Facilities' shall be calculated as described in this document.

L<sub>b</sub> – Coefficient of labour (for all categories) content in the Indian Rupee portion of the erection & commissioning =0.85

L=Indian field labour index namely, all India consumer price index for industrial workers (All India Monthly Average) as published labour bureau, Shimla, Government of India.

For the indices, subscript '0' refers to indices as on date of completion of delivery as per LOA.

Subscript '1' refers to indices as applicable for the month of execution of the E&C work

Note:

1) PVC shall be applicable only beyond original overall completion schedule as per LOA. PVC shall be applicable only if the delay is not attributable to contractor/ vendor. However even if the delay is attributable to vendor then also the negative price variation shall be passed on to BHEL.

2) The price variation shall be limited to +10% of total E&C price (excluding taxes).

## Land border sharing certificate

To,

M/s Bharat Heavy Electricals Ltd.,  
Project Engineering Management,  
Power Project Engineering Institute,  
HRD & ESI Complex,  
Plot No 25, Sector-16 A, Noida-201301

Dear Sir,

This has reference to:

1. Our offer for “**COMPRESSED AIR SYSTEM**” as per Technical Specifications No. **PE-TS-485-555-A001, REV 00** for **1X800 MW North Chennai TPS FGD SYSTEM**. against BHEL Tender No.....
2. Order no. F.No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name \_\_\_\_\_) is not from such a country,

or,

*if from such a country, has been registered with the competent authority. (Strike through if not applicable)*

I hereby certify that M/s (Company Name \_\_\_\_\_) fulfil all requirements in this regard and is eligible to be considered for procurement on GeM.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,  
Yours faithfully,

Director/Proprietor/Partner  
M/s \_\_\_\_\_

**LOCAL CONTENT CERTIFICATE**

To,

Bharat Heavy Electricals Limited  
PEM, PPEI Building, Plot No 25,  
Sector 17 A, Noida (U.P)-201301

Subject: - Certification regarding local content

Reference: Tender Enquiry No.: [REDACTED]

Name of Package: [REDACTED]

Project Name: [REDACTED]

Dear Sir,

It is certified that items offered by M/s. [REDACTED] for "COMPRESSED AIR SYSTEM" as per Technical Specifications No. PE-TS-485-555-A001, REV 00 for 1X800 MW North Chennai TPS FGD SYSTEM has local content of [REDACTED] %

Further, it is also certified that the local content % certified above is in line with definition of local content given in Public Procurement (Preference to Make in India), Order 2017-revision, having ref no. P45021/2017/-PP (BE-II) dtd. 04.06.20 & 16.09.20 and M/s. [REDACTED] qualify as Class [REDACTED] supplier.

It is further confirmed that address of the location at which the local value addition is made will be as follows:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Thanking You,  
Yours faithfully,

## 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 Indian Penal Code (IPC) 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 with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 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 Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.
- 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.
- 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 Secret/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 advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.
- 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. Issues like warranty/ guarantee etc. shall be outside the purview 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 till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. 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. 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. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

**Sumeet Sahay**  
Digitally signed by Sumeet Sahay  
 DN: cn=Sumeet Sahay, o=Bharat  
 Heavy Electricals Ltd, ou=PS-PEM,  
 email=sumeetsahay@bhel.in, c=IN  
 Date: 2022.04.28 14:57:08 +05'30'

For & On behalf of the Principal  
 (Office Seal)

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

Place-----

Date-----

**SHARAD**  
 Witness:  
**CHANDRA**  
 (Name & Address)

Digitally signed by SHARAD CHANDRA  
 DN: c=IN, o=SHARAD HEAVY ELECTRICALS LIMITED, ou=POWER SECTOR,  
 PROJECT ENGINEERING MANAGEMENT (PS-PEM), postalCode=201301,  
 SCUTTAR PRADESH,  
 2.2.A.20-08916018625cac45670e8ff7d15d090921775267d5d6c6d63d  
 -----BEGIN-----  
 sha1Digest=BD2948864F2C2291CB1007210178DC109E308A,  
 serialNumber=411890C6A63E22088E465C0C062D1A2B15E342C  
 98EC8B22C928FF83, o=SHARAD CHANDRA  
 -----END-----

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_