

**2X800 MW NTPC KARIMNAGAR TELANGANA STPP PHASE-I**

**COMPRESSED AIR SYSTEM**

**PRICE SCHEDULE**

| S. No. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | UNIT | QTY | TOTAL PRICE (INR) |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-------------------|
| 1.0    | Total lumpsum firm price inclusive of all prevailing taxes, duties and other levies for <b>Supply part, Services part and Mandatory spares</b> 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 (as applicable), fill of lubricants & consumables, mandatory spares along with spares for erection, startup 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 3D (as applicable) 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   |                   |
| 2.0    | <b>MAJOR BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |     |                   |
| 2.1    | Total lump sum firm price inclusive of all prevailing taxes, duties and other levies for <b>Supply part</b> 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 (as applicable), fill of lubricants & consumables along with spares for erection as required, startup and commissioning spares as required, forwarding, proper packing, shipment and delivery at site, preparation of layout drawings 3D (as applicable) 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 firm prices inclusive of all prevailing taxes, duties and other levies for <b>Services part</b> 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 (if applicable) 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   |                   |
| 2.3    | Total lumpsum firm price inclusive of all prevailing taxes, duties and other levies 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   |                   |

Note: 1.) Bidder to quote Guaranteed Power Consumption for Compressed Air System as per Annexure-III.

**Particulars of bidder / authorised representative**

|             |                    |                  |             |                     |
|-------------|--------------------|------------------|-------------|---------------------|
|             |                    |                  |             |                     |
| <b>Name</b> | <b>Designation</b> | <b>Signature</b> | <b>Date</b> | <b>Company Seal</b> |

| ANNEXURE-I                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----------------|----------------------------------|---------------------------|--------------------------------------|-----------------------------------------------------------------|----------------------------|-----------------|-------------------|-----------------------------|-----------------------------------------|----------------------------------|
| 2X800 MW NTPC KARIMNAGAR TELANGANA STPP PHASE-I |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| COMPRESSED AIR SYSTEM                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| PRICE SCHEDULE- MAIN                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| S. No.                                          | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | UNIT | QTY | Unit Rate (INR) | Total Ex-Works duly packed (INR) | Excise Duty @ ----% (INR) | CST/ VAT against C Form @ ---% (INR) | Freight Inclusive of Service Tax @ ---% of Total Ex-works (INR) | Total FOR SITE PRICE (INR) | Unit Rate (INR) | Total Price (INR) | Service Tax @ ----- % (INR) | Total Price Including Service Tax (INR) | TOTAL PRICE (SUPPLY + E&C) (INR) |
| SUPPLY                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |     |                 |                                  |                           |                                      |                                                                 | E & C                      |                 |                   |                             |                                         |                                  |
|                                                 | <b>BREAK-UP OF SUPPLY PRICES GIVEN IN 2.1 OF MAIN SHEET.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1                                             | Total lump sum firm price inclusive of all prevailing taxes, duties and other levies for <b>Supply part</b> 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 (as applicable), fill of lubricants & consumables alongwith spares for erection as required, startup and commissioning spares as required, forwarding, proper packing, shipment and delivery at site, preperation of layout drawings 3D (as applicable) for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order. | Lot  | 1   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
|                                                 | Break up prices for items covered in clause 2.1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |     |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.1                                           | Instrument Air Compressors (Oil Free Screw type) each of minimum 60 NM3/Min capacity @ <b>8.0</b> 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 <b>but excluding electric motor drive.</b>                                                                                                                                                                                                                                                                                                                                                                                                                         | Nos. | 3   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.2                                           | Air Drying Plants Heat of compression (HOC) Rotary type/Dual Tower Type of min. 60 NM3/min. capacity for Instrument Air Compressor with all instruments, control panels and other accessories as specified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nos. | 3   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.3                                           | Service Air Compressors (Oil Free Screw type) each of minimum 60 NM3/Min capacity @ 8.0 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 <b>but excluding electric motor drive.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nos. | 4   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.4                                           | Air Receivers required for Compressed Air System of minimum 10 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. | 7   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.5                                           | Inter connecting cooling water, drain piping and compressed air piping as specified including fittings and valves etc. for complete Compressed air system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Lot  | 1   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |
| 2.1.6                                           | Field instruments, junction box etc. for complete Compressed air system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lot  | 1   |                 |                                  |                           |                                      |                                                                 |                            |                 |                   |                             |                                         |                                  |

Note: 1.) Bidder to quote Guaranteed Power Consumption for Compressed Air System as per Annexure-III.

| Particulars of bidder / authorised representative |             |           |      |              |
|---------------------------------------------------|-------------|-----------|------|--------------|
|                                                   |             |           |      |              |
| Name                                              | Designation | Signature | Date | Company Seal |

| ANNEXURE-II                                     |                                                       |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
|-------------------------------------------------|-------------------------------------------------------|-----|-------------------------|--------------------|----------------------------------------|----------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------|----------------------------------|
| 2X800 MW NTPC KARIMNAGAR TELANGANA STPP PHASE-I |                                                       |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| COMPRESSED AIR SYSTEM                           |                                                       |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| PRICE SCHEDULE-MANDATORY SPARES                 |                                                       |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| S. No.                                          | Description                                           | QTY | UNIT                    | Unit Rate<br>(INR) | Total Ex-Works<br>duly packed<br>(INR) | Excise Duty @ -<br>---%<br>(INR) | CST/ VAT<br>against C Form<br>@ ---%<br>(INR) | Freight Inclusive<br>of Service Tax @ -<br>----% of Total Ex-<br>works<br>(INR) | Total FOR SITE<br>PRICE<br>(INR) |
| <b>1.00.00</b>                                  | <b>Oil free Screw Air Compressor (As applicable )</b> |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (i)                                             | Complete HP Stage with HP element.                    | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (ii)                                            | Complete LP stage with LP element                     | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (iii)                                           | Motor Bearings (other than main motor if applicable)  | 2   | Sets                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (iv)                                            | LP stage Pinion                                       | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (v)                                             | HP stage Pinion                                       | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (vi)                                            | Air Oil Filter Kit                                    | 4   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (vii)                                           | After cooler Safety Valve                             | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (viii)                                          | Inter Cooler Safety Valve                             | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (ix)                                            | Oil Pump kit                                          | 2   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (x)                                             | After cooler drain valve kit                          | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (xi)                                            | Inter cooler drain valve kit                          | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (xii)                                           | Air receiver drain/moisture trap                      | 1   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (xiii)                                          | O' Rings for oil cooler                               | 8   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (xiv)                                           | Moisture separators for Aftercooler                   | 2   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| (xv)                                            | Moisture separators for Intercooler                   | 2   | No.                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| <b>1.02.00</b>                                  | <b>Centrifugal Compressor (as applicable)</b>         |     |                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.01                                         | Pinion Shaft Journal Bearing Assembly                 | 2   | Sets                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.02                                         | Thrust Bearing Assembly                               | 2   | Sets                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.03                                         | Shaft Seals for Air-Oil (All stages)                  | 2   | Sets                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.04                                         | Gasket / O rings                                      | 3   | Sets type each<br>/size |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.05                                         | Air Filter Elements                                   | 4   | Sets type each<br>/size |                    |                                        |                                  |                                               |                                                                                 |                                  |

| ANNEXURE-II                                     |                                                                               |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
|-------------------------------------------------|-------------------------------------------------------------------------------|-----|-----------------------------------------|--------------------|----------------------------------------|----------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------|----------------------------------|
| 2X800 MW NTPC KARIMNAGAR TELANGANA STPP PHASE-I |                                                                               |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| COMPRESSED AIR SYSTEM                           |                                                                               |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| PRICE SCHEDULE-MANDATORY SPARES                 |                                                                               |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| S. No.                                          | Description                                                                   | QTY | UNIT                                    | Unit Rate<br>(INR) | Total Ex-Works<br>duly packed<br>(INR) | Excise Duty @ -<br>---%<br>(INR) | CST/ VAT<br>against C Form<br>@ ---%<br>(INR) | Freight Inclusive<br>of Service Tax @ -<br>----% of Total Ex-<br>works<br>(INR) | Total FOR SITE<br>PRICE<br>(INR) |
| 1.02.06                                         | Lub Oil System                                                                |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.06.1                                       | Main oil pump complete                                                        | 1   | No.                                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.06.2                                       | Aux. oil pump complete                                                        | 1   | No.                                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.06.3                                       | Complete coupling for Main & Aux. oil pump , spade                            | 1   | No.                                     |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.06.4                                       | Cartridge filter elements with gaskets and seals                              | 4   | Sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.06.5                                       | Motor Bearings (other than main motor if applicable)                          | 2   | Sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.07                                         | Drain / Moisture Trap                                                         | 2   | Set of each<br>type/size.               |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.02.08                                         | Oil Cooler Gaskets & Seals                                                    | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.03.00                                         | AIR DRYING PLANT FOR IA SYSTEM (Twin<br>tower Type) (As applicable)           |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 1. Pre filter element(Ceramic candle or as<br>applicable)                     | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 2. After filter element(Ceramic candle or as<br>applicable)                   | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 3. Heater element(if applicable)                                              | 1   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 4. Blower bearing(if applicable)                                              | 1   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 5. Blower motor bearing(if applicable)                                        | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 6. Valves & Valve Actuators<br>(pneumatic/hydraulic)                          | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 7. Heater coil for temperature stabilization (for<br>HOC type)(as applicable) | 2   | sets                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.04.00                                         | AIR DRYING PLANT FOR IA SYSTEM (Rotating<br>Drum Type) (As applicable)        |     |                                         |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 1. Air dryer rotor                                                            | 2   | Nos.                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
|                                                 | 2. Air dryer complete gear box assembly                                       | 1   | Nos.                                    |                    |                                        |                                  |                                               |                                                                                 |                                  |
| 1.05.00                                         | Valves (within the compressor house with actuator)                            | 2   | Nos. of each<br>type / rating /<br>size |                    |                                        |                                  |                                               |                                                                                 |                                  |

[illegible]



| ANNEXURE-III                                           |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------|-----------------|-------------------------------|
| Guaranteed Power Consumption For Air Compressor System |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
| 2X800 MW NTPC KARIMNAGAR TELANGANA STPP PHASE-I        |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
| COMPRESSED AIR SYSTEM                                  |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
| 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) |
|                                                        |                                                                                                                                                                                                                                                                                                     | A                      |                                                                                                    |                 |                               |
| 1                                                      | Air Compressors for Service air application (Oil free Screw type / Centrifugal type) of capacity 60Nm3/min                                                                                                                                                                                          | 2                      |                                                                                                    | 0.6             |                               |
| 2                                                      | Air Compressors for Instrument air application (Oil free Screw type / Centrifugal type) of capacity 60Nm3/min                                                                                                                                                                                       | 2                      |                                                                                                    | 0.33            |                               |
| 3                                                      | Air Drying plant (Heaters) (if applicable)                                                                                                                                                                                                                                                          | 2                      |                                                                                                    | 0.5             |                               |
| 4                                                      | Air Dyrer (Blower, if applicable)                                                                                                                                                                                                                                                                   | 2                      |                                                                                                    | 1.0             |                               |
|                                                        |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    | TOTAL           |                               |
| Note :                                                 |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
| 1                                                      | Estimated Power Consumption Figure for the compressed air system (For Working Drives Only) considered is 1001 KW.                                                                                                                                                                                   |                        |                                                                                                    |                 |                               |
| 2                                                      | Bidders Guaranteed power consumption at motor input terminals (Not Shaft Power) considering motor efficiency of 95 % including power for control panel 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 @ US \$ 4314 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) on actual performance testing at the manufacturing works / site, penalty @ US \$ 4314 per kW increase in power consumption figure shall be levied. |                        |                                                                                                    |                 |                               |
| 5                                                      | If the contract currency is other than US \$, then the liquidated damages shall be in equivalent amount in contract currency based on Bill selling exchange rate of State Bank of India prevailing in the date of Award of Contract i.e. 05.02.2016.                                                |                        |                                                                                                    |                 |                               |
| Particulars of bidder / authorised representative      |                                                                                                                                                                                                                                                                                                     |                        |                                                                                                    |                 |                               |
| Name                                                   | Designation                                                                                                                                                                                                                                                                                         | Signature              | Date                                                                                               | Company Seal    |                               |