

## 1.0 **PROJECT DETAILS**

1. **OWNER/Purchaser:** The EMCO Energy Ltd.,  
A subsidiary of GMR Energy Ltd.,
2. **Project Title :** 2 x 300 MW EMCO Thermal Power Project at Warora, Chandrapur Dist., Maharashtra
3. **Location:** Site near Warora Town, Chandrapur district of Maharashtra state.
4. **Elevation Above Sea Level :** 210m above Mean Sea level
5. **Nearest Railway Station :** Warora (7 Km) , Chandrapur (45 Km) Chikani Road Railway Station
6. **Name of Railway :** Central Railway division of Indian Railways
7. **Nearest Air Port :** Nagpur Airport (100 Km)
8. **Port Facility :** Mumbai and Vizag ports
9. **Land :** Project area – 132 Hectares (Approx)
10. **Ambient Air Temperatures**
  - a) Maximum dry bulb temperature: 48.3 deg C
  - b) Minimum dry bulb temperature: 2.8 deg C
  - c) Design temperature for electrical: 50 deg C equipment /device
11. **Relative Humidity**
  - a) Maximum during monsoon: 84%
  - b) Minimum during March: 21% to May
12. **Air Quality :** Industrial area with Thermal power plants in the vicinity
13. **Rainfall**
  - a) Maximum annual: 1276.5 mm
  - b) Period: July to October
14. **Wind**
  - a) Basic Wind Speed: 39 m/sec
  - b) Wind direction: Predominant wind direction is from North-West to South-East.
15. **Seismic Data**

(As per IS: 1893 latest issue)

  - a) Zone: Zone III

16. **Road Access** : State highway SH-264 Runs with in 4km from site
17. **Water Table** : 2.5 M below M.S.L (Max)\*

➤ **SCOPE OF WORK**

- ❖ As per the provisions of the bidding documents, Contractor will be responsible for the entire scope of work for execution of Earthwork, Bridge work, OHE and P -Way works with supply of materials for Rail Infrastructure facility for transportation of coal from Chikni Road station to Emco TPP, Warora
- ❖ The contractor in accordance with the design, technical specifications and approved drawings shall execute all the above works.
- ❖ The scope of work is given in brief here under:

➤ **EARTHWORK:-**

- ❖ Execution of all associated civil works which includes earthwork in formation including cutting and filling, blanketing layer, slope dressing, turfing as per drawing and as per direction of Engineer-in-charge.
- ❖ Dressing of the formation top as per drawing.
- ❖ Arrangement of all machineries required for the above work.
- ❖ Proper maintenance of works executed for a period of 12 months from the date of issue of completion certificate by the Engineer-in-charge.
- ❖ After counting, demarcation and formalizing the record with concern Forest Official for Cutting of all trees of all sizes and girths, clearing of bushes, grass, vegetable, growth, grubbing of roots, filling of hollows with approved earth, and stacking the trees in the forest wood depot.
- ❖ Disposal of surplus and unserviceable earth / material outside the work limit / and acquisition limit including transportation, excavation and clearing of site in all respects all complete as per specifications and direction of Engineer-in-charge. Disposal shall be away from working area for any lead outside the premises as per direction of Engineer-in-charge and shall be arranged by contractor.
- ❖ If required obtain license for storage of blasting material and conducting controlled blasting through an authorized expert.
- ❖ Any other work required for completion of the work under this contract as per direction of Engineer-in-charge.

- ❖ The contractor shall provide a site office for Consultant's Personal with a size of minimum 15 sqm including Office Furniture, Toilet and Internal electrical fittings.

➤ **BRIDGE WORK:-**

- ❖ Execution of all associated civil works including minor/major bridges, culverts, drains, nallah crossings, road bridges with its diversion, pipe culverts including abutments/piers, wing wall etc. as per drawing and as per direction of Engineer-in-charge.
- ❖ Arrangement of centering and shuttering materials, erection and removal etc. of all bridges including pre-stressed bridges as per drawing.
- ❖ Supplying of all materials required for the construction of all bridges.
- ❖ Disposal of surplus and unserviceable earth / material outside the work limit / and acquisition limit including transportation, excavation and clearing of site in all respects all complete as per specifications and direction of Engineer-in-charge.
- ❖ If required obtain license for storage of blasting material and conducting controlled blasting through an authorized expert.
- ❖ Proper maintenance of works executed for a period of 12 months from the date of issue of completion certificate by the Engineer-in-charge.
- ❖ Any other work required for completion of the work under this contract as per direction of Engineer-in-charge.

➤ **P- WAY WORKS:-**

- ❖ Supplying, laying and linking of all permanent way elements of work including rails at site including all lead and lift and safe custody and handling at site.
- ❖ Linking of track to specified sleeper density(1540 sleepers per KM)
- ❖ Supplying of 1 in 8-1/2 turnout 52/60 Kg rail including PSC sleepers including all fittings and laying thereof as per direction of Engineer-in-charge.
- ❖ Supplying of 1 in 12 turnout 60 Kg rail including PSC sleepers including all fittings and laying thereof as per direction of Engineer-in-charge.

- ❖ Supplying of 1 in 8-1/2 derailing switches 52 Kg rail including PSC sleepers including all fittings and laying thereof as per direction of Engineer-in-charge.
- ❖ Supply and spreading of stone ballast including all lift and lift and as per specification.
- ❖ Supply of P.Way fittings and fixing thereof.
- ❖ Welding of Rails.
- ❖ Fixing of check rails on level crossings, curves and other locations as required.
- ❖ Through packing of track, turnouts as per direction of Engineer-in-charge.
- ❖ Fabricating, supplying & fixing fouling blocks, gradient post, curve post, engine stop whistle board, level crossing warning board etc.
- ❖ Proper maintenance of tracks and all assets constructed for a period of 12 months from the date of issue of completion certificate by the Engineer-in-charge including watch and ward of all P. way materials/fittings till handing over of track to BPSCL.
- ❖ Supplying, fabricating & fixing buffer stops as per drawing.
- ❖ All the above works are executed as described in Schedule of Quantities and technical specification.
- ❖ Any other work required for completion of the work under this contract as per direction of Engineer-in-charge.

➤ **OHE WORKS:-**

- ❖ The OHE works involves supply, Erection & Modification of 25 KV OHE for BG Railway siding facility from Chikni Road yard to EMCO ENERGY Thermal power station including modification in Chikni Road SSP and SCADA system.
- ❖ All the drawings required in connection with the execution of OHE works will be prepared by the successful tenderer and he will arrange commissioning of the OHE jobs.
- ❖ The tenderer shall also be responsible for:-
- ❖ Approval of the drawings by Central Railway division and HQ.
- ❖ Testing and commissioning of the works by Central Railway including checking by Tower Wagon etc., and preparation of E.I.G. papers.

- ❖ Preparation and certification of E I G paper and approval at divisional and HQ level under the guidance of consultant.
- ❖ Execution of OHE works:
  - ❖ The overhead electrification (OHE) works shall be done as per the standard and specifications of AC traction Manual of Indian Railways under the supervision of Consultant appointed by the Owner.
  - ❖ OHE ladder trolleys shall be used with caution and shall not be put on tracks until traffic block is provided by Railway staff in writing. For power block similar written permission shall be obtained from an authorized staff of Sr.DEE/TRD/Central Railways brought at site by the OHE contractor from OHE depot as and when power block is required. Such OHE authorized staff shall be given conveyance to go back to OHE depot, after cancellation of power block by the OHE contractor.
  - ❖ During the OHE stringing operation every care shall be taken to prevent conductors hanging low over tracks on which traffic block has not been taken.
  - ❖ All stay, bracket, 9 tone insulators procured by OHE contractor as per schedule shall be got tested at Running Repair Depot of Sr.DEE/TRD/Central Railway before erection as per standing orders of CEE/Central Railway/CSTM. The cost of such test shall be borne by the agency along including the cost of transportation to site and vice-a-versa.
  - ❖ Detailed specification of the above items of stores shall be followed as per the explanatory notes of this tender document.
  - ❖ The OHE materials shall be procured only from the approved manufacturers / suppliers of RDSO/Lucknow and CORE/Allahabad duly inspected by RITES Inspection Wing.
  - ❖ Erection of OHE works shall be executed on existing / newly laid running yard lines under the traffic block shutdown, caution notice. Contractor shall quote their rate accordingly and the quoted rate shall cover all additional cost arising there from if any.
  - ❖ Soon after order placed, the contractor shall peg mark and prepare the OHE layout plan, SED's and CSD's. The contractor shall access the quantities required for entire works and prepare fresh schedules of quantities for the approval of purchaser/consultant before procurement of OHE materials.