

### CIVIL WORKS PART (ANNEXURE-II)

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                 |                  |                           |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|------------------|---------------------------|
| <b>Project</b>  | <b>400/33 kV Transmission lines at Nabinagar</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                 |                  |                           |
| <b>Customer</b> | <b>NABINAGAR POWER GENERATION CO. LTD.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                 |                  |                           |
| <b>S. No.</b>   | <b>Item / Work description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Unit</b> | <b>Quantity</b> | <b>Unit Rate</b> | <b>Total Amount (Rs.)</b> |
| <b>A</b>        | <b>Civil Works for 400 &amp; 33kV transmission lines</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                 |                  |                           |
| <b>1.1</b>      | Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 3.5m, disposed earth to be levelled and neatly dressed.                                                                                                                                                                                       |             |                 |                  |                           |
| <b>(a)</b>      | All kinds of soil.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | cum         | 18900           |                  |                           |
| <b>1.2</b>      | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.                                                                                                                                                                                                                                                                                               | cum         | 15500           |                  |                           |
| <b>1.3</b>      | Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -.                                                                                                                                                                                                                                                                                        |             |                 |                  |                           |
| <b>(a)</b>      | Lead upto 1 km.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | cum         | 3450            |                  |                           |
| <b>1.4</b>      | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.                                                                                                                                                                                                                                                                                                                                                                                       |             |                 |                  |                           |
| <b>(a)</b>      | M7.5(1:4:8 nominal mix).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | cum         | 471             |                  |                           |
| <b>1.5</b>      | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements including roads excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability. - <b>M25 grade</b> reinforced cement concrete by using minimum 330kg of cement per cum of concrete. |             |                 |                  |                           |
| <b>(a)</b>      | All works upto plinth level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | cum         | 3000            |                  |                           |
| <b>1.6</b>      | Centering and shuttering including strutting, propping, etc., and removal of form for:                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                 |                  |                           |
| <b>(a)</b>      | Foundations, footings, bases of columns, etc., for mass concrete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | sqm         | 2700            |                  |                           |
| <b>(b)</b>      | RCC walls at all levels (any thickness).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | sqm         | 10              |                  |                           |
| <b>(c)</b>      | Beams,plinth beams.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | sqm         | 10              |                  |                           |
| <b>(e)</b>      | Columns, Pillars, Piers, Posts and Struts .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | sqm         | 2000            |                  |                           |
| <b>1.7</b>      | Steel reinforcement -Cold twisted bars /TMT- Fe 500 (To be procured from SAIL,TISCO,IISCO, JINDAL STEEL and RINL only)                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                 |                  |                           |
| <b>(a)</b>      | Including supply, straightening, cutting and bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.                                                                                                                                                                                                                                                                                                                                                                                  | kg          | 274000          |                  |                           |
| <b>1.8</b>      | Fixing of stub angles in position with necessary arrangements as per drawing and directions of Engr-in-Charge including template fixing,alignment and removal of template.(Weight of stub only shall be measured for payment of this item.)                                                                                                                                                                                                                                                                                            | kg          | 22000           |                  |                           |
| <b>1.9</b>      | 6 mm plaster of mix: 1:3 (1 cement:3 fine sand)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | sqm         | 375             |                  |                           |
| <b>1.10</b>     | Neat cement punning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | sqm         | 375             |                  |                           |
|                 | <b>Total Amount (Rs.)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                 |                  |                           |
| <b>Notes :</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                 |                  |                           |
| 1               | The quantities mentioned in the BOQ are tentative and Quantity of any item may vary upto any extent but the overall contract value may vary by ± 30%.                                                                                                                                                                                                                                                                                                                                                                                  |             |                 |                  |                           |
| 2               | Any material/services required for successful completion of the project but not covered in the BOQ shall be deemed to be included in the scope of contractor without any cost implications to BHEL. <b><u>The bidder is advised to visit Nabinagar site before submission of bid.</u></b>                                                                                                                                                                                                                                              |             |                 |                  |                           |
| 3               | Make of items to be supplied/used under this contract shall be subject to acceptance by customer/BHEL at contract stage.                                                                                                                                                                                                                                                                                                                                                                                                               |             |                 |                  |                           |
| 4               | Handling, storage, transportation, loading, unloading, shifting etc. of all materials to required locations shall be in the scope of the bidder.                                                                                                                                                                                                                                                                                                                                                                                       |             |                 |                  |                           |
| 5               | Bidder may note that owner (NTPC/BHEL) shall not pay any compensation for any loss or damage to the properties during work of execution of transmission line job or for tree cutting due to bidder's work.                                                                                                                                                                                                                                                                                                                             |             |                 |                  |                           |
| 6               | MS welding - apply red lead paint then aluminium paint then bitumen after welding.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |                 |                  |                           |
| 7               | GI welding - apply 2 coats of cold galvanising anti corrosive paint after welding.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |                 |                  |                           |
| 8               | 10% welding joints in earthing shall be tested for dye penetration test.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                 |                  |                           |
| 9               | Right of way is not in Bidder scope, but tree cutting (if any) is in the scope of bidder. Please refer special conditions of contract and customer technical specification.                                                                                                                                                                                                                                                                                                                                                            |             |                 |                  |                           |
| 10              | For scope of supply items in contractor scope following should be followed .<br>(1) The approval of makes shall be obtained from BHEL/Customer .<br>(2) Drawings and MQP shall be submitted for approval in line with specification and relevant IS.<br>(3) Quality -Inspection & dispatch clearance shall be given by BHEL/Customer.                                                                                                                                                                                                  |             |                 |                  |                           |