

**TRANSMISSION CORPORATION OF TELANGANA LIMITED**

From :  
Chief Engineer/400kV,  
TSTRANSCO,  
Vidyut Soudha,  
Hyderabad 500 082.  
Ph. : 040-2332 3933  
Fax: 040 2332 3933

To :  
M/s.Megha Engineering & Infrastructures Ltd,  
S-2, Technocrats Industrial Estate,  
Balanagar,Hyderabad -500037.  
Tel.No. 040 44336700  
Fax No. 040 44336800  
e-mail: info@meil.in.

**P.O.No. 184 /OC- 10 /CE /400kV/SE-I/D2-A3/e-EHVT-02/2018/**

**D. No.: 195/18, Dt: 18 .08.2018.**

Sir,

Sub: Specification No.e-EHVT-02/2018 - Erection, Civil , Testing , Construction and Commissioning of 400/220/11kV Kamalapuram LI Sub Station, 220/11kV B.G.Kottur and V.K.Ramavaram LI Sub Station along with connected Transmission lines & 2 Nos. Bays Extension under Sita Rama Lift Irrigation Scheme at Bhadradi Kothagudem Dist.and Diversion of 3.2 kMs of Twin Moose DC line of 400kV Gajwel SS - 400kV Shankarpally SS for Crossing Broad-Gauge Railway Track under Deposist Contribution Works on turnkey basis –**Detailed Erection Purchase Order**– Regarding .

- Ref: 1. TSTRANSCO Bid No.e-EHVT-02/2018.  
2. Your offer for the above bid opened on 08-06-2018 on e-procurement platform.  
3. Lr.No.CE/400kV/SE-I/400kV/D3-A1/F.ehvt-02/2018/D.No: 192/18, Dt: 20-06-2018.  
4. Lr.No.MEIL/BD/TST/e-EHVT-02/2018/Discount/001, Dt:23.06.2018.  
5. LOI No.CE/400kV/SE-II/400kV/D3-A1/F.e-EHVT-02/18/D.No. 215/18, Dt:29.06.2018.  
6. Your Ltr. No.MEIL/BD/TST/e-EHVT-02/2018/LOI Acceptance, Dt:30.06.2018.

-oOo-

I, acting for and on behalf of and by the order and direction of the TRANSMISSION CORPORATION OF TELANGANA LIMITED (here in after called ‘TSTRANSCO’)accept the offer ofM/s.Megha Engineering & Infrastructures Ltd, vide reference (2) & (4) cited and subsequent correspondence above (here in after called ‘Contractor’) against TSTRANSCO’s bidding documents for Bid No.e-EHVT-02/2018 for Erection, Civil , Testing , Construction and Commissioning of 400/220/11kV Kamalapuram LI Sub Station, 220/11kV LI Sub Station B.G.Kottur and 220/11 kV LI Sub Station V.K.Ramavaram along with connected Transmission Lines &2 Nos. Bays Extension under Sita Rama Lift Irrigation Scheme at Bhadradi Kothagudem Dist.and Diversion of 3.2 kMs of Twin Moose DC line of 400kV Gajwel SS - 400kV Shankarpally SS for Crossing Broad-Gauge Railway Track under Deposist Contribution Works on turnkey basisfor a total amount **Rs. 77,64,91,417.52(Rupees Seventy SevenCrores Sixty Four Lakhs Ninety one Thousand Four Hundred and Seventeen Paise Fifty Two**

**Only**)including all taxes and levies as detailed in Schedule - B enclosed, subject to the terms and conditions set out in this order.

This order is issued in regularization of 'Letter of Intent' issued in the reference 5<sup>th</sup> cited and your acceptance of LOI .

#### **1.0. SCOPE:**

The Scope of this order covers Design, Engineering, Civil, Construction, Erection, Testing and Commissioning of following Sub stations , Lines and Bay extension on turnkey basis as per as per bidding documents of Bid No. e-EHVT-02/2018.

##### **Pump House -1 at B.G.Kottur.**

- B(I) 220/11kV LIS Substation at B.G.Kottur(V) (without Pump PTRs).
- B(II) LILO of one circuit of 220kV KTPS V-Lower Sileru -II Line to proposed Pump House-1 at B.G.Kottur for a length of 20 kMs.(approx)
- B(III) Erection of LILO of one circuit of 220kV KTPS-Manuguru Line to proposed Pump House-1 at B.G.Kottur for a length of 1 kM.(approx)

##### **Pump House-2 at Ramavaram.**

- B(IV) 220/11kV LIS Substation at V.K.Ramavaram (without Pump PTRs)
- B(V) Erection of 220kV TMDC Line from 400/220/11kV Kamalapuram SS to 220/11 kV V.K.Ramavaram for a length of 15 kMs.(approx)

##### **Pump House-3 at Kamalapuram**

- B(VI) 400/220/11kV LI Substation at Kamalapuram with 3 x 315MVA Transformers
- B(VII) 2 Nos 400kV Quad Bay extension at 400/220kV Julurupadu SS for Julurupadu to Kamalapuram line .
- B(VIII) 400kV TMDC line from Julurupadu SS to Kamalapuram LI Sub Station of length 40kMs.
- B(IX) Diversion of 3.2kMs.(approx) 400kV TMDC Line from 400kV Gajwel SS to 400kV Shankarpally SS to facilitate crossing of Broad Gauge Railway Track between Manoharabad and Kothapalli under Deposit Contribution Works as per bidding documents of Bid No. e-EHVT-02/2018.

The rates indicated in Schedule - B appended to this order are for Erection and Civil & Construction works respectively.

## 2.0 ABSTRACT OF PRICES: Schedule of Prices for Civil, Construction, Erection, Testing and Commissioning

<b>Pump House - I</b>		
<b>B(I)220/11kV LIS Substation at B.G.Kottur(V) (without Pump PTRs).</b>		
<b>I.</b>	Electrical Erection Works:	
1	Schedule-BE-1 : Structure Erection	17,22,552.16
2	Schedule-BE2 : setting of Stubs & Templates	7,74,906.47
3	Schedule-BE3 : Bus Erection	5,43,366.81
4	Schedule-BE4 : Earth Bus Stringing	1,60,352.50
5	Schedule-BE5 : Jumpers	4,71,225.51
6	Schedule-BE6 : Earthing & Earth Pits	43,73,334.80
7	Schedule-BE7 : Cable Laying & Terminations	10,84,647.12
8	Schedule-BE8 Lighting Fixtures	1,34,231.00
9	Schedule-BE9 : Erection of 220kV Equipment	15,50,622.69
10	Schedule-BE10 : Panels & Marshalling Boxes	95,243.40
11	Schedule-BE11 : Batteries & Bateries Chargers	2,11,794.32
12	Schedule-BE12 : Caution Boards & Misleneous	5,07,092.07
13	Schedule-BE13 : Erection of Telecom Equipment	1,70,985.16
	<b>Total (I):</b>	<b>1,18,00,354.01</b>
<b>II</b>	Civil &Constrecution Works:	
1	Schedule- I : Dismantling items, Levelling & Grading, Construction of Retaining Wall, Bore Well, Switch Yard works and Water supply arrangement in Earth Pits.	2,58,05,927.59
2	Schedule - II : Civil Works, Water Supply & Sanitary Works and Internal Electrification for Control House .	74,08,119.58
3	Schedule - III : Road Work, Road Culvert and Compound Wall	1,08,40,654.51
	<b>Total (II):</b>	<b>4,40,54,701.68</b>
	<b>Total (I)&amp; (II):</b>	<b>5,58,55,055.69</b>
<b>B(II)LILO of one circuit of 220kV KTPS V-Lower Sileru -II Line to proposed Pump House-1 at B.G.Kottur for a length of 20 kMs.</b>		
1	Schedule : Electrical Erection Works	2,18,25,513.99
2	Schedule : Civil and Construction Works	5,59,59,787.45
	<b>Total :</b>	<b>7,77,85,301.44</b>
<b>B(III)Erection of LILO of one circuit of 220kV KTPS-Manuguru Line to proposed Pump House-1 at B.G.Kottur for a length of 1 kM.</b>		
1	Schedule : Electrical Erection Works	68,72,427.37
2	Schedule : Civil and Construction Works	41,93,552.34
	<b>Total :</b>	<b>1,10,65,979.71</b>
	<b>Grand Total Pump House –I</b>	<b>14,47,06,336.84</b>

<b>Pump House -II</b>		
<b>B(IV) 220/11kV LIS Substaion at V.K.Ramavaram (without Pump PTRs).</b>		
Sl.No	Description	Total amount in Rs. incl of all taxes and duties
I	Electrical Erection Works:	
1	Schedule-RE1 : Structure Erection	16,77,723.45
2	Schedule-RE2 : Setting of Stubs & Templates	5,30,226.82
3	Schedule-RE3 : Bus Erection	4,43,889.51
4	Schedule-RE4 : Earth Bus Stringing	1,52,972.75
5	Schedule-RE5 : Jumpers	3,11,257.17
6	Schedule-RE6 : Earthing & Earth Pits	26,73,474.32
7	Schedule-RE7 : Cable Laying & Terminations	10,22,597.12
8	Schedule-RE8 : Lighting Fixtures	1,34,231.00
9	Schedule-RE9 : Erection of 220kV Equipment	13,13,406.18
10	Schedule-RE10 : Panels & Marshalling Boxes	2,16,697.33
11	Schedule-RE11 : Batteries & Bateriaes Chargers	16,109.12
12	Schedule-RE12 : Caution Boards & Miscellaneous	4,11,802.07
13	Schedule-RE13 : Telecom Erection	32,556.29
	<b>Total(I):</b>	<b>89,36,943.13</b>
II	Civil &Constrecution Works:	
1	Schedule-I : Dismantling items, Levelling & Grading, Construction of Retaining Wall, Bore Well, Switch yard works and Water supply arrangement in Earth Pits.	4,47,68,767.14
2	Schedule – II: Civil Works, Water Supply & Sanitary Works and Internal Electrification for Control House	72,82,660.37
3	Schedule -III : Road Work, Road Culvert and Compound Wall	1,73,08,859.85
	<b>Total(II):</b>	<b>6,93,60,287.36</b>
	<b>Total(I) &amp; (II):</b>	<b>7,82,97,230.49</b>
<b>B(V) Erection of 220 kV TMDC line from 220/11 V.K.Ramavaram SS to 400/220/11 kV Kamalapuram SS for a length of 15 kMs.</b>		
I	Electrical Erection Works:	
1	Schedule:I Electrical Erection Works	1,44,88,501.43
2	Schedule:II Civil & Constrecution Works	1,74,49,489.99
	<b>Total:</b>	<b>3,19,37,991.42</b>
	<b>Grand Total Pump House –II</b>	<b>11,02,35,221.91</b>

<b>Pump House -III</b>		
<b>B(VI)400/220/11kV LI Substation at Kamalapuram with 3 x 315MVA Transformers.</b>		
Sl.No	Description	Total amount in Rs. incl of all taxes and duties
I	Electrical Erection Works:	
1	Schedule - KE1: Prices for Erection of Switchyard Structures	27,77,367.77
2	Schedule - KE2 : Prices for Erection of Earthing & Earthmat	1,19,93,193.60
3	Schedule - KE3 : Prices for Bus Bar Erection and Equipment Inter Connections	17,95,844.61
4	Schedule - KE4 : Prices for Erection, Testing and Commissioning of Power and Control Cables	1,61,70,590.00
5	Schedule -KE5 : Prices for Erection, Testing and Commissioning of Indoor and Outdoor Illumination	12,33,613.43
6	Schedule - KE6 : Prices for Erection , Testing and Commissioning of Fire Protection, Detection & Alarm Systems	29,59,311.35
7	Schedule-KE7 : Prices for Erection, Testing and Commissioning of Air Conditioning & Ventilation System	7,60,540.16
8	Schedule - KS8 : Prices for Supply of 250 KA Diesel Generator Set	1,19,079.46
9	Schedule - KE9 : Prices for Erection, Testing and Commissioning of 33kV Station Power Supply Facilities	16,99,799.75
10	Schedule - KE10 : Prices for Erection, Testing and Commissioning of Switchgear Equipment	55,03,971.02
11	Schedule -KE11 : Prices for Erection of Telecom Equipment	79,677.22
12	Schedule -KE12 : Prices for Erection of Transformer	1,04,03,869.86
13	Schedule -KE13 : Prices for 220/11kV Switchyard	1,46,56,482.16
	<b>Total(I):</b>	<b>7,01,53,340.39</b>
II	Civil & Construction Works:	
1	Schedule - 1: Levelling of site. Providing rough stone pitching, platform and construction of RRstone & retaining walls.	1,82,42,944.21
2	Schedule - 2: Construction of Foundations For Towers And Equipments, Cable Trenches, Metalling .	13,48,15,489.01
3	Schedule - 3: Formation Of External And Internal Roads , Drains And Associated Works .	2,40,57,793.00
4	Schedule - 4: Construction of control house, fire fighting & D.G . building, water tank, store building	4,19,56,509.79
5	Schedule - 5: Providing External Water Supply And Sanitary System, Borewell, Drinking Water Supply, Plantation	23,63,210.60
6	Schedule - 6: Plantation	11,03,352.00
7	Schedule - 7: Construction of Compound wall	1,49,20,721.17
	<b>Total (II):</b>	<b>23,74,60,019.78</b>

	<b>Total(I) &amp; Total(II)</b>	<b>30,76,13,360.17</b>
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**B(VII) 2 Nos 400kV Quad Bay extension at 400/220kV Julurupadu SS for Julurupadu to Kamalapuram line.**

Sl.No	Description	Total amount in Rs. incl of all taxes and duties
I	Electrical Erection Works:	
1	Schedule -JBKE1 : Prices for Erection of Switchyard Structures	2,12,235.48
2	Schedule - JBKE2 : Prices for Erection of Earthing & Earthmat	7,55,901.16
3	Schedule - JBKE3 : Prices for Bus Bar Erection and Equipment Inter Connections	2,17,098.53
4	Schedule - JBKE4 : Prices for Erection, Testing and Commissioning of Power and Control Cables	23,43,610.00
5	Schedule - JBKE5 : Prices for Erection, Testing and Commissioning of Indoor and Outdoor Illumination	1,26,062.51
6	Schedule - JBKE6 : Prices for Erection, Testing and Commissioning of Switchgear Equipment	86,091.56
7	Schedule - JBKE7 : Prices for Erection, Testing and Commissioning of Switchgear Equipment	15,01,192.78
8	Schedule - JBKE8 : Prices for Telecom Equipment	24,462.87
	<b>TOTAL(I):</b>	<b>52,66,654.89</b>
II	Civil &Constrction Works:	
1	Schedule – 1: Construction of Foundations for Towers and Equipments, Cable Trenches, Metalling, for 2 Nos. of QM DC Line Bay at 400kV SS Tippapur.	1,82,03,310.89
2	Schedule- 2: Erection of 2 Nos. Bays at 400/220 kV SS Julurupadu for 400 kV Twin DC Line from Julurupadu - Kamalapuram under Sita Rama LIS at Bhadradri, Kothagudem Dist.	20,43,734.65
	<b>Total (II):</b>	<b>2,02,47,045.54</b>
	<b>Total (I )&amp;(II)</b>	<b>2,55,13,700.43</b>
<b>B(VIII) 400kV TMDC line from Julurupadu SS to Kamalapuram LI Sub Station of length 40kMs</b>		
I	Electrical Erection Works:	
1	Schedule:I Electrical Erection Works	6,14,12,025.45
2	Schedule:II Civil & Constrction Works	9,83,78,156.40
	<b>Total:</b>	<b>15,97,90,181.85</b>
	<b>Grand Total Pump House –III</b>	<b>49,29,17,242.45</b>

<b>B(IX) Diversion of 3.2kMs 400kV TMDC Line from 400kV Gajwel SS to 400kV Shankarpally SS to facilitate crossing of Broad Gauge Railway Track between Manoharabad and Kothapalli</b>		
Sl.No	Description	Total amount in Rs. incl of all taxes and duties
1	Schedule - I: Electrical Erection Works	1,40,01,093.46
2	Schedule-II : Civil and Construction Works	1,46,31,522.80
	<b>Total [B]:</b>	<b>2,86,32,616.26</b>
	<b>Grand Total [A] +[B]</b>	<b>77,64,91,417.46</b>
	<b>Or say</b>	<b>77,64,91,417.46</b>

**Grand Total : Rs. (77,64,91,417.00 (Rupees Seventy Seven Crores Sixty Four Lakhs Ninety one Thousand Four Hundred and Seventeen Only)**

### **3.0 PRICES AND PRICE ADJUSTMENTS:**

#### **3.1 For Works:**

The prices of all the items are indicated in **Schedules – B (I ) to (IX)** . The prices for steel and cement utilized in civil works are VARIABLE and prices of all other items shall be FIRM on all accounts such as (i) increase in quantum of work up to 50% over that provided in the contract, (ii) execution of contract beyond the scheduled completion period for whatever reasons and (iii) increase in the rates of material and labour both during and beyond the completion period etc. These prices include loading, transport, unloading of all equipment & materials to and from site, storage-cum-insurance, erection, supervision and other incidental services and insurance for erection, testing & commissioning and construction & civil works and all the taxes and duties wherever applicable as per the tender specification.

The price variation clause applicable is given in Annexure-I.

- 1.2 Quantities provided in the Price in **Schedules – B (I ) to (IX)** are based on rough estimate and provisional only and payment will be limited to actual quantities based on the design and drawings approved by TSTRANSCO. Contractor shall complete the supplies, storage, erection, testing and commissioning, civil and construction works and other incidental services as per the system requirement and as stipulated in bidding documents, designs, drawings approved during the detailed engineering. The contract price adjustments will be made based on the actual required quantities utilized as per detailed engineering and as per completed quantities of the supplies / works.

Wherever lump sum prices are provided in the price schedules, the Contractor shall cover complete requirement of works as per bidding documents, relevant standards and as per approved drawings.

The prices include insurance to be covered by the Contractor for the works, workmen's compensation, and all other insurances required as per specification. Please refer clause no. 19.0 of Section ITB of Volume-I of the specification.

Any other items not specifically mentioned in the bidding documents / drawings but which are required for erection, testing and commissioning of 400/220/11kV Kamalapuram Sub-Station, 220/11kV at B.G.Kottur and V.K.Ramavaram along with connected Transmission lines & Bays under Sita Rama Lift Irrigation Scheme and Diversion of 3.2 kMs of Twin Moose DC line of 400kV Gajwel SS - 400kV Shankarpally SS for Crossing Broad-Gauge Railway Track under Deposit Contribution Work on turnkey basis are deemed to have been included in the scope of the contract as mentioned in tender specification, unless specifically excluded.

**3.3 The tender price quoted by the Contractor is 1.09% less over the ECV of TSTRANSCO.**

**4.0 TAXES AND DUTIES:**

- 4.1 Prices for the Erection & Civil works are inclusive of Goods and Service Tax (GST) @ 18% on total value and Corpus fund @0.1% on total Civil Erection Works.
- 4.2 The Contractor will be entirely responsible for payment of taxes and duties, other local taxes or levies if any, license fee, etc., which are to be borne by the company/contractor until the completion of the contract.
- 4.3 No claim against the variation in taxes and duties or new levies in respect of the transaction between the Contractor and their vendors / sub-suppliers while procuring any components, sub-assemblies, raw materials and equipment will be entertained by the TSTRANSCO.
- 4.4 TSTRANSCO shall not bear any tax liability ie., Income Tax, surcharge on Income Tax and any other Corporate Tax, irrespective of the mode of contracting. The contractor shall be liable and responsible for payment of taxes, under the provision of the law. The TSTRANSCO as per the respective acts will make deduction towards Income Tax, TSVAT/WCT and Labour cess at source.

TSTRANSCO is registered under GST Act and Provisional ID is **36AAFCT0166J1Z9CIN No.U40102TG2014SGC094248**.



#### **4.5 PAYMENT OF TAXES, LEVIES, DUTIES, STATUTES:**

- 4.5.1 Contractor shall be entirely responsible for payment of all taxes, levies, duties, other local taxes, license fees, etc.
- 4.5.2 The contractor shall pay all types of fees, levies, taxes, duties etc. required to be paid by any National or State statute, ordinance or other law or any regulation or bye-law of any local or other duly constituted authority in relation to the execution of works and by the rules and regulations of all Public bodies and companies whose property or rights are affected in any way during the execution of works. In compliance to the above, the contractor shall keep the TSTRANSCO indemnified against all such penalties and liability of every kind for breach of any statute, ordinance or law, regulation or byelaw.
- 4.5.3 Nothing in the contract shall relieve the contractor from his responsibility to pay any tax that may be levied by the Government on the turnover / profits made by him in respect of the contract.

#### **4.6 TAX AND CESS DEDUCTABLE AT SOURCE:**

- 4.6.1 As per provision of Income tax Act, applicable Income tax, GST and Labour cess will be deducted at source at all stages of payment of the bills and same will be remitted to the concerned department as per the rules / acts of the State / Central Government.
- 4.6.2 The GST will be deducted in accordance with the orders issued by Government of India/Telangana from time to time at the rates, as applicable under TDS at all stages of payment of the bills and same will be remitted to the concerned department as per the rules / acts of the State / Central Government.

The Contribution to the corpus fund of N.A.C(National Academy of Construction), Hyderabad, component loaded in estimate shall be added in each bill of contractors and recovered from contractors bill and remitted to bank Account No.of N.A.C i.e., State Bank of Hyderabad, Madhapur Branch, A/c.No.62354682987, IFSC Code: SBIN0021162, Branch Code:21162.

#### **4.7 STATUTORY VARIATION:**

Any variation up or down in statutory levy or new levies introduced after calling of tender date under this specification will be to the account of TSTRANSCO and which shall be regulated in the contract agreement by the agreement concluding authority.

The successful Bidder has to declare the own manufactured and bought out items at the time of acceptance of LOI.

Any increase in statutory levies will be granted by the competent Authority on production of documentary evidence of such increase by the supplier provided the variation is within the scheduled completion period of contract. This is allowed only once during delivery period i.e. at the time of delivery of goods at factory.

In cases where the Bidder does not adhere to schedule of completion date of Supply/works and if there is any upward variation/revision in taxes & duties after the agreed schedule completion of programme of works, the Bidder shall bear such impact of levies and if there is any downward variation/revision, the credit shall be passed on to TSTRANSCO to that extent irrespective of scheduled completion of period of contract.

In case of sub-vendor (bought out) items, no statutory variation is applicable after the acceptance of LOI by the successful bidder.

#### **4.8 SEINORAGE CHARGES:**

Seignorage charges shall be paid to the Assistant Director Mines & Geology Department as per existing rules in vogue.

#### **5.0 COMPLETION PERIOD:**

The work shall be completed within **Eighteen (18) months** from the date of **issue of Purchase Order**.

#### **6.0. TERMS OF PAYMENT:**

- 6.1 (a) Ninety percent (90%) payments of the periodical progressive bills for the erection works will be made for the items of work done. For this purpose the contractor shall submit bills to the concerned Executive Engineer regularly to ensure payments in time. The contractor shall give the full details of items of works done against each location in support of the bill along with the summary sheet of payment particulars with the details of item wise quantity of work completed until the present claim, quantity of work completed against this claim and balance work to be carried out and corresponding amounts of payments. Bills submitted without supporting details will not be taken in to cognizance. Payment is subject to submission of performance security by the supplier/contractor.
- b) Out of the balance 10% amounts, 5% payments will be released after completion of all the works & submission of Material Accounts subject to submission of the following certified by the field engineer of TSTRANSCO.
  - a. As built drawings.
  - b. Instruction, O & M manuals and installation manuals as *Applicable*.

- c. Reconciliation of bill of material and order as executed.
  - d. Distribution copies of all drawings.
  - e. Tools and plants.
  - f. Equipment drawings, shop floor drawings and design calculation as *Applicable*.
- b) The balance (final) 5% will be paid after completion of one year performance guarantee period reckoned from the date of completion of all the works as per contract or after all the balance materials left over after completion of works are handed over to TSTRANSCO whichever is later. The date of commissioning/ energising the equipment will not be considered for reckoning the performance guarantee period and the date of completion of all the works will only be considered as start date of Guarantee period.
- c) **The Bank Account details furnished by the company are as follows**
- |                                |  |
|--------------------------------|--|
| <b>Name of the beneficiary</b> | <b>: M/s. Megha Engineering &amp; Infrastructure Ltd.,</b> |
| <b>Name of the Bank</b>        | <b>: Andhra Bank, TIE, Balanagar, Telangana – 500 035.</b> |
| <b>Account No.</b>             | <b>: 005713046109183</b>                                   |
| <b>IFSC Code</b>               | <b>: ANDB00000057</b>                                      |
- d) Price variation is *Applicable* for the items cement, reinforcement steel and M.S Flat/Rod (for earthing), which is as per Price Variation clause mentioned in ITB.
- e) In case however, the balance materials are returned to TSTRANSCO well before the completion of the performance guarantee period, the 5% amount will be released against a bank guarantee for equal amount, which shall be valid for the performance guarantee period and also provide two months claim period along with "Performance Security Bank Guarantee". "All banking charges should be to the account of the contractor".
- f) Contractor shall not be entitled to the said retention amount, until he shall deliver to the TSTRANSCO, a complete release of all works & materials arising out of this contract or receipts in full in lieu thereof, and in either case an affidavit that so far as he has knowledge or information, licenses and other commitments for which any part of work could be failed. If any unsatisfied work remains after all the payments are made to the contractor, he shall refund to the TSTRANSCO, all moneys that the latter may be compelled to pay in discharging such including all costs and the attorney's fees so incurred.

The payments are subject to performance security with validity of 12 months with 2 months claim period as on the date of check measurement of materials or works.

No interest will be payable in case payment is delayed for what ever reason.

## **7.0 FINAL PAYMENT:**

Whenever, in the opinion of owner/employer, the work covered in the Contract has been completed, the contractor shall prepare a final abstract showing the total amount of work done and its value according to the terms of the Contract. From the total value thus arrived at all previous payments shall be deducted and all deductions made in accordance with the provisions of the Contract. The remainder shall be paid by owner to Contractor within three months after the date of owner's final certificates.

Payment of the retention amount shall be due after the Defects Liability period of 12 calendar months, as per conditions stipulated in Clause 48 and clause 54.1 b and c of GCE.

- 7.1 Where the Vendor/Contractor requests for the payment in advance before the "scheduled date of payment" that would be examined by the Finance Wing of TSTRANSCO to decide whether such facility could be extended or not and if found acceptable the Contractor should agree to offer a rebate/ discount @ 0.3% per week or part there of for the advancement. Accordingly, the Finance & Accounts wing will release priority payment to such Contractor after availing of the rebate/ discount.
- 7.2 The payment for super-structure erection shall be based on the calculated weights of tower and their extensions as per the approved bill of material for each type of tower.
- 7.3 The payment for excavation and concreting shall be based on the approved design volumes of excavation and concreting.
- 7.4 No claim for idle period resulting from any "Force Majeure" condition shall be entertained by the TSTRANSCO.

## **8.0 PERFORMANCE SECURITY:**

Bank Guarantee towards Performance Security (Erection) for an amount equivalent to 5% of erection value i.e. for Rs.3,88,24,600/- valid upto 31.01.2021 with a claim period upto 31.03.2021.

Within 15 days of the issue of letter of intent from the TSTRANSCO, the successful Bidder shall furnish the Performance Security for an amount equivalent to sum of 5% of the supply value of the contract i.e. **Rs. 3,88,24,600/-** in accordance with the contract, in the Performance Security form provided in the bidding documents or any other form acceptable to the TSTRANSCO.

The Performance Security/additional performance securities shall cover the 12 months over and above completion period, with a further claim period of two months thereafter. The TSTRANSCO will discharge the Performance Security after completion of the warranty/ Guarantee period.

Failure to furnish the Performance Security as specified within 15 days of award of contract shall constitute sufficient grounds for the annulment of the Award and forfeiture of the bid guarantee, in such case the TSTRANSCO may Award the said contract to the next lowest evaluated Bidder or call for new bids. Any further correspondence made by the Contractor in this regard will not be entertained.

Performance security may in the form of

- (i) A Bank Guarantee from any Nationalised Banks (list specified) as per list enclosed in the specification, State Bank of India or its Associate Banks/ Nationalized banks in favour of **Chief Engineer / 400kV/VS/TSTRANSCO**.
- (ii) A Banker cheque, crossed Demand Draft, pay order on any Nationalized Bank / State Bank of India or its associate banks in the Headquarters in favour of Pay Officer/TSTRANSCO.

All Bank Guarantees, which are executed in accordance with this specification, shall be only on TSTRANSCO State Non- Judicial Stamp paper purchased in Telangana State to the value of not less than Rs.100/- (Rupees one hundred only). Bank Guarantee executed on the Non- Judicial stamp paper of value less than Rs.100/- will not be accepted.

In case of the non-execution of works within the stipulated completion period the bidder shall extend the bank guarantee suitably to cover the 12 Months performance and 2 Months claim period from the expected date of commission of the project.

In case of replacement/repair of any material/works after commissioning of the Sub-Station / Line and before expiry of Guarantee / Warranty period, the contractor shall furnish separate bank guarantee valid for 12 Months with 2 Months claim period from the date of repair / replacement covering the value of such materials / works.

The TSTRANSCO will discharge the Performance Security after completion of the contract and within 60 days of the expiry of the warranty.

## **9.0 INDEMNITY BOND:**

All materials/equipment supplied by the contractor and TSTRANSCO shall be handed over to the owner on delivery note. All such material/equipment shall be provided to the contractor for erection purpose after executing an indemnity bond as per proforma in Conditions of Contract, Volume-I in favour of the owner against loss, damage and any risks involved, for the full value of the materials. This indemnity bond shall be valid till the scheduled date of testing, commissioning and handing over of the equipment to the engineer. Please refer clause 33 of Section GCC of Volume-I of Specification.

## **10.0 CONTRACT AGREEMENT:**

The Contractor shall enter into a Contract Agreement in the prescribed proforma as indicated in Annexure-X of Volume-I of bidding documents with the TSTRANSCO within thirty (30) days from the date of "Notice of Award of Contract" or within such extended time as may be granted by the TSTRANSCO.

The agreement shall be executed at the Office of the Chief Engineer/400kV, TSTRANSCO, Vidyut Soudha, Hyderabad on a date and time to be mutually agreed.

The expenses for the preparation and stamping the contract agreement shall be to the account of the Contractor.

## **11.0 WARRANTY/GUARANTEE:**

11.1 The Contractor shall guarantee, among other things the following:

- i. Quality and strength of materials / equipment used.
- ii. Adequate factors of safety for the material / equipment to withstand the mechanical and/or electrical stresses developed therein.
- iii. The delivery and erection periods given in the Bid.
- iv. The Contractor shall warrant further that the services to be carried out under this contract shall conform with generally accepted professional standards and engineering principles.

- v. Guarantee for Works: Twelve calendar months from the date of commissioning of the Substation, unless otherwise agreed in writing by owner, will be deemed to be the 'Defect Liability Period'. The works shall not be considered as completed until owner has certified in writing that they have been virtually completed and the defect liability period shall commence from the date of such certificate. In case any defects in the work, due to bad materials, and/or bad workmanship, develop in the work before the expiry of the period, contractor, on notification by owner shall rectify or remedy the defects at his own cost and he shall make his own arrangements to provide materials, labour, equipment and any other appliances required in this regard. The performance security will be returned to contractor only after the expiry of this defect liability period. In case even on due notification by owner, contractor fails to rectify or remedy the defects, owner shall have the right to get this done by the other agents and recover the cost incurred by deductions from the retention amount due to contractor, in case this cost is within the value of the performance security, and if not, contractor shall be liable to pay to owner the balance amount.

However any Engineering error, omission, wrong provision, Goods failure etc., shall be attended to by the Contractor up to and on the date of actual Commissioning of the Goods without any revision in the price or extra cost.

- 11.2 If during the period of guarantee, any of the materials, are found defective and/or fail in test or operation, such materials, shall be repaired or replaced by the Contractor free of cost to the TSTRANSCO irrespective of the reimbursements from the insurance company within reasonable time which shall in no circumstance be more than 30 days or such other reasonable time as the TSTRANSCO may deem proper to afford failing which the cost of the failed material will be deducted from the subsequent bills/Bank Guarantee.
- 11.3 Provision of this clause shall also apply to all materials and services repaired or replaced under the provision of this until the expiration of period of 12 (twelve) months from the date of such repair or replacement. In case of replacement/repair of any material/works after commissioning of the Sub-Station / Line and before expiry of Guarantee / Warranty period, the contractor shall furnish separate bank guarantee valid for 12 Months with 2 months claim period from the date of repair / replacement covering the value of such materials / works.

- 11.4 The cost of any special or general overhaul rendered necessary during the guarantee period due to defective Goods and Services furnished by the contractor shall be borne by the contractor.
- 11.5 The taking over of the Goods and services by the TSTRANSCO shall in no way relieve the contractor of his obligation under this clause.
- 11.6 The Contractor shall co-operate with the TSTRANSCO in all ways in repair or replacement of the defective part, so as to minimize to the extent possible the interruption in operation of Goods.
- 11.7 Where the sub-contractors provide longer periods of warranty than mentioned above, the TSTRANSCO shall be entitled for such longer guarantees.
- 11.8 If the Supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the TSTRANSCO may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the TSTRANSCO may have against the Supplier under the contract.
- 11.9 The Contractor's full and extreme liabilities under this clause shall be satisfied by the payments to the TSTRANSCO of the extra cost, of such replacement procured including erection as provided for in the contract, such extra cost being the ascertained difference between the price paid by the TSTRANSCO for such replacements and the contract price portion for such defective plants. Should the TSTRANSCO not so replace the defective plant, the contractor's extreme liability under this clause shall be limited to repayment of all sums paid by the TSTRANSCO under the contract for such defective plant. Please refer clause no. 48 of GCE of Volume –I of Specification.

## **12.0 FORCE-MAJEURE CONDITIONS:**

- 12.1 Notwithstanding the provisions of clauses 21, 22 and 23 of Section GCC of Volume-I of Specification the Contractor/Supplier shall not be liable for forfeiture of his performance security, Penalty or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of force Majeure.
- 12.2 For purposes of this clause, "Force Majeure" means an event beyond the supplier/contractor and not involving the supplier's/contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, wars or revolutions, fires, earthquakes, floods, epidemics, quarantine restrictions, freight embargoes, riots, civil commotions.



- 12.3 If a Force Majeure situation arises, the supplier shall promptly notify the TSTRANSCO in writing of such condition and the cause thereof. Unless otherwise directed by the TSTRANSCO in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. No price variance will be allowed during the period of force majeure.
- 12.4 Force majeure is herein defined as
- (a) Any cause which is beyond the control of contractor or TSTRANSCO, as the case may be.
  - (b) Natural phenomenon including but not limited to weather conditions, floods, drought, earthquakes and epidemics.
  - (c) Acts of any governmental authority, domestic or foreign, including but not limited to war, declared or undeclared, priorities, quarantine, embargoes, licensing control or production or distribution restrictions.
  - (d) Accidents and disruptions including but not limited to fires, explosions, breakdowns of essential machinery or equipment and power shortages.
  - (e) Transportation delay due to force majeure or accidents.
  - (f) Strikes, slowdown, lockouts and sabotage.
  - (g) Riots and civil commotions.
- 12.5 If a Force Majeure situation arises, the supplier/contractor shall promptly notify the TSTRANSCO within 10 days in writing of such condition and the cause thereof. Unless otherwise directed by the TSTRANSCO in writing, the supplier/contractor shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 12.6 The Contractor or the TSTRANSCO shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and/or defined above.
- 12.7 No price variance is allowed during the period of Force Majeure Conditions.

### **13.0 PENALTY FOR LATE COMPLETION:**

The completion period mentioned in the Clause no. 5 of this Order is the essence of contract. Penalty will be levied as follows for the delay in executing the works.

Further in case of delay in erection of the works or supply of material / equipment beyond over all completion period, whatever may be the reasons, the TSTRANSCO shall levy and collect the penalty @ 0.5% per week of the delay on the delayed value of the works / material / equipment subject to a maximum of 10% of the total value of the contract. Once the maximum is reached, TSTRANSCO shall consider termination of the contract.

The right of the TSTRANSCO to levy penalty shall be without prejudice to its rights under the law including the right to get the balance works executed by other agencies at the risk and cost of the successful bidder. This is in addition to the right of the TSTRANSCO to forfeit the deposit, recover any damages from the contractor and also blacklisting.

Penalty shall be calculated while admitting the final bill, duly taking into account, extension of completion period if any, and the penalty shall be recovered along with applicable GST.

However to ensure availability of sufficient amount for deducting penalty a recovery of 0.5% of the value of supply/work, delayed, per week(or part thereof, as the case may be) shall be adjusted against the Penalty (+GST) levied while admitting the final bill.

In case the successful bidder fails to execute the supplies/works as per the program or in the opinion of TSTRANSCO, the supplies/works are progressing at a slow pace, TSTRANSCO reserves its right to get the balance or part of supplies/works executed through other agencies at the risk and cost of the successful bidder, this is in addition to the right of the TSTRANSCO to recover any damage from the contractor and also blacklisting.

**SPECIFIC ACCEPTANCE OF THIS CLAUSE SHOULD BE BOLD IN THE BID. IF SUCH ACCEPTANCE IS NOT INDICATED, THE BID IS LIABLE TO BE OVERLOOKED.**

- (i) The date of receipt of materials/equipment at the destination stores in good condition (The date of Form-13) will be taken as the date of delivery.

For penalty, the number of days of delay would be rounded off to the nearest week and interest calculated accordingly. Materials / equipment which are not of acceptable quality or are not conforming to specification would be deemed to be not delivered. The penalty specified shall be levied and would be adjusted against same bill / subsequent pending bills.

- (ii) Deficiency in quality of works in deviation from the specification: Instance wise minimum penalty leviable and debarred from participating in future tenders for a minimum period of one year, indicated as below:

S.No.	Deficiency in quality of works in deviation from the specification/ Agreement such as	Instance wise Minimum penalty leviable in Rupees during the same work by the contractor			Duration of disqualification of the contractor in participation the tenders of TSTRANSCO in the event of further instance.
		1 <sup>st</sup> Instance	2 <sup>nd</sup> Instance	3 <sup>rd</sup> Instance	
1	2	3			4
Category-I	Not using (i) prescribed shoring, shuttering and dewatering equipment, (ii) measurement boxes, (iii) Form boxes for different types of foundations and steel measuring boxes, (iv) not providing adequate number of chairs to the steel reinforcements, (v) not carrying out back filling and compaction of the foundation pits in layers and leveling the tower footings properly, (vi) not ensuring that the excavated earth is dumped at least 2 meters away from the pit etc., and (vii) not providing copings to the tower legs/stubs (viii) not providing water tanker, Earth rammers/earth vibrators.	5000	10000	15000	Debarred from participating in future tenders for a minimum period of one year.
Category-II	Use of reinforcement steel without ISI marking, not using vibrators for effective consolidation of the concrete during foundation works, not using proper templates for firmly keeping the stubs in position when templates are supplied by the contractor and improper fixing of stubs, non ensuring of tower verticality, use of rusted stubs and tower parts if supply is by the contractor, non painting of butt joints and rusted stubs with zinc rich paint immediately after erection of the towers and stringing, non fixing of earth flat to the stub, non deployment of technical personnel for supervision of works by the contractor.	7500	15000	22500	Debarred from participating in future tenders for a minimum period of one year.

Category-III	Use of improper grade/quality of raw material like HBG metal, water and sand for concreting using clogged and/or lump/clotted cement for concreting not ensuring proper curing for foundation concrete, not ensuring that all the members of the tower are placed in position and firmly fixed with bolts and nuts immediately after erection of tower.	10000      20000      30000	Debarred from participating in future tenders for a minimum period of one year.
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The penalty in the first instance shall be finalised by Executive Engineer concerned based on the report of Assistant Divisional Engineer/concerned after giving an opportunity to the contractor to submit explanation.

Penalty for second instance shall be finalised by the Superintending Engineer concerned based on the report of Executive Engineer/ concerned after giving an opportunity to the contractor to submit explanation.

Penalty for third instance shall be finalised by the Chief Engineer concerned based on the report of Superintending Engineer concerned after giving an opportunity to the contractor to submit explanation.

For the fourth instance of deficiency, the Chief Engineer concerned shall report to the Director, concerned proposing for debarring the contractor from participating in future tenders for a minimum period of one year. Technical Committee shall examine the facts and figures of the case and take a final view in the case.

#### **14.0 INSURANCE:**

- 14.1 In addition to the conditions covered under the clause entitled 'Insurance' in 'General Conditions of Contract', the following provisions will apply to the portion of the 'Works' at site to be done at site beyond the Contractor's own or his Subcontractor's manufacturing works. Comprehensive Insurance of equipment during erection and commissioning, Workmen's Compensation Insurance, Comprehensive Automobile Insurance & Comprehensive General Liability Insurance shall be the responsibility of the CONTRACTOR. Contractor shall at his own expense arrange to effect and maintain until the completion of the contract. Insurance policies, with an insurance company approved by owner, against all risks in respect of which contractor is required under this clause to indemnify owner.

In particular, contractor shall effect and maintain an insurance policy of at least Rs.3.00 lakhs for one person and Rs.5.00 lakhs per accidental for injury or death and at least Rs.5.00 lakhs per accident for third party property damage, to indemnify owner against all third party accident/damage claims which may arise in respect of the work or in consequence thereof. The Contractor shall also maintain an insurance policy against all claims which may be made upon owner whether under the Workmen's Compensation Act or any other statute in force during the currency of the contract or at common law in respect of any employee of contractor or any subcontractor. All such insurance policies shall be in the joint names of owner and contractor and shall be deposited with owner. The Contractor shall be responsible for anything which may be excluded from the insurance policies referred to above and also for all other damage to any property or persons out of and incidental to the negligence or defective carrying out of this contract.

**All costs on account of insurance liabilities covered under the contract will be on contractor's account and will be deemed to have been included in the contract price.**

#### 14.2. **WORKMEN'S COMPENSATION INSURANCE:**

This insurance shall protect the CONTRACTOR against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the CONTRACTOR against claims for injury, disability, disease or death of his or his Subcontractor's employees, which for any reason are not covered under the Workmen's Compensation Act, 1948. The liabilities shall not be less than :-

Workmen's Compensation - As per statutory provision

Employee's liability - As per statutory provision.

#### 14.3 **COMPREHENSIVE AUTOMOBILE INSURANCE:**

This insurance shall be in such a form to protect the CONTRACTOR against all claims for injuries, disability disease and death to members of public including the Owner's men and damage to the property of others arising from the use of motor vehicles during on or off the 'Site' operations, irrespective of the ownership of such vehicles.

The liability covered shall be as herein indicated:

Fatal injury	: Rs.1, 00,000 each person
	: Rs.2, 00,000 each occurrence
Property damage	: Rs.1, 00,000 each occurrence

**14.4 COMPREHENSIVE GENERAL LIABILITY INSURANCE:**

This insurance shall protect the CONTRACTOR against all claims arising from injuries, disabilities, diseases or death of members of public or damage to property of others due to any Act or omission on the part of the CONTRACTOR, his agents, his employees, his representatives and Subcontractors from riots, strikes and civil commotion. This insurance shall also cover all the liabilities of the CONTRACTOR arising out of the clause entitled 'Defense of Suits' under 'General Conditions of Contract'.

14.5 The hazards to be covered will pertain to all the works which and areas where, the CONTRACTOR, his SUBCONTRACTOR, his agents and his employees have to perform work pursuant to the 'Contract'.

14.6 The above are only illustrative list of insurance covers normally required and it will be the responsibility of the CONTRACTOR to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either director indirect, in pursuance of the 'Contract'.

**14.7 FIRE INSURANCE:**

Unless otherwise instructed by the OWNER, the CONTRACTOR shall, on signing the 'Contract', insure the works and keep them insured until the completion of the 'Contract' against loss or damage by fire, with the Company to be approved by the OWNER, in the joint names of the OWNER and the CONTRACTOR for such amount and for any further sum, if called upon to do so by the OWNER, the premium of such further sum being allowed to the CONTRACTOR as an authorized extra. Such policy shall cover the property of the OWNER only and shall not cover any property of the CONTRACTOR or any SUBCONTRACTOR, or his employees.

The CONTRACTOR shall deposit the policy receipts for the premium with the OWNER within twenty one (21) days from the date of signing the 'Contract' unless otherwise instructed by the OWNER. In default of the CONTRACTOR insuring as provided above, the OWNER may so insure and may deduct the premiums paid from any moneys due, or which may become due to the CONTRACTOR. The CONTRACTOR shall, as soon as the claim under the policy is settled, or the work reinstated by the insurance office should they elect to do so, proceed with all due diligence with the completion of the 'Works' in the same manner as though the fire had not occurred and in all respects under the same conditions of 'Contract'. The CONTRACTOR in case of rebuilding or re installment after fire, shall be entitled to such extension of time for completion as the OWNER may deem fit.

#### **14.8 Comprehensive Transport, Storage, Erection cum Commissioning Insurance:**

14.8.1 All the equipment and materials being supplied by the Contractor (as per GCC Clause No.1.1 of this section) shall be kept completely insured by the Contractor at his cost from the time of dispatch from the Bidders Works, up to the completion of erection, testing and commissioning at site and taking over the equipment by the owner in accordance with the contract.

14.8.2 Contractor shall take the delivery at site and jointly with the TSTRANSCO, inspect all the material received at destination store and furnish a loss/damage report to the TSTRANSCO within a week of receipt of material at site and lodge insurance claims there upon. Incase of loss to the TSTRANSCO due to delays in submitting the loss/penalty report by contractor, owner will be within his right to deduct such losses from the contractor's progressive payments. All the equipment and materials being supplied by the TSTRANSCO shall also to be taken delivery from any of the designated stores of TSTRANSCO/at site and shall be insured by the contractor against loss, damage, theft, pilferage, fire etc. from the point of unloading up to the time of taking over of equipment by the TSTRANSCO including handling, transportation, storage, erection, testing and commissioning etc. and the contractor shall be fully responsible for making good of any loss or damage at his own cost. All costs for such insurance shall be to the contractor account and shall be deemed included in the contract price.

14.8.3 It will be the responsibility of the Contractor to lodge, pursue and settle all claims with the Insurance Company in case of any damage; loss, theft, pilferage or fire and the owner shall be kept informed about it. The losses, if any, will have to be borne by the Contractor, if the claims are not lodged and pursued properly or in time or if the insurance company does not settle the same. The contractor shall replace the lost/damaged materials (own and owner supplied) promptly irrespective of the settlement of the claims by the under writers and ensure that the work progress is as per agreed schedules. The losses, if any, in such replacement will have to be borne by the contractor.

#### **15.0 FACILITIES TO BE PROVIDED BY TSTRANSCO:**

##### **15.1 SPACE:**

The CONTRACTOR shall advise the OWNER within thirty (30) days from the date of acceptance of the 'Letter of Intent' about his exact requirement of space for his office, storage area, pre assembly and fabrication areas, toilets, etc. The above requirement shall be reviewed by the OWNER and space will be allotted to the CONTRACTOR for construction of his temporary structures like office, storage sheds, and other utilities, etc., for his own as well as his Subcontractor's use.

The space allotted shall be within a distance of about 1.0 km from the 'Site'. No space will be provided by the OWNER for the Contractor's labour and facilities for labour housing shall be the sole responsibility of the CONTRACTOR.

The contractor shall erect all temporary buildings, tool sheds, fabrication shops, stores and office, etc. at his own cost in the area allotted to him at work site by the owner. Contractor shall obtain owner's approval before removal of such temporary buildings. The contractor shall indicate the area required for storage facilities inside the work site. The contractor shall at all times keep the site free from accumulation of waste and debris and on completion of work dispose of all the surplus materials and temporary works, as directed by the owner and leave the works and site clean and tidy. The contractor shall be responsible for taking all the safety precautions during construction and maintaining the site safe at all times. At the end of each working day and at all times, when the work is temporarily suspended he shall protect all the construction material, equipment and facilities from penalty.

#### 15.2 **ELECTRICITY:**

The CONTRACTOR shall submit to the OWNER within thirty (30) days from the date of acceptance of the 'Letter of Intent', his phased electrical power requirements to allow the planning of the temporary electrical distribution by the OWNER. The CONTRACTOR shall be provided with construction power for the purposes of the 'Contract', at one point in the project 'Site' which shall be metered and chargeable to contractor.

The CONTRACTOR shall make his own further distribution arrangement. All temporary wiring must comply with local regulations and will be subject to the OWNER's inspection and approval before connection to supply. Power supplied to Contractor's office, contractor's works and contractors residential colony will be charged at the rates in vogue at that time. The contractor's temporary distribution shall be arranged so as to maintain a Power Factor of 0.8 minimum under all operating conditions.

The owner will not be responsible for the consequences of any unintentional or unplanned interruptions to the above power supply. However, in case of power failure or due to any unavoidable circumstances, the contractor has to make necessary arrangements like diesel sets etc. so as not to affect the progress of work. The contractor shall make his own arrangement for the dismantling on completion of the works of his temporary distribution systems, distribution panel and other equipment he may require to take power from owner's supply point.



**15.3 WATER:**

Water supply by the Owner will be on chargeable basis. Supply of water, if available, will be made for the construction purposes at an agreed single point in the 'Site'. Any further distribution will be the responsibility of the CONTRACTOR. Drinking water will also be provided at one agreed single point in the 'Site' if available.

**16.0 SECURITY (WATCH & WARD):**

The Contractor shall have total responsibility for all equipment and materials in his custody stored, loose, semi assembled and / or erected by him at 'Site'. The Contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials, equipment and 'Works' from theft, fire, pilferage and any other damage and loss.

**17.0 VARIATIONS IN QUANTITIES :**

The quantities indicated in the **Schedules – B (I) to (IX)** are only provisional and are likely to change during actual execution.

**(a) For Works items covered in Schedule - B :**

For quantities increased up to 50% over and above the Scheduled quantities: The rates accepted for individual items shall hold good up to 50% over and above the agreement quantities.

For quantities increased beyond 50% over and above the Scheduled quantities:  
The rates payable for the quantities beyond 50% over and above the agreement quantities will be TSTRANSCO estimated rate or accepted rate whichever is less.

**18.0 TSTRANSCO'S RIGHT TO VARY THE SCOPE DURING THE PERIOD OF CONTRACT:**

TSTRANSCO may change the scope of the contract based on the priorities and may subsequently extend for balance scope with the prices quoted if required.

TSTRANSCO reserves the right to increase or decrease the scope stated above as per requirement up to + or - 50% during the execution of the order with quoted prices

**18.1 SUPPLEMENTAL/NEW ITEMS AND PROCEDURE FOR WORKING OUT RATES**

The contractor is bound to execute Supplemental / new items that are found essential, incidental and inevitable during execution of the contract at the rates to be worked out as below : -

For the items relating to the **Schedules – B (I ) to (IX)** where the rate can be deduced from the estimate or TSTRANSCO / DISCOMS / Common SSR, the rate applicable will be the estimated / SSR rate +/- tender percentage quoted/ accepted by the bidder for Schedule – B& B1. The schedule of rates adopted for supplemental items / new items shall be from the current SSR applicable during the execution period.

For the items relating to the **Schedules – B (I ) to (IX)** where the rates of new items cannot be deduced from the estimate / SSR, the rate payable will be arrived based on the prevailing market rates duly enquiring / collecting quotations and observing the reasonableness of the rates by the TSTRANSCO.

- 18.2 The contractor shall plan and procure the materials indicated in the schedules duly verifying with the approved layout and profile so that the procured quantities match with actual requirement to avoid excess supply of materials. The Executive Engineer shall give the details of the materials such as quantities of type wise towers and extensions and other line materials based on the line approved profile and the quantities of type wise structures and other materials based on the approved layout on the date of Kickoff meeting without fail.

The Schedule time required to complete the new / supplemental items including the balance work will be indicated in the approval letter issued for new / supplemental items.

## **19.0 PHOTOGRAPHS&PROGRESS REPORTS:**

The Contractor shall furnish three (3) prints each of progress photographs of the work done at 'Site' to the TSTRANSCO. Photographs shall be taken as indicated by the TSTRANSCO or his representative. Photographs shall be adequate in size and number to indicate various stages of erection. Each photograph shall contain the date, the name of the Contractor and the title of the photograph. Normally photographs may be taken once in every 15 days and for all special events.

The photographs shall accompany the monthly progress report detailing out the progress achieved on all erection activities as compared to the Schedules. The report shall also indicate the reasons for the variance between the scheduled and actual progress and the action proposed for corrective measures wherever necessary.

Photographs shall be taken by the contractor for each tower location of EHT lines in the following stages of

1. After excavation is over in normal soils.
2. Before and after blasting in Hard rock soils.
3. During dewatering.

4. During concreting.
5. Shoring & strutting.

The photographs should be clear. The Contractor shall submit both hard copy and soft copy (2 sets) to the Engineer in charge immediately.

The Contractor shall keep the TSTRANSCO informed in advance regarding his field activity plans and schedules for carrying out each part of the 'Works'. Any review of such plan or schedule or method of work by the TSTRANSCO shall not relieve the Contractor of any of his responsibility towards the field activities.

## **20.0 QUALITY ASSURANCE PROGRAMME:**

To ensure that the equipment and services under the scope of this contract whether manufactured or performed within the Bidder's works or at his Subcontractor's premises or at the TSTRANSCO's site or at any other place of work are in accordance with the specifications, the Bidder shall adopt suitable quality assurance programmes to control such activities at all points, necessary. Such programmes shall be outlined by the Bidder and shall be furnished as applicable. A quality assurance programme of the Bidder shall generally cover the following.

- a) His organization structure for the management and implementation of the proposed quality assurance programme;
- b) Documentation control systems;
- c) Qualification data for Bidders key personnel;
- d) The procedure for purchase of materials, parts, components and selection of Sub-Contractor's service including vendor analysis, source inspection, incoming raw-material inspection, testing, verification of materials purchased, etc.
- e) System for shop manufacturing and site erection controls including process controls and fabrication and assembly controls;
- f) Control of nonconforming items and system for corrective actions;
- g) Inspection and test procedure both for manufacture and field activities
- h) Control of calibration and testing of measuring and testing equipment;
- i) System for indication and appraisal of inspection status
- j) System for quality audits;
- k) System for authorizing release of manufactured product to the TSTRANSCO
- l) System for handling storage and delivery;
- m) System for maintenance of records; and
- n) A quality plan detailing out the specific quality control procedure adopted for controlling the quality characteristics relevant to each item of equipment/component furnished.

**21.0 QUALITY ASSURANCE DOCUMENTS:**

The Bidder shall be required to submit the following Quality Assurance Documents within before dispatch of the equipment

- i) All Non-Destructive Examination procedures, stress relief and weld repair procedure actually used during fabrication,
- ii) Welder and welding operator qualification certificates,
- iii) Welder identification lists, listing welders and welding operator's qualification procedure and welding identification symbols.
- iv) Material mill test reports on components as specified by the specification.
- v) The inspection plan with verification, inspection plan check points, verification sketches, if used, and methods used to verify that the inspection and testing points, in the inspection plan were performed satisfactorily.
- vi) Sketches and drawings used for indicating the method of trace ability of the radiographs to the location on the equipment
- vii) Non-destructive Examination result, reports including radiography interpretation reports.
- viii) Factory test results for testing required as per applicable codes and standards referred in the specification.
- ix) Inspection reports duly signed by Quality Assurance personnel of the TSTRANSCO and Bidder for the agreed inspection hold points. During the course of inspection, the following will also be recorded:
  - a) When some important repair work is involved to make the job acceptable; and
  - b) The repair work remains part of the accepted product quality.

**22.0 IMPLEMENTATION AND FIELD QUALITY PLANS :**

It will be the responsibility of the Contractor to ensure through adequate supervision that the erection of the equipment supplied by the Contractor and by TSTRANSCO is being carried out according to the quality plans and standard manufacturing practice/instructions as given by the Contractor. In case of any deviations noticed in performing the erection in accordance with such quality plans, etc. the Contractor shall forthwith inform the TSTRANSCO of such deviations for taking necessary corrective action. In case the TSTRANSCO fails to ensure such corrective action, the Contractor shall be absolved of any consequential liability.

The TSTRANSCO/Contractor will further identify specific hold points beyond which work will not proceed without TSTRANSCO's/Contractor's consent so as to further ensure that the Erection Contractor performs the above quality functions effectively.

### **23.0 COMMISSIONING CUM ACCEPTANCE TESTS:**

- 23.1 On completion of erection of the equipment and before commissioning, each item of the equipment shall be thoroughly cleaned and then inspected jointly by the TSTRANSCO and the Bidder for correctness and completeness of installation and acceptability for commissioning, leading to initial pre-commissioning tests at site. The list of pre-commissioning tests to be performed shall be as mutually agreed and included in the Bidder's quality assurance program.
- 23.2 The Bidder's commissioning engineers, specifically identified as far as possible, shall be responsible for carrying out all the pre-commissioning tests. On completion of inspection, checking and after the pre-commissioning tests are satisfactorily over, the complete equipment shall be placed on Initial Operation during which period the complete equipment shall be operated integral with sub-systems and supporting equipment as a complete system.
- 23.3 The specific tests to be conducted on equipment have been brought out in the specifications.
- 23.4 The Contractor in charge of erection testing and commissioning shall provide, at free of cost, all testing instruments, control equipment etc. for conducting above tests, in fully calibrated condition along with valid Calibration Certificates. The TSTRANSCO reserves the right to get the testing instruments/control equipment recalibrated before the test at a laboratory of his choice at the cost of the Bidder. The TSTRANSCO will apply proper corrections in calculations, to take into account conditions that do not correspond to the specified conditions.
- 23.5 Any special equipment, tools and tackles required for the successful completion of the Commissioning Tests shall be provided by the Bidder, free of cost.
- 23.6 The guaranteed performance figures of the equipment shall be provided by the Bidder during these commissioning and acceptance Tests. Should the results of these tests show any decrease from the guaranteed values the Bidder shall modify the equipment as required to enable it to meet the guarantees. In such case, commissioning and acceptance Tests shall be repeated within one month, from the date the equipment is ready for re-test and all costs for modifications including labour, materials and the cost of additional testing to prove the equipment meet the guarantee, shall be borne by the Bidder.

**24.0 INSPECTION OF MATERIALS AT SITE:**

24.1 The TSTRANSCO will have the right to insist on any test(s) of reasonable nature carried out at Bidder's premises or at site or in any other place to satisfy that the material comply with the specification.

24.2 The TSTRANSCO reserves the right for getting any field tests conducted on the completely assembled equipment at site.

**24.3 For Works:**

- a) The provisions of the clauses entitled Inspection, Testing and InspectionCertificates shall also be applicable to the erection portion of the Works'. TSTRANSCO shall have the right to re-inspect any equipment though previously inspected and approved, at the Contractor's works, before and after the same are erected at 'Site'. If by the above inspection, TSTRANSCO rejects any equipment, the CONTRACTOR shall make good for such rejections either by replacement or by modifications / repairs as may be necessary to the satisfaction of TSTRANSCO. Such replacements will also include the replacements or re- execution of such of those works of other CONTRACTORS and / or agencies, which might have been damaged or affected by the replacements or rework done to the Contractor's work.
- b) The CONTRACTOR shall immediately correct any work that is faulty. The fact that TSTRANSCO or their representatives have not pointed out faulty work or work which is not in accordance with plans and specifications shall not relieve the CONTRACTOR from correcting such work as and when directed by TSTRANSCO without additional compensation.
- c) When TSTRANSCO takes down any item of finished work for the purpose of inspection, the CONTRACTOR shall bear the entire expenses incident there to. However, no extension of time shall be given for completion of works on this account. If the CONTRACTOR fails to repair any defective work or replace any defective materials after reasonable notice, TSTRANSCO may cause such defective work to be repaired or defective materials to be replaced by other agencies and the expenses thereof shall be deducted from the amount to be paid to the CONTRACTOR.

- d) TSTRANSCO, their representatives and employees shall, at all reasonable times, have free access to the works and/or to the workshops, factories or other places where materials are being prepared or constructed for the 'Contract' and also to any place where the materials are lying or from where they are being obtained, and the CONTRACTOR shall give every facility to TSTRANSCO and his representatives for inspection and examination and test of the materials and workmanship even to the extent of discontinuing portions of the work temporarily, or of uncovering or taking down portions of finished work, without any financial commitments.

## **25.0 TEST CODES:**

The provisions outlined in the IEC test codes or other international and Indian standards and approved equivalents shall generally be used as a guide for all the above test procedure unless otherwise specified in the technical specifications.

## **26.0 COMPLETION OF ERECTION AND COMMISSIONING:**

- i) After completion of erection work the contractor shall furnish 10 sets of copies of As- Built Drawings in bound volumes along with softcopies in a CD and two sets of re-producible including key diagrams, schematic drawings for piping system, electrical circuits and cabling arrangement etc. and other drawings as called for in the bidding documents.
- ii) The operating and maintenance manuals for the equipment/material erected by the contractor shall be furnished in ten copies before the commencement of erection of the same. These shall contain every drawing and information and step by step instructions required for the erection, testing and commissioning as well as operation and maintenance for all the equipment as stipulated in the bidding documents.
- iii) The commissioning of the equipment erected by the contractor shall be the responsibility of the contractor. The contractor shall provide all the test instruments, calibrating devices etc and labour required to carry out the tests as stipulated in the bidding documents.
- iv) The contractor shall impart training of personnel of TSTRANSCO, at the supplier's plant and /or on-site in assembly, start-up, operation, maintenance and/or repair of the supplied Material/equipment.

**27.0 INCIDENTAL SERVICES :**

27.1 As specified below the Supplier/Contractor may be required to provide in addition to erection, testing and commissioning the following services.

- (a) Performance or supervision of on-site erection / assembly, testing and commissioning and / or start-up of the supplied goods.
- (b) Furnishing of tools required for the assembly, testing & commissioning and / or maintenance of the supplied goods and also detailed operations and maintenance for each appropriate unit of the supplied Materials / equipment.
- (c) Performance or supervision or maintenance and / or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract.
- (d) Conduct of training of the TSTRANSCO's personnel, at the supplier's plant and / or on-site in assembly, start-up, operation, maintenance and/or repair of the supplied Material/equipment.

**28.0 TAKING OVER:**

Upon successful completion of all the tests to be performed at Site on equipment furnished and erected by the contractor, the TSTRANSCO shall issue to Contractor a taking over certificate as a proof of the final acceptance of the equipment. Taken over certificate will be issued by the TSTRANSCO after all the as built drawings, equipment drawings, test reports, instruction manuals, O & M manuals, installation drawings, bill of material, shop floor drawings, reconciliation etc. are done and certified by the Field engineer of TSTRANSCO. Such certificate shall not un-reasonably be withheld nor will the TSTRANSCO delay the issuance thereof because of minor omissions or defects, which do not affect the commercial operation and/or cause any serious risk to the equipment. Such certificates shall not relieve the contractor of any of his obligations which otherwise survive, by the terms and conditions of the Contract after issuance of such certificate.

However, besides the specified conditions may be imposed and agreed to between the TSTRANSCO and the CONTRACTOR depending on the outcome of the 'Performance Tests'.

**29.0 TREE / CROP COMPENSATION RIGHT-OF-WAY, CUTTING OF TREES, ETC.**

Payment of compensation for damaged crops or fruit bearing trees shall be initially made by the contractor, which will be reimbursed by TSTRANSCO later on. The compensation so payable in respect of damaged crops shall be based on the assessment of MRO.



In respect of the trees, compensation so payable is the lowest of the rates fixed by the Horticulture/NABARD/MRO. The contractor shall take up the payment of compensation amount only after written approval by the Executive Engineer. The payment shall be made in the presence of representatives of 400kV, Accounts and Vigilance wings of TSTRANSCO. The Superintending Engineer/400kV shall finalise the compensation claims. The contractor shall take all possible steps to see that standing crops etc. are not damaged during execution of works. When such damage is inevitable, the compensation will be borne by the TSTRANSCO to the extent of land required for laying of foundation, provided the damage is with prior concurrence of the Executive Engineer. The contractor shall bear the compensation for damages caused without prior concurrence of the Executive Engineer concerned. Any extra land required by the contractor temporarily for dumping of the construction material and consequent damage to the crops etc. shall be the responsibility of the contractor.

In the event of any obstruction being encountered from the local villagers or authorities, the contractor shall immediately notify the Executive Engineer who shall take such steps as may be necessary to clear the obstruction. The contractor or his representative or gangs shall not adopt antagonistic attitude towards the village authorities with whom they may come into contact, but shall immediately report to the Executive Engineer any case of obstruction which cannot be settled amicably. No trees shall be cut until the TSTRANSCO has made necessary arrangement with the authorities concerned and permission is given to the contractor to fell such trees. The TSTRANSCO shall arrange to remove the obstacles as soon as possible. At times however, it may not be possible for the TSTRANSCO to arrange right-of-way for laying foundations or erecting the towers or stringing the line. At all such times, the contractor shall shift his gangs to other locations. The rates quoted shall cover all such contingencies and no extra payments shall be claimed for such contingencies.

The TSTRANSCO will arrange the right-of-way along the transmission line route. Any avoidable or deliberate damage done to standing crop or private property by the erection contractor's labourers shall be the erection contractor's responsibility.

The erection contractor shall take all reasonable steps for preventing damage to crops during execution of the contract work.

Clearing of obstructions falling in the right-of-way as per IS:5613 (part-2, section-2) – 1985 and lopping or trimming of the portion of the trees falling within the minimum electrical clearance zone shall be the responsibility of the contractor. And also, any lopping or trimming of tree branches obstructing the line of sight during check survey shall be the responsibility of the erection contractor.

**30.0 SURPLUS MATERIALS:**

On completion of works, all the surplus material which has been already billed by contractor to TSTRANSCO but not used by contractor in the project, shall be handed over designated TSTRANSCO stores at the cost of the contractor within the time limit of 2 months of commissioning of the project. However if the material is not handed over within such time limit or in the opinion of designate officer of TSTRANSCO who is in-charge of the works, such material is not in fit condition for use, such material shall be retained by the contractor and recovery shall be made from contractor at the rate as per the contract rate.

In exceptional cases, in order to expedite work progress, whenever TSTRANSCO issues the material from its stores on returnable basis to the contractor, the contractor shall return such material within 30 days from the date of issue of such material along with interest on the value of such material at the rate of 2% per month or part thereof.

However if contractor fails to return material within 30 days of issue of such material, the material shall be deemed to have been sold to contractor on the date of its issue to contractor at a price which shall be 150% of the procurement cost and such cost shall be recovered from contractor along with interest at 2% per month or part thereof from the date of issue of material till amount is recovered.

**31.0 CORRESPONDENCE:**

All the correspondence regarding the works / payments and other field matters shall be addressed to the Superintending Engineer /400kV/Construction/Warangal /TSTRANSCO and  
Superintending  
 Engineer/400kV/Construction/Rural/TSTRANSCO/Erragadda/Hyderabad (Diversion work) with copies marked to this office.

All the correspondence on all the technical matters shall be addressed to this office with copies marked to the Superintending Engineer /400kV/ Construction/ Warangal /TSTRANSCO and Superintending Engineer/400kV/Construction/Rural/ TSTRANSCO / Erragadda/ Hyderabad (Diversion work).

**32.0 GENERAL CONDITIONS OF CONTRACT:**

Except it is provided otherwise in this contract, all the general, technical, commercial terms and conditions stipulated in the bidding documents for this contract shall be complied with.

### 33.0 TERMINATION OF CONTRACT:

The TSTRANSCO may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier/ Contractor, terminate the contract in whole or in part:

- a) If the supplier/Contractor fails to deliver any or all of the goods and to complete any or all works commensurate with progress of completion within the time period(s) specified in the contract or any extension thereof granted by the TSTRANSCO.
- b) If the supplier/Contractor fails to perform any other obligation(s) under the contract.
- c) If the supplier/Contractor, in the judgment of the TSTRANSCO has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

#### **Termination of contract.**

If it is found that progress of works are not commensurate with the program of completion or if the contractor does not fulfill his obligations as per the terms of the specification TSTRANSCO will be entitled to terminate the contract in part or full by giving 15 days notice and get the balance works completed through other agencies at the contractor's cost and risk.

Warning letters will be issued by Superintending Engineer/400kV or/and **Chief Engineer/400kV** if the progress is not satisfactory. If the progress continues to be poor even after the second warning letter, show cause notice/final notice will be issued by the Chief Engineer/400kV . If no satisfactory reply is received or the progress of the works are not improved within 15 days of issue of the final notice/show cause notice, the Chief Engineer/400kV shall terminate the agreement, which will be followed by stoppage of all payments to the contractor, encashment of the BGs, and after termination of contract the balance works/supplies shall be completed through alternate agencies at contractor's risk and cost. The contractor so penalized shall be blacklisted for 3 years from the date of termination of contract.

In the event of termination of contract due to delay attributable to the contractor, TSTRANSCO is entitled to get back equipment/material from the contractor for the payment already made but the material is not put to use, and then get the works done by other agency/agencies for completion of contract by using the said recovered material. The contractor shall have no objection in this regard.

However, the Supplier /Contractor shall continue performance of the Contract to the extent not terminated. Please refer clause 56 of Section GCE of Volume-I of Specification.

**34.0 APPLICABLE LAW, RESOLUTION OF DISPUTES & JURISDICTION:**

The contract shall be interpreted in accordance with the laws prevailing in India.

TSTRANSCO and the Contractor shall make every effort to resolve amicably by direct informal negotiation any dis-agreement or dispute arising between them under or in connection with the contract. If, after thirty (30) days from the commencement of such informal negotiations, TSTRANSCO and the Contractor have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms. These mechanisms may include, but are not restricted to, conciliation mediated by a third party. The dispute resolution mechanism shall be as follows.

- a) All and any disputes or differences arising out of or touching the order based on this specification shall be decided by a panel of arbitrators as detailed below:

Value of Claim	Panel of Arbitrators
i) Disputes involving amounts up to Rs.10,000/- and below.	Superintending Engineer of the TSTRANSCO other than the circle to which the disputes relate.
ii) Disputes involving amounts ranging from Rs.10,001 to Rs.50,000/-.	Any Chief Engineer of the TSTRANSCO.

There shall not be any reference of disputes, the value of which is above Rs.50,000/- to arbitration. The parties shall approach the competent Civil Courts situated in Hyderabad/ Secunderabad twin cities only, if any such disputes shall arise involving more than Rs.50,000/-.

A reference for adjudication under this clause shall be made by either party to the contract, within one year from the date of intimating the Contractor of preparation of final bill or his having accepted the payment.

- b) For the settlement of any dispute arising out of the contract, the venue of arbitration proceedings will be in Hyderabad as per jurisdiction.
- c) All and any disputes or differences arising out of or touching this Order shall be decided by courts or tribunals situated in Hyderabad / Secunderabad cities only. No suit or other legal proceedings shall be instituted elsewhere.

**35.0 DETAILS OF ENCLOSURES:**

The following are the enclosures to this order, which form part of the contract.

1. Appendix-B(Attachment for the terms to be complied with).
2. Annexure- I (Price Variation Clause)
3. **Schedules – B (I ) to (IX)** (Prices)

Please note that all terms & conditions of Volume – I of specification will form part of this Order.

Yours faithfully,

CHIEF ENGINEER/400kV  
(For and on behalf of TSTRANSCO)

Copy to be returned to TSTRANSCO by the Contractor duly signed on every page of this order in acknowledgement and acceptance of this order.

We accept the terms and conditions of this order.

SIGNATURE OF THE CONTRACTOR.

**Copy to**

1. P.S. to Chairman & Managing Director /TSTRANSCO/VidyutSoudha/Hyderabad.
2. P.S to JMD (Finance, Comm& HRD)/TSTRANSCO/VidyutSoudha / Hyderabad.
3. DE(T) to Director (Projects & Grid Operation)/TSTRANSCO/VidyutSoudha/Hyd.
4. ADE (T) to Director (Lift Irrigation Schemes)/TSTRANSCO/VidyutSoudha/ Hyd.
5. FA&CCA(Accounts & CFO)/TSTRANSCO/Vidyut Soudha/Hyderabad.
6. Executive Director (Finance)/TSTRANSCO/VidyutSoudha/Hyderabad.
7. Chief Engineer/400kV/Warangal Zone /TSTRANSCO/Warangal.
8. Chief Engineer/Rural Zone /TSTRANSCO/Hyderabad.
9. Chief Engineer/400kV/Civil/TSTRANSCO/VidyutSoudha/Hyderabad.
10. Chief Engineer/ Telecom /TSTRANSCO/VidyutSoudha/ Hyderabad.
11. Superintending Engineer/400kV/Construction/Warangal.
12. Superintending Engineer/400kV/Construction/Rural/Hyderabad.
13. Superintending Engineer/Civil/TSTRANSCO/Warangal.
14. Superintending Engineer/Telecom/TSTRANSCO/Warangal.
15. Executive Engineer/400kV/Construction/Warangal.
16. Executive Engineer/400kV/Construction/Rural/Hyderabad..
17. Executive Engineer / Civil/ Construction Division/Warangal.
18. SAO/P&A/TSTRANSCO/VidyutSoudha/Hyderabad.

## **Appendix-B**

### **ERECTION**

**P.O.No. /OC-10/ CE/400kV/SE-I /D2-A3/e-EHVT-02/2018/**

**D.No./2018 , Dt: .08.2018 .**

1. Quality assurance plan shall be submitted for the scope of works to be carried out soon after award of contract and obtain approval of TSTRANSCO before taking up the works. The Quality plan shall be in line with the quality plan as approved by Power Grid/TSTRANSCO for substations works.
2. The terms and conditions of the Bidding Documents for Insurance shall be complied with in total.
3. M/s.Megha Engineering & Infrastructures Ltd.,will furnish the detailed programme in the form of Master Net work for Erection to meet the completion Schedule as called for in the bidding documents.
4. M/s.Megha Engineering & Infrastructures Ltd, shall take delivery of certain equipment and material available else where at TSTRANSCO stores / sites required forSub Stations, Transmission Lines and Bay Extensions as directedbyTSTRANSCO and in such cases transportation charges will be given as per SSR Rates and the Contractor has to transport such materials invariably.

#### **Erection of Structures:**

5. Any wastage at site regarding bolts & nuts during erection stage in the switchyard shall be taken care of by including extra bolts & nuts, spring washers, flat washers and step bolts & nuts and balance materials shall be handed over after erection of structures for future maintenance works.
6. The prices indicated in the schedule shall be inclusive of the cost of foundation bolts and base plates of varoius sizes wherever required as per the design. Hence no separate rate will be paid for.
7. Approved drawings for structure shall be adopted by the contractor. The quantities include structural requirement for bus arrangement & equipment erection.
8. The structures are to be delivered at TSTRANSCO Stores / at 400kV Sub-Station Site.
9. Site handling includes transportation from site stores to site & stores.
10. The templates are painted only and should be returned to TSTRANSCO's stores /400kV SS after completion of work. The templates should be repaired after usage before handing over to the stores.

**Earthing and Earth Mat:**

11. The installation cost includes charges for welding at the joints for earth mat and other locations of the earthing system and applying Bitumen compound.
12. The payment will be limited to actual quantities for the complete requirement of main earth mat as per the design requirements and standards and specifications specified in the bidding documents for the total area of 400kV and 220kV Switchyards covered in the scope. Risers and equipment earthing for the equipment and structures covered in the scope shall be based on the approved drawings.
13. Earthing of Power cables as specified and earthing of motors by 25 x 6 mm GS Flat shall be free of cost.

**Bus Bar Materials:**

14. The payment will be limited to actual quantities required as per the approved design drawings.
15. The price for erection of hardware includes formation of strings and hoisting of insulators.
16. The prices for erection of 4/4.5" IPS aluminium conductor / pipe includes cost for erection of all other material required for erection of this conductor / pipe for equipment inter-connections including bending and welding works etc.
17. Any other items not specifically quoted above shall also be provided at the free of cost to the TSTRANSCO to meet the system requirement.

**C & R Panels, Batteries & Battery Charges, AC & DC DB:**

18. The payment will be limited to actual quantities required as per the approved Drawings.

**Power and control cables:**

19. The payment will be limited to actual erection quantities as per requirement of power and control cables as approved by the TSTRANSCO during detailed engineering.
20. The contractor shall prepare complete power and control cable schedules for indoor and out door for the substation detailing the cable sizes, cable routing with route lengths, termination details without any extra cost and obtain approval for these schedules.

**Indoor and outdoor Illumination:**

21. The payment will be limited to actual erection quantities required as per the approved quantities. Contractor shall design indoor and out door illumination system as per the bidding documents.
22. The prices are inclusive of erection of Indoor / Out door Junction Boxes, Conduits, Lighting wires, Lugs, Ferules etc., for completing Indoor and Outdoor Lighting system.
23. Erection, testing and comissioning prices are inclusive of all Civil works required for the lighting system as per approved drawings.

**Fire protection, detection, & alarm systems:**

24. The above quantities are purely tentative. The contractor, shall design the system as per bidding document and execute the same as per approved drawings.
25. The payments will be based on actual erection quantities as per approved drawings. Price adjustment for the size / capacity of the items which are not indicated will be done as per the price for nearest lower size / capacity of the item of this schedule.
26. 'Set' mentioned for erection includes total number of equipments to be covered therein including the stand by equipment to meet the requirement as specified in the bidding documents.
27. Prices for erection / installation and commissioning shall be inclusive of civil works for the respective items and their accessories required as per the specifications in Bidding documents.
28. Fire Protection, Detection and Alarm system erected shall be as per Tariff Advisory Committee standards and regulations for getting maximum permissible rebates in fire insurance premium .The contractor shall obtain approval of the system by TAC also.
29. Any other item required for completion of the system as per bidding document is deemed to have been included in this schedule.
30. MS Pipe prices are for ERW pipes to API – 5L GRB above 150 NB and carbaon steel pipe heavy class black for the pipes of 150 NB and below as per IS : 3589 and IS : 1239 with anticorrosion treatment.

**Air-conditioning and ventilation system:**

31. The above prices are on lump sum basis and the payments will be limited to the above for complete requirement of erection, testing and commissioning of the system as per the specification requirement.
32. Any other item required for completion of the system as per bidding document is deemed to have been included in this schedule.



33. Prices for erection / installation and commissioning shall be inclusive of civil works for the respective items and their accessories required as per the specifications in Bidding documents.
34. The above quantities are purely tentative. Contractor shall design the system as per the bidding document and execute the same as per the approved drawings and the payment will be limited to actual erection quantities.

**Diesel Generator set (D.G.set):**

35. With in the above Total Price items which are not specifically mentioned but required are deemed to have been included for Erection, testing and commissioning of the said DG set. Erection, testing and commissioning prices are inclusive of all the civil works for the system as per the specification requirement.
36. The above prices are on lump sum basis and payments will be limited to the above for complete requirement of erection, testing and commissioning of the system as per the specification requirement.
37. Any other item required for completion of the system as per bidding document is deemed to have been included in this schedule.
38. 'Set' mentioned include total number of equipments to be covered therein including the standby equipment as specified in the bidding documents.

**33 kV Station Power Supply facilities:**

39. The payment will be limited to actual erection quantities required as per the approved drawings. Contractor shall design the system as per the bidding documents.
40. Erection works of any other ancillary and miscellaneous items which are not covered in the price schedule for completion of works shall be carried out by the contractor without any additional cost to TSTRANSCO.
41. No additional charges for type tests of the equipment are envisaged since it is contractors responsibility to offer the equipment type tested without additional cost to the TSTRANSCO.

**CHIEF ENGINEER / 400kV**

## **Annexure- I**

### **PRICE VARIATION (PV) Clause**

#### **The Price Variation clause for steel and cement utilized in civil works :**

The Price Variation applicable in respect of steel and cement utilized in civil works shall be as per G.O.Ms.No.94, Dt: 16-04-2008 and T.O.O CE (Civil) Ms.No.24,Dt:23-04-2008 of TSTRANSCO with subsequent amendments subject to the following conditions:

- a) The Price adjustment shall be applicable for both upward and downward variation in prices of respective items within original contract period or period extended on grounds of the departmental delays and valid reasons and shall not be applicable to the extensions granted on account of the contractors fault.
- b) The price adjustment shall be applicable for actual components of items of works actually carried out during the period of bill and allow to adopt price adjustment for steel and cement utilized in civil works by the absolute variation between the estimated rate and the rate approved by the Govt. based on the recommendation of Board of Chief Engineers for the month.

The Basic rate of reinforcement steel and cement as taken in the estimate were as informed by Government as below

For Sub Stations & Transmission Lines :

The basic rate for Cement and Steel rates adopted in the estimate is Nov'2017.

Cement                   :-    4450/1MT

Structural Steel    :-    34500/1MT

Reinforcement Steel :- 36000/1MT

For Diversion Line works :

The basic rate for Cement and Steel rates adopted in the estimate for is Dec' 2017.

Cement                   :-    4600/1MT

Reinforcement Steel :- 38000/1MT

- c)
  - i) The price adjustment will be applied where the variation in rates only to the extent where it is above 5% over the estimates rates. Thus if the price excess is 10%, payment will be made only to the extent of 5% (10% - 5%). Further, the same procedure should be also followed for Negative Price variation.
  - ii) For the time extension period due to
    - a) department fault, price variation (Both +ve and -ve ) is applicable.
    - b) contractors fault, only negative price variation is applicable.

- d) Necessary supplemental proposal regarding differential rate payable or difference rate recoverable on agreement rates of steel and cement utilized in civil works and structural steel due to price adjustment is to be submitted to the agreement concluding authority for approval.
- e) The completion schedule approved in the form of bar chart shall be the basis for timing of the each activity for calculating the Price Variation during a month. If the schedule is not complied by the contractor as per the above programme due to the reasons like right-of-way, the particular activity or task can be rescheduled by moving upward or downward on the time axis of the bar chart within the agreement period, as agreed by the Concerned Executive Engineer (field officer), as per the actual site conditions. In such cases, the concerned Executive Engineer will record the reasons for re-scheduling / delay of the work.
- f) In specific cases like Substation/Bay extension site being not handed over to the contractor in time by the TSTRANSCO due to delay in land acquisition, natural calamities, right-of-way problems, for which the contractor is not responsible, extension of the agreement period may be given duly rescheduling the programme of completion with the approval of competent authority. In all such cases, TSTRANSCO will consider application of Price variation clause case to case.

**CHIEF ENGINEER / 400kV**