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| कार्यालय अधीक्षण अभियन्ता<br>विद्युत पारेषण परिकल्पना मण्डल<br>उ०प्र० पावर ट्रान्समिशन कारपोरेशन लि०<br>10वाँ तल, शक्ति भवन विस्तार,<br>14-अशोक मार्ग, लखनऊ-226 001 (भारत) |  | OFFICE OF THE SUPERINTENDING ENGINEER<br>ELECTRICITY TRANSMISSION DESIGN CIRCLE<br>UP POWER TRANSMISSION CORPORATION LTD.<br>(UP GOVERNMENT UNDERTAKING)<br>10 <sup>th</sup> Floor, Shakti Bhawan Extn.,<br>14-Ashok Marg, Lucknow- 226 001 (INDIA)<br>Tele: (0522) 2218645, e-mail:seetdc@upptcl.org |
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No. : 555 /ETDC/5/TD-455/Pkg-2/RS

Date : 08.02.2021

Sub: Letter of Intent for construction of various 132 KV & 220KV lines(305Km) on Turn-Key basis against Tender Specification No. TD-455/20(Pkg-2)

M/s RS Infraprojects Pvt. Ltd,  
 B-133,Sec-2,  
 Noida-201301

e-mail: projects.power@rsinfra.in

Dear Sirs,

In reference to your offer vide letter no. RSIPL/UPPTCL/TD-455/2020-21/01 dt. 21.11.2020 and subsequent correspondences against Tender Specification No. TD-455/20(Pkg-2), we hereby place letter of intent on you for entering into contract for construction of 132KV & 220KV lines (on D/C Tower) on turn-key basis (excluding supply of ACSR conductor & earthwire), as per details given below :

| S N | Name of line   | Length (Km) |
|-----|--|-------------|
| 1   | 132KV S/c Awada Solar -Usawan (deposit line)   | 11          |
| 2   | Lilo of one ckt of 220KV Roza(TPS)-Badaun(220) @ 220KV S/s Dataganj                  | 12          |
| 3   | Lilo of 132KV S/c Usawan -Tilhar @ Dataganj220                                       | 21          |
| 4   | Lilo of 132KV S/c Awada Solar -Usawan (underconstruction deposit line) @ Dataganj220 | 10          |
| 5   | Lilo of 220KV S/c Sitapur220-Nighasan220 @ 220KV S/s Kanduni                         | 30          |
| 6   | Lilo of 2 <sup>nd</sup> ckt of sidhauri132 -Mahmudabad132@ 220KV S/s Kanduni         | 20          |
| 7   | 132KV S/c Itwa -Shohratgarh TSS line (deposit Railways)                              | 30          |
| 8   | 220KV D/c Gkp(PG) -Maharajganj   | 70          |
| 9   | Lilo of above 220KV D/c Gkp(PG) -Maharajganj line at 220KV S/s anandnagar            | 30          |
| 10. | 132KV 2-ph S/C Sareni - Raghuraj Singh TSS   | 20          |
|     | subtotal   | 254         |
|     | Unidentified lines (220KV D/c line)  | 51          |
|     | Total (Pkg-2)  | 305 Km      |

Total value of award/contract is approx. Rs. 101.82 Crores incl. of 18% GST [extra for special works/supply of material of specialised nature mentioned as per Schedule Q-3(a) & 3(b)] and price variation as applicable

#### 1.0 RATES:

Rates are given in enclosed price schedules as per details hereinafter:

| S N | Item                                 | Schedule Reference |
|-----|--------------------------------------|--------------------|
| 1   | Rates for supply of material         | Q-1                |
| 2   | Rates for construction of line       | Q-2                |
| 3   | Unit rates for special item of works | Q-3(a)             |
| 4   | Unit rates for special supply item   | Q-3(b)             |

Accordingly, total contract value shall be as under :

| S N | Type of line   | Approx length (Km) | Material (excl. of GST) (Rs.) | Erection (excl. of GST) (Rs.) | Total cost (excl. of GST) (Rs.) | GST @18%     | Total value of contract (incl. of 18% GST) (Rs.) |
|-----|--|--------------------|-------------------------------|-------------------------------|---------------------------------|--------------|--|
| 1   | Construction of various types of 220KV & 132KV lines | 305                | 59,26,34,161                  | 27,02,12,451                  | 86,28,46,613                    | 15,53,12,390 | 101,81,59,003                                    |

( Rs. One Hundred One Crore Eighty One Lacs Fifty Nine Thousand Three only)

*[Signature]*

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2.0 **SCOPE OF WORK :**

2.1 **SUPPLY**

- 2.1.1 Fabrication , Galvanizing, routine testing & supply of towers including stub and stub setting, templates, tower extensions, gantries, special structures like river crossing and anchor towers, if any, D-Shackles, U-Bolts, hangers, extension links etc. based on drawings and Bill of Material provided by the purchaser. The tower members like U-Bolt, D-Shackle, hangers, extension links etc. shall be supplied complete with required number of bolts, nuts, washers , split pins etc. The contractor shall have to develop shop drawings themselves . Necessary quantities of steel of tested quality and zinc for fabrication and galvanizing of tower parts shall have to be arranged by the bidder themselves and UPPTCL shall in no way be responsible for arranging the same and will not accept any responsibility and liability in this connection.
- 1.2.1.2 Supply of Bolts, Nuts and washers, anti theft bolts & nuts, step bolts, spring washers conforming to relevant ISS, including wastage, if any.
- 1.2.1.3 Supply of all type of tower accessories like phase plate, danger plate, number plates , circuit plates, earthing material ,anti climbing devices etc. However, if any designing/modification is required that shall be done by contractor.
- 1.2.1.4 Supply of all line materials i.e. insulators, OPGW & related hardware & accessories, conductor accessories, G.S.Earthwire accessories, from approved vendors excluding Conductor and G.S.Earthwire
- 1.2.1.5 The tentative quantities of material to be supplied against this contract have been mentioned in the Schedules Q-1 and that of work component in Sch-Q-2 against the various packages. However, the bidder will have to supply the materials as per actual quantities required for construction of the transmission line.
- 1.2.1.6 The bidder shall be responsible for coordinating and arranging inspection and testing of items to be supplied by him including proto assembly inspection of all types of towers with extensions and stubs at the manufacturer's works in presence of purchaser's representatives.
- 1.2.1.7 The design of special structures, gantries, river crossing towers, anchor towers (if any) and their foundations other than those supplied by the owner encountered if any, during construction of line shall also be under the scope of contract.
- 1.2.1.8 Quantities mentioned in price schedule are provisional. However, actual quantity of material and work component shall be decided after final survey of line, to be carried out by contractor.
- 1.2.1.9 Supply of the Panther/Zebra Conductor & G.S Earthwire is not in the scope of contractor and shall be supplied by UPPTCL to the contractor. Supply of OPGW & related hardware & accessories (including OFAC, it's h/w & FODP) is in the scope of contractor. Qty. & location of OFAC & FODP to be decided, as per site conditions, in joint survey with division.
- 1.2.1.10 On all 220KV & 132KV lines, OPGW is to be installed, However, if any 220 KV or 132KV line(s) is to be constructed with E/W, same shall be informed and rates as per Q-3(a) & Q-3(b) shall be applicable.
- 1.2.1.11 24F OPGW is to be laid on main lines and 48F OPGW is to be laid on LILO lines.

2.2 **CONSTRUCTION OF LINE(S)**

- 2.2.1 Allotment of lines shall be done after confirmation of availability of land for respective substation and deposit of Fund from railways. However, allotment of line(s) for which substation land is available or line(s) for which Fund has been deposited shall be done immediately. The work shall be started immediately after allotment of line.
- 2.2.2 Survey (preliminary and final), profiling, tower spotting and preparing tower schedule, peg marking, excavation, stub setting, concreting, erection of all types of towers, gantry structures ,special structures like structures for river crossing, if any, tack welding of bolts and nuts including supply and application of Zinc rich primers and two coat of enamel paint at the welding point with fixing of accessories, installation of hardware and insulator strings, stringing of conductor and earth wire, fixing of conductor and earth wire accessories, testing and commissioning of erected line (s). The contractor has to completely erect and commission the line(s).
- 2.2.3 Unloading and taking delivery of all materials to be supplied by the contractor and the purchaser, transporting them to the contractor depots, sorting and stacking them in proper storage sheds and yards provided by the contractor, safe custody of all materials.

*[Signature]*

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- 2.2.4 Soil investigation, Auger, soil, metal, sand, concrete and earth resistivity test etc whenever/ wherever required by the purchaser.
- 2.2.5 Distribution of all materials to the respective tower sites.
- 2.2.6 Supply of cement, stone, metal, sand, stone pad etc. to be used in foundation work shall be arranged and supplied by the contractor without any extra cost to UPPTCL.
- 2.2.7 Supply of reinforcement bars conforming to the relevant ISS for R.C.C. foundations.
- 2.2.8 Tools and Plants required for construction of the transmission lines at various stages shall be arranged by the contractor at his own cost.
- 2.2.9 Storage-cum-erection insurance of all material used / to be used on line.
- 2.2.10 Erection, testing and commissioning of the line.
- 2.2.11 Safe custody and proper maintenance of completed transmission lines till the same is taken over by the purchaser.
- 2.2.12 Return of stub setting template and all surplus materials to UPPTCL's stores.
- 2.2.13 Any other material, tools and plants, equipment, work etc. as may be necessary for construction of the transmission line (s) which have not been specifically mentioned in this contract but are necessary for the successful operation of the lines are deemed to be included in the scope. The Contractor shall, unless specifically excluded in the Contract, perform all such work and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Completion of the Facilities and desired objective, as if such work and/or items and materials were expressly mentioned in the Contract.
- 2.2.14 Other necessary provisions of rules & regulations of Indian Govt. relating to navigation, Railways, Roads, PTCC etc. are to be complied by the contractor.
- 2.2.15 The erection and installation of aviation requirements materials conforming to IS 5613 shall be in the scope of contractor.
- 2.2.16 Casting of well and pile foundation is not in scope of contract. However, contractor shall be responsible of all necessary co-ordination with Special Foundation contractor during stub setting and fixing of Anchor tower.
- 2.2.17 Any work relating to clause number 1.2.1.7 shall be in the scope of contractor.
- 2.2.18 For the places where Railway crossings as well as railway TSS & other Power line crossings are to be done in hot/live conditions, the rates mentioned in Sch-Q-3(a) shall be applicable. Also, normal crossings of railway lines/power lines shall also be done at the rates given in respective schedule.
- 2.2.19 Contractor shall have to deposit Bank Guarantee for each railway crossings/power line crossing, as the case may be. BGI value shall be conveyed by railway authorities at the time of submission of railway crossing proposal. At present, this value is Rs. 5,00,000/- (Rs. Five Lacs only) per crossing.

### 3.0 PRICE VARIATION:

- 3.1 The quoted prices of supply & erection shall be variable without ceiling on either side as per price adjustment formula given in clause 2.3 (Part-II/SCC/Sec.2/Prices) of Tender Specification.
- 3.2 Ruling date of base prices of raw material is **01.10.2020**
- 3.3 Within completion schedule of the line the price variation, on applicable items, shall be granted as per actual date of offer of inspection/completion of work. After completion schedule, UPPTCL's liability of upward price variation shall be limited to the price variation amount, applicable on the actual date of offer of inspection/completion of work or amount applicable on the last date of scheduled completion date, whichever is less. But, in case of negative price variation the price variation as applicable on the actual date of inspection offer/completion of work shall be admissible.
- 3.4 No price variation shall be admissible on the component of packing & forwarding, freight and insurance charges. Freight, Insurance and P & F charges shall remain firm.

### 4.0 TERMS OF PAYMENT :

Payment terms shall be as per clause-25 of Form-A. However, payment for supplies shall be done only after completion of minimum erection works as detailed below:

| S N | Detail of Supplies(Quantity wise) | Minimum Erection required for payment of supplies |
|-----|-----------------------------------|---|
| 1   | 50% Stubs and 100% Templates      | On start of survey                                |
| 2   | Beyond 50% Stubs                  | 70% of Survey and Profiling                       |
| 3   | 25% Towers                        | After completion of 10% foundation work           |

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|   |                                       |   |
|---|---------------------------------------|---|
| 4 | 25% to 50% Towers                     | After completion of 50% foundation & 10% erection work                          |
| 5 | Beyond 50% Towers & up to 75% Towers  | After completion of 65% foundation & 25% erection work                          |
| 6 | Beyond 75% Towers & up to 100% Towers | After completion of 80% foundation, 50% erection work & start of stringing work |
| 7 | Line material                         | After completion of 25% Tower Erection work                                     |

Note:- For smaller lines of less than 20 Km. length, UPPTCL may consider to relax the above provisions depending upon merit of the case. However, the contractor shall have no claim over it.

The contractor has to provide all details of completed works along with visual charts for claiming the payments.

#### 5.0 **TAXES & DUTIES :**

- 5.1 The prices of imported items, if any, shall be inclusive of all taxes, duties, license fees, import/custom duties etc. as legally applicable except GST. GST shall be payable, at the applicable rate for work contract, on landed cost of material, freight from port to site, insurance, packing and forwarding.
- 5.2 Since the line/substation will be immovable property of UPPTCL, this contract shall be treated as a work contract and GST shall be payable on all supply items (contractor's self manufactured as well as bought out) and work items at the rate applicable for work contract.
- 5.3 For all supply items, GST shall be payable at the applicable rate for work contract on ex- works price of the material, freight, insurance, packing and forwarding.
- 5.4 For all work components, GST shall be payable at the applicable rate for work contract on all the components of work.
- 5.5 No other taxes and duties shall be payable on any supply item (whether self manufactured or bought out) or work item except GST which shall be paid at the rate applicable for work contract. **Present rate of GST on work contract is 18%.**
- 5.6 No concessional tax certificate shall be provided by UPPTCL for any of the supply items.
- 5.7 UPPTCL shall not bear any liability towards Turnover tax, corporate tax, sales tax/GST on works contract, income tax and any other such taxes & surcharge/cess on them. Liabilities towards these, if any, shall be to Contractor's account.
- 5.8 UPPTCL shall deduct Income tax, labour cess and other taxes at source in accordance with provisions of Income tax/ other taxation laws as applicable from time to time.
- Prices indicated are after taking all the benefits of GST INPUT TAX CREDIT by the supplier.

#### 5.9 **CHANGE IN LAW CLAUSE**

- To this end, the incidence of any cost increase/ benefit of cost reduction on account of GST shall be to the account of UPPTCL.
- GST will be payable over and above the revised contract price.

#### 5.10 **PENAL CLAUSE**

In case any credit, refund or other benefit is denied or delayed to UPPTCL due to any non-compliance by the supplier (such as failure to upload the details of the supply on the GSTN portal, failure to pay GST to the Government) or due to non-furnishing or furnishing of incorrect or incomplete documents by the supplier, the supplier would reimburse UPPTCL the loss to UPPTCL including, but not limited to, the tax loss, interest and penalty.

#### 5.11 **ANTI PROFITEERING :**

- (a) As per Section 171 of CGST Act 2017, any reduction in rate of Tax on any supply of goods or services or the benefit of input tax credit shall be passed on to the recipient by way of commensurate reduction in prices. Hence, supplier/manufacturer to ensure to pass the benefit of reduced prices to UPPTCL. Further prices quoted by supplier/manufacturer/contractor are subject to scrutiny under above section.
- (b) In Case any credit, refund or other benefit is denied or delayed to UPPTCL due to any non-compliance by the contractor (Such as failure to upload the details of the supply on the GSTN portal, failure to pay GST to the Government) or due to non-furnishing or furnishing of incorrect or incomplete document by the contractor, contractor would reimburse UPPTCL the loss to UPPTCL including, but not limited to, the tax loss, interest and penalty.

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## 6.0 LIQUIDATED DAMAGES FOR DELAY

In case of delay in completion period of entire substation beyond contractual completion period, liquidated damage @ 0.5% per week subject to maximum of 10% of aggregate contract value shall be deducted from the Contractors bills as per clause-32 of Form-A. Applicable GST shall be charged on the amount of such liquidated damages.

## 7.0 COMPLETION SCHEDULE :

7.1 Construction of Lines shall be completed within time mentioned below from the date of allotment of line (as the case may be) :-

(a) For 132 Kv lines

| Sl. No. | Length of Line              | Completion Period                              |
|---------|-----------------------------|--|
| 1       | Line upto 30 Kms            | Within 8 months of date of allotment of line.  |
| 2       | Line above 30 Kms – 50 Kms. | Within 11 months of date of allotment of line. |
| 3       | Line above 50Kms            | Within 14 months of date of allotment of line. |

(b) For 220 Kv lines

| Sl. No. | Length of Line              | Completion Period                              |
|---------|-----------------------------|--|
| 1       | Line upto 10 Kms            | Within 9 months of date of allotment of line.  |
| 2       | Line above 10 Kms – 50 Kms. | Within 11 months of date of allotment of line. |
| 3       | Line above 50Kms            | Within 14 months of date of allotment of line. |

The completion periods mentioned above are broad guidelines to the bidders, however the contractor may be asked to match completion period of lines linking with the related sub-stations for which lines are proposed to be constructed, which shall be intimated at the time of LOI/allotment and shall be binding to the contractor.

7.2 Firm will have to submit milestones of different activities in the form of bar-chart linking with schedule completion date along with no. of gangs to be deployed from time to time.

## 8.0 SECURITY-CUM-PERFORMANCE DEPOSIT

Contractor shall have to submit a Security-cum-Performance Bank Guarantee for 10% of value of the contract within 30 days of receipt of the L.O.I. Till the successful completion of contract, this bank guarantee shall be treated as Security BG. After successful completion of the contract, this BG shall be treated as performance Bank Guarantee. Security-cum-performance bank guarantee shall be kept valid till completion of maintenance period, after commissioning of the lines. The Bank guarantee shall be furnished on a non-judicial stamp paper calculated @ Rs. 5=00 per thousand of value of BG and maximum Rs. 10,000=00 or as per latest provisions of the Indian Stamp Act.

## 9.0 CONSTRUCTION OF CONTRACT :

Single contract shall be executed which shall be treated as work contract.

## 10.0 UNDERTAKING :

All rights of the design/drawing for all types of towers and foundations shall be strictly reserved with the Purchaser only and any designs/drawings/data sheets submitted by the contractor from time to time shall become the property of the Purchaser. Under no circumstances, Contractor shall be allowed to use or offer above designs/drawings /data sheets to any other authority/contractor without prior written permission of the owner. Contractor shall have to give an undertaking in this regard on non judicial stamp paper of Rs. 100/-.

## 11.0 Grant of Mobilisation advance

11.1 Five percent (5%) of the Ex-works price component of supply of Materials shall be paid as an interest bearing initial advance after signing the contract agreement and on submission of

a) Advance Bank Guarantee of 112% amount of mobilization advance having validity up to three months after scheduled completion period with six month claim period thereafter. However, in

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case of delay in completion of lines, the validity of BG shall be extended by the period of such delay.

- b) Submission of an unconditional Security cum Performance Bank Guarantee towards faithful performance of the contract as applicable, valid up to scheduled date of completion of line. This Bank Guarantee is proposed to be converted into 10% performance Guarantee after line is handed over to UPPTCL and 100% completion of all related works. The advance shall be recovered on pro rata basis from all bills till the entire advance amount is recovered.
- c) Submission of detailed Bar Chart and its approval by UPTTCL.

Note: This advance payment is an optional payment. The contractor has the option of taking the interest bearing initial advance or otherwise.

In case, the contractor opts for this interest bearing initial advance, the same shall be paid to the contractor on fulfilment of above conditions and an interest will be charged at the rate of 12% per annum. The mobilization advance shall be recovered from the running bills at the same percentage (i.e. 5%) of gross value of the bill alongwith interest. In case, the contractor opts not to take interest bearing advance as above, it would be mandatory for him to submit the documents listed at Sl. No. (b) & (c) above within Thirty (30) days of issuance of LOI."

### **12.0 INCENTIVE:**

For early completion of contracted work (energization & commissioning of line) prior to the contractual completion period incentive @ 0.1% per month shall be admissible to the contractor. If due to the special provision in contract Form- A, delivery extension is granted to the contractor, the provision of 0.1% incentive shall not be applicable.

### **13.0 GENERAL/SPECIAL CONDITIONS :**

All other terms & conditions shall be as per Form-A and those specified in Tender Specification no. TD-455/20.

Two (02) no. hard copies of this letter of intent are being sent through post with the request to return one copy duly signed with stamp as token of your acceptance so that detailed contract may be drawn for signing the same. Please send the acceptance of LOI within three(03) days of issue through email/Speed post/ special messenger.

Yours Sincerely,



(Akhilesh Srivastava)  
Superintending Engineer

Encl: Price Schedules (04Nos.)

CC:

1. Director (W& P), UPPTCL, Lucknow.
2. CE(D&P)/CE(IC)/CE(TSC)/CE(TSW)/CE(TNE)/CE(TSE)/CE(TW)



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**Executive Engineer**  
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Robertganj



| SCHEDULE-Q-2 FOR PACKAGE-2 (Erection work) |  |       |           |           |           |           |  |                |                |                |                  |   |
|--|--|-------|-----------|-----------|-----------|-----------|--|----------------|----------------|----------------|------------------|---|
| Tender Specification No.: TD-455/20(Pkg-2) |  |       |           |           |           |           | Name of Firm : R.S. Infraprojects Pvt. Ltd., B-133, Sector-2, Noida-201301 |                |                |                |                  |   |
| SN   | DESCRIPTION  | UNIT  | Unit Rate | Qty.      |           |           |  | Amount (Rs.)   |                |                |                  | Total amount Exclusive of GST (Rs.)<br>(9+10+11+12) |
|  |  |       |           | 220 KV DC | 132 KV DC | 132 KV SC | 132 KV 2-Ph  | 220 KV DC(4x5) | 132 KV DC(4x6) | 132 KV SC(4x7) | 132 KV 2-Ph(4x8) |   |
| 1  | 2  | 3     | 4         | 5         | 6         | 7         | 8  | 9              | 10             | 11             | 12               | 13  |
| 1(i)                                       | Survey including preparation of schedule of materials, marking of locations (Route length), GPS Survey of line with co-ordinates of each tower. The length of line shall be authenticated by GPS Survey.   | Km    | 11,781.00 | 193       | 51        | 11        | 50   | 2273732.00     | 600831.00      | 129591.00      | 569050.00        | 3593205.00  |
| 1(ii)                                      | Check survey   | Km    | 4,158.00  | 193       | 51        | 11        | 50   | 802494.00      | 212058.00      | 45738.00       | 207900.00        | 1268390.00  |
| 2  | Cost of excavation of 132 KV tower foundation pits including all earth work, backfilling, levelling etc.   | Cu.m  | 180.18    | 0         | 13540     | 2920      | 13274  | 0.00           | 2439637.20     | 526125.60      | 2391709.32       | 5357472.12  |
| 3  | Cost of excavation of 220 KV tower foundation pits including all earth work, backfilling, levelling etc.   | Cu.m. | 180.18    | 65895     | 0         | 0         | 0  | 11872961.10    | 0.00           | 0.00           | 0.00             | 11872961.10   |
| 4  | Setting of stubs including all foundation work but excluding the cost of concreting and excavation (Rate per location) for following towers  |       |           |           |           |           |  |                |                |                |                  |   |
| i  | 132 KV DA  | Nos.  | 2,079.00  | 0         | 82        | 18        | 80   | 0.00           | 170478.00      | 37422.00       | 166320.00        | 374220.00   |
| ii   | 132 KV DB  | Nos.  | 2,772.00  | 0         | 41        | 9         | 40   | 0.00           | 113852.00      | 24948.00       | 110880.00        | 249480.00   |
| iii  | 132 KV DC/DE   | Nos.  | 3,465.00  | 0         | 36        | 8         | 35   | 0.00           | 124740.00      | 27720.00       | 121275.00        | 273735.00   |
| iv   | 220 KV DA  | Nos.  | 2,079.00  | 310       | 0         | 0         | 0  | 644490.00      | 0.00           | 0.00           | 0.00             | 644490.00   |
| v  | 220 KV DB  | Nos.  | 2,772.00  | 155       | 0         | 0         | 0  | 429660.00      | 0.00           | 0.00           | 0.00             | 429660.00   |
| vi   | 220 KV DC/DE   | Nos.  | 3,465.00  | 136       | 0         | 0         | 0  | 471240.00      | 0.00           | 0.00           | 0.00             | 471240.00   |
| 4  | Cost of concreting for all types of tower foundation including cost of cement, dewatering, shoring and shuttering, forming, curing but excluding cost of reinforcement bars  |       |           |           |           |           |  |                |                |                |                  |   |
| i  | 1:2:4 concreting   | Cu.m. | 9,530.73  | 11726     | 2340      | 462       | 2098   | 111757339.98   | 20395762.20    | 4403197.26     | 18985471.54      | 156551770.98  |
| ii   | 1:3:6 concreting   | Cu.m. | 73.26     | 1303      | 238       | 51        | 233  | 95457.78       | 17435.86       | 3736.26        | 17069.58         | 133699.50   |
| 5  | Erection of Superstructure of 132KV Towers and Anchor tower and their extensions wherever required including all work above ground level excluding hoisting of insulators, hardware & accessories but including fitting of danger number, phase plates, bird guard and fixing & punching for 132KV SC/DC lines | MT    | 5,662.60  | 0         | 838       | 181       | 822  | 0.00           | 4762018.80     | 1028550.60     | 4671097.20       | 10461666.60   |
| 6  | Erection of Superstructure of 220KV Towers and Anchor tower and their extensions wherever required including all work above ground level excluding hoisting of insulators, hardware & accessories but including fitting of danger number, phase plates, bird guard and fixing & punching for 220KV SC/DC lines | MT    | 5,662.80  | 4788      | 0         | 0         | 0  | 27208288.80    | 0.00           | 0.00           | 0.00             | 27208288.80   |

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|            |  |              |           |        |       |       |       |             |            |           |              |             |
|------------|--|--------------|-----------|--------|-------|-------|-------|-------------|------------|-----------|--------------|-------------|
| 7          | Back welding of all the bolts up to the height of one section of the tower or 5 meter from ground level whichever is higher with three faces at 120° separation of minimum 10 mm thickness with 15mm/12 mm electrode & application of Zinc rich Aluminium paint on the affected surface including cost of all material including back welding of River Crossing tower & Anchor towers. | per bolt     | 5.64      | 238548 | 83036 | 13396 | 61800 | 1416975.12  | 374433.54  | 80760.24  | 387092.00    | 2239261.20  |
| 8 (a)      | Laying, stringing, tensioning, clamping, jointing etc of ACSR 'Panther' conductor including hoisting of insulators, fitting of all necessary hardware and accessories i.e. fittings Armour rods, vibration dampers etc on all three phases of 132 KV SC lines  | per route Km | 72,072.00 | 0      | 0     | 11    | 0     | 0.00        | 0.00       | 792792.00 | 0.00         | 792792.00   |
| 8(b)       | Laying, stringing, tensioning, clamping, jointing etc of ACSR 'Panther' conductor including hoisting of insulators, fitting of all necessary hardware and accessories i.e. fittings Armour rods, vibration dampers etc on all Six phases of 132 KV DC lines  | per route Km | 90,090.00 | 0      | 51    | 0     | 0     | 0.00        | 4594590.00 | 0.00      | 0.00         | 4594590.00  |
| 8(c)       | Laying, stringing, tensioning, clamping, jointing etc of ACSR 'Zebra' conductor including hoisting of insulators, fitting of all necessary hardware and accessories i.e. fittings Armour rods, vibration dampers etc on all Six phases of 220 KV DC lines  | per route Km | 97,020.00 | 193    | 0     | 0     | 0     | 18724860.00 | 0.00       | 0.00      | 0.00         | 18724860.00 |
| 8(d)       | Laying, stringing, tensioning, clamping, jointing etc of ACSR 'Panther' conductor including hoisting of insulators, fitting of all necessary hardware and accessories i.e. fittings Armour rods, vibration dampers etc on 02 phases of 132 KV SC Railway TSS lines   | per route Km | 48,510.00 | 0      | 0     | 0     | 50    | 0.00        | 0.00       | 0.00      | 2425500.00   | 2425500.00  |
| 9          | Laying & stringing of 7/10 SWG EW including fixing of all kind of hardware on 132 KV Lines   | per route Km | 10,395.00 | 0      | 0     | 0     | 50    | 0.00        | 0.00       | 0.00      | 519750.00    | 519750.00   |
| 10         | Laying, stringing, tensioning, clamping, jointing, including fittings of all necessary Hardware and accessories of OPGW & OFAC termination at S/S, end to end connectivity & testing etc on 132KV & 220 KV lines   | per route Km | 48,510.00 | 193    | 51    | 11    | 0     | 9362430.00  | 2474010.00 | 533610.00 | 0.00         | 12370050.00 |
| 11(i)      | (a) Grounding work including earth work etc for pipe type grounding including cost of coke & salt  | Nos          | 2,079.00  | 297    | 79    | 17    | 80    | 617463.00   | 154241.00  | 35343.00  | 166320.00    | 963367.00   |
| 11(ii)     | (a) Grounding work including earthwork etc for counterpoise grounding materials including cost of all material   | Nos          | 4,651.00  | 100    | 27    | 6     | 25    | 485100.00   | 130977.00  | 29106.00  | 121275.00    | 766458.00   |
| 12         | Installation of steel reinforcement bars in R.C.C. foundation including cost of steel reinforcement bars with cutting, bending, placing, binding etc   | MT           | 63,756.00 | 78     | 21    | 5     | 20    | 4972968.00  | 1336876.00 | 316780.00 | 1275120.00   | 7905744.00  |
| TOTAL (Rs) |  |              |           |        |       |       |       |             |            |           | 270212451.30 |             |

*Prat*

*Ashok*  
*29/1/22*  
 Executive Engineer  
 Electy. Transmission Division  
 U.P. Power Corporation Ltd.  
 Robertganj