DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED

(A Government of India Enterprise) REPLY TO QUERIES-Dated 31.1.2013 FOR SYSTEM WORKS CONTRACT PACKAGE

NCB NO.: HQ/SYS/DB/NKWD-DGO

PRE-BID QUERIES

| | | | | | | | Relevant Abstract from Tender | Query / Clarification/Justification | |
|--------|------|-----|--------|---------|--------------------------------------|--------|---|---|--------------------------------|
| S. No. | Part | Sec | Volume | Pg. No. | Item | Clause | | | Reply to Query |
| 270 | 3 | VII | + | | Adjustment for changes in cost | 13.8 | 'iron & steel' is as published by the office of Economic Advisor, Ministry of Industry, Govt of India, New Delhi with base 1993-94 =100. This whole sale price index number is being published weekly on provisional basis. However, the same gets finalized after eight weeks and is normally available after two month. Therefore, we are considering in our | 'iron & steel' has been discontinued by the office of Economic Advisor, Ministry of Industry, Govt of India, New Delhi and hence no longer available. We request to change the above mentioned Index number to the whole sale price index number for 'Ferrous metals' as published by the office of Economic Advisor, Ministry of Industry, Govt of India, New Delhi with base 2004-05 =100 | Please refer Addendum no. 6 |

| 271 | 3 | VII | | 20 | Adjustment | 13.8 | Price Variation Clause for Traction | It is requested to changes the Indices as | Please refer Addendum |
|-----|---|-----|---|----|----------------|------|--|---|-------------------------|
| | | | | | for changes in | | Power Transformer/Auto Transformers | I - | no. 6. |
| | | | | | cost | | complete with all accessories and | 06 Feb 2009 & 223/PVC/CLAR/02 dt. 18 | |
| | | | | | | | components(Cost centre : C 5.1, C 5.2, | Oct 2010, due to following reasons: | |
| | | | | | | | C 6.1 & C 7.1) | , | |
| | | | | | | | ········· | 1. (TB) Transformer Oil Base Stock index | |
| | | | | | | | TB0 = Prince of Transformer Oil Base | has been discontinued and Transformer | |
| | | | | | | | Stock This price is as applicable on the | Oil index (TO) is being circulated by | |
| | | | | | | | 1st working day of the month, two | IEEMA now. It will be impossible to | |
| | | | | | | | months prior to the date of tendering. | arrive at PV wothout availability of | |
| | | | | | | | | indices. | |
| | | | | | | | W0 = All India average consumer price | 2. (W) All India average consumer price | |
| | | | | | | | index number for industrial worker, a | index: the index being circulated now | |
| | | | | | | | published by the Labour Bureau, | are with base 2001=100. | |
| | | | | | | | Ministry of Labour, Govt of India(Base | 3. (IS) has been changed to 'Ferrous | |
| | | | | | | | 1982=100). | Metals' with base 2004-05=100 | |
| | | | | | | | | 4. Lag period of copper prior to delivery | |
| | | | | | | | | has been reduced to 2 months. | |
| | | | | | | | TBn = Price of Transformer Oil Base | | |
| | | | | | | | Stock (refer notes) This price is as | Relevant IEEMA circulars are attached | |
| | | | | | | | applicable on the 1st working day for | for reference. | |
| | | | | | | | the month, two months prior to the | | |
| | | | | | | | date of delivery. | | |
| | | | | | | | | | |
| 272 | 3 | VII | - | 18 | Adjustment | 13.8 | Values of a, b, c and d are as under for | The value of the fixed Component (a) | Provisions in the Bid |
| | | | | | for Changes in | | Cost center C1, C9, C10, C11, C12 of | and the Labour Component (b) are too | Document shall prevail. |
| | | | | | Cost | | electrical price schedules and as well as | high and are usually in the order .15 and | |
| | | | | | | | for Signalling & Telecommunication | .10 respectively. Hence, please revise | |
| | | | | | | | price schedules: | the values of a, b, c and d as follows: | |
| | | | | | | | | | |
| | | | | | | | Fix Component (a) 0.30 | Fix Component (a) 0.15 | |
| | | | | | | | Labour (b) 0.30 | Labour (b) 0.10 | |
| | | | | | | | Material c) 0.25 | Material c) 0.60 | |
| | | | | | | | Fuel (d) 0.15 | Fuel (d) 0.15 | |
| | | | | | | | | | |

| 2-2 | _ | \ //=\ | | Τ. | c .c | OL 1: 5 | la | n |
|-----|---|--------|---|---------|---------------|---------|--|--|
| 273 | 2 | V(B) | 9 | | Specification | | Percentage of impedance voltages, | Please refer Addendum |
| | | | | re-XIII | | of | main/primary winding and | No.6 |
| | | | | | Transformer | Pg 7/61 | teaser/primary winding at 30 MVA | |
| | | | | | | | based at principal tapping is asked as: | |
| | | | | | | | %Z = 11-13% | |
| | | | | | | | %Zt = 12 +/- 1.2% | |
| | | | | | | | %Zf = 12 +/- 1.2% | |
| | | | | | | | %Zn = -0.2 to 3.5%. | |
| | | | | | | | Definition of Z,Zt,Zf &Zn is required. | |
| | | | | | | | In earlier specification of 54 MVA Scott | |
| | | | | | | | trf. impedance definition has been | |
| | | | | | | | provided in the specification and also | |
| | | | | | | | Base MVA was 54/4 i.e 13.5 MVA for | |
| | | | | | | | guaranteed impedance. For | |
| | | | | | | | reference,54 MVA have been attached: | |
| | | | | | | | Percentage of impedance voltages | |
| | | | | | | | measured & calculated@13.5 MVA as | |
| | | | | | | | per definition as per Annexure-1 | |
| | | | | | | | %Zt = 12+/-1.2% | |
| | | | | | | | %Zf = 12 +/-1.2% | |
| | | | | | | | %Zn= -0.2% to 3.5 % | |
| | | | | | | | Please confirm so that we can verify | |
| | | | | | | | that our design is in the compliance | |
| | | | | | | | with the revised specification issued by | |
| | | | | | | | you. | |
| 274 | 2 | V(B) | 9 | | Rated Power | 5.1.7 | We understand this rated power is Line | Provisions in the Bid |
| | | | | re-XIV | 8MVA (ONAN) | | capacity of auto transformer and the | Document shall prevail. |
| | | | | | | | self capacity of auto transformer is | |
| | | | | | | | 4MVA. The difference between line | |
| | | | | | | | capacity and self capacity is shown in | |
| | | | | | | | the attached document "ECS-01950" | |
| 275 | 2 | V(B) | 9 | Annexu | Ability to | 5.1.14 | We propose this thermal withstand | Provisions in the Bid |
| -/3 | - | - (5) | | | withstand | J | ability shall be 2s based on the IEC | Document shall prevail. |
| | | | | | short circuit | | standard. | and the state of t |
| | | | | | current | | | |
| | | | | | Thermal | | | |
| | | | | | ability 5s | | | |
| | | | | | ability 55 | | | |

| 276 | 2 | V(B) | 9 | Annexu | Flux density at | 5.1.15 | We propose this clause shall be | Provisions in the Bid |
|-----|---|------|---|--------|-----------------|--------|---|-------------------------|
| | | | | re-XIV | rated voltage | | deleted because the secondary voltage | Document shall prevail. |
| | | | | | and | | of traction transformer should be | |
| | | | | | Frequency | | stable thanks to the tap changer on the | |
| | | | | | Shall not | | primary side. Thus it is not necessary to | |
| | | | | | exceed 1.55T | | restrict flux density of auto | |
| | | | | | | | transformer. It would rather lead | |
| | | | | | | | unreasonable transformer. | |
| | | | | | | | | |
| 277 | 2 | V(B) | 9 | Annexu | Current | 5.1.16 | We propose this current density shall | Provisions in the Bid |
| | | | | re-XIV | density in the | | not exceed 5.0A/mm2 | Document shall prevail. |
| | | | | | windings at | | | |
| | | | | | rated current | | | |
| | | | | | Shall not | | | |
| | | | | | exceed | | | |
| | | | | | 2.5A/mm2 | | | |
| 278 | 2 | V(B) | 9 | Annexu | Bushing | 5.1.18 | Auto Transformer has neutral bushing, | Provisions in the Bid |
| | | | | re-XIV | Highest | | hence these bushing only needs ; | Document shall prevail. |
| | | | | | voltage for | | Highest voltage : 30kV | |
| | | | | | equipment | | Creepage : 920mm | |
| | | | | | Um 52kV | | | |
| | | | | | Minimum | | | |
| | | | | | creepage | | | |
| | | | | | distance | | | |
| | | | | | 1300mm | | | |
| | | | | | | | | <u> </u> |

| 279 | 2 | V(B) | 9 | 17 | Proven design | 4.4.2 | Request for adding the following clause.: Provisions in the Bid |
|-----|---|------|---|----|---------------|-------|---|
| | | | | | & cross | | " Scott connected transformers and Document shall prevail. |
| | | | | | acceptance | | Auto Transformers, the contractor can |
| | | | | | criteria | | procure the equipment from sources |
| | | | | | | | who appear in the RDSO approved |
| | | | | | | | vendor list for Scott connected |
| | | | | | | | transformers and Auto transformers. |
| | | | | | | | Such sources, if have not manufactured |
| | | | | | | | Scott connected transformers or Auto |
| | | | | | | | transformers of similar rating, shall have |
| | | | | | | | to develop the design and detailede |
| | | | | | | | specifications for these items based on |
| | | | | | | | draft specification/functional |
| | | | | | | | requirement if available, for approval of |
| | | | | | | | the Employer. Such sources shall also |
| | | | | | | | need to carry out the prototype testing |
| | | | | | | | on the 1st unit of each rating of |
| | | | | | | | transformer manufactured." |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |