DESIGN, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF 2X25kV AC ELECTRIFICATION, SIGNALLING & TELECOMMUNICATION, E&M AND ASSOCIATED WORKS ON DESIGN BUILD LUMP SUM BASIS OF DADRI – KHURJA SECTION (APPROXIMATELY 47 ROUTE KM OF DOUBLE LINE) OF EASTERN DEDICATED FREIGHT CORRIDOR SYSTEMS WORKS CONTRACT PACKAGE- 105

RESPONSES TO PRE-BID QUERIES OF THE BIDDERS

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
784.	Part -2 / Section VI / Volume 2 / Particular Specification / Clause 5.1.1 / Page No. 36 of 303 One Traction Sub-station is proposed for the Dadri - Khurja section, located at Wair (IR Km: 1390.90). The Wair TSS shall be capable to feed Dadri – Khurja section including up to the SPs (Neutral Section) of adjacent sections under normal feed condition as depicted in Fig.501 and also detailed here under : (1) On the Khurja end, up to Danwar SP of the New Bhaupur - Khurja Section (CP-104) (2) On the Dadri end, up to Dadri Jn. SP of WDFC (CTP-14) (3) up to Khurja RFO SP of Khurja – Pilkhani Section (CP-305)	In the Figure No. 501 – the third line going to the CP-305 single line section is originating from the CP-104 section (shown as dotted section). In this connection, the originating point of the third line is not provided in the tender document. For Normal Scenario, the feed is extended up to Khurja RFO SP of CP-305 section. To simulate the case, the train operation plan of the third line is essential. Without the same, it is not possible to estimate the power requirement of the WAIR TSS. Kindly provide the train operation plan for the third line to be considered for Simulation purpose. Alternatively, kindly confirm that no traffic needs to be considered on the CP-104 section (shown as dotted section) In the contract, nothing has been mentioned about the feeding of this third line. We assume that Wair TSS of CP 105 will feed this third line	Please refer clause no. 5.1.1(1), wherein it is clear that Khurja yard is fed through Wair TSS. The third line going to CP-305 is originating from Khurja yard. Please also refer General Supply Diagram no. GC/DFCC/PS/GSD/401 Rev. 01. The Train Operation Plan for CP-305 is as under: a. Headway – 17mins. b. Mix of single train and double train – In the ratio of 2:1(In line with CP-104 and CP-204. c. Empty running- Not considered for simulation purpose.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
		up to Khurja City SP of CP 305 through a circuit breaker installed at the Sikandarpur SSP (CP 105). If DFCC wants any specific feeding arrangement for this third line duly agreed by DFCC O&M team, the same may please be suggested.	
785.	Part -2 / Section VI / Volume 2 / Particular Specification / 2x25kV AC Traction Electrification and Associated Works Clause 5.1.5 / Page No. 38 of 303 Clause 5.1.5: Emergency Feeding Scenario is defined as "A first failure condition (N-1)" that either:- (1) The adjacent TSS (Ibrahimpur in the New Bhaupur - Khurja Section CP-104), is out of service, the feed is extended from the healthy TSS (Wair) till the Outage TSS Neutral section (Ibrahimpur TSS)	We understand that for the N-1 scenario, WAIR TSS will not take care of the failure of HAFIZPUR TSS of CP-305 section. Kindly confirm our understanding.	Provisions of bidding document are self-explanatory and shall prevail.
786.	Part -2 / Section VI / Volume 2 / Particular Specification / 2x25kV AC TractionElectrification and Associated Works, Clause 5.1.7 (3) / Page No. 39 of 303 **Clause 5.1.7 (3)**: The Traction Transformer (s) at the Wair TSS shall be rated for full capacity to meet the power requirement of the extended feed scenario.	Kindly confirm that the transformer need not meet the power demand under extended feed (N-1 failure) scenario under ONAN cooling mode but it can be met through OFAF rating.	The understanding of the bidder is correct however, the ONAN rating shall meet the power demand under Normal Feeding scenario as per the clause no. 5.1.4 of Part 2, Section VI, Vol.2, of employers Requirement.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
787.	Part -2 / Section VI / Volume 2 / Particular Specification / 2x25kV AC Traction Electrification and Associated Works7.3.2 (2) / Page No. 62 of 303 &4.4.1 (2) / Page No. 225 of 303. **Clause 7.3.2 (2): Traction Transformer**: "One traction transformer shall be supplied complete with pumps and fans etc. for carrying out tests for ONAF and OFAF ratings." **Clause 4.4.1**: **Traction Transformer General Data:** The transformer shall have 60/84/100 MVA power rating based on ONAN/ ONAF/OFAF cooling. ***The transformer shall be supplied with ONAN rating only.***	As per our understanding, the referred clauses are contradictory and doesn`t clearly specify the exact quantity of transformers to be supplied with ONAN & ONAN/ONAF/OFAF cooling mode. Kindly clarify whether the main transformer along with Spare transformer is to be provided with pumps and fans at WAIR TSS	Provisions of bidding document are self-explanatory and shall prevail.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
788.	Part -2 / Section VI / Volume 5 / Particular Specification / E&M and Associated Works Clause 17.7.1 / Page No. 103 of 132 **Clause 17.7.1 Foundation Work:** In the Traction Substations (TSSs) and SSP, the Contractor shall provide a road & rail system integrated with the transformer foundation to enable installation and the replacement of any failed unit by the spare unit located at the site. ***The Contractor shall connect such rail system to the adjoining Railway track for easy transport of the Transformers and heavy equipment through rail transport as per the requirements of ACTM.*** This system shall enable the removal of any failed unit from its foundation to the nearest road.	We understand that the rail system is required only for easy transport/handling of transformer within the same TSS, for which a small rail track is to be laid from the location of Transformer foundation to location where spare Transformer unit is kept. Transport of Transformers outside TSS shall be done only through Road. Therefore, we understand that no Rail track connection is required with adjoining DFCC Track. Kindly confirm.	Please refer Addendum no. 11, S. No.3.
789.	**LOCATION CHAINAGE DRGs of BUILDINGS** CP-105 Vol-5 Particular Specifications E&M and Associated Works, clause no. 3.2.4 & 3.2.5 **The general requirement for construction of the control room building and ancillary building/rooms under the scope of the contractor (CP-105) has been described in chapter-17: Civil work of this PS.**	1. For evaluate the Geo Tech Data & E&M Requirements Like Cable <3% voltage Drop etc., request to provide the Chainage details for Civil& E&M works of Aux SS, constructed by Bidder & for E&M works Station, Staff Quarters, IMSD. 2. Without this Information or Master Plan of every Station, it is not possible to evaluate the requirements of the following a) Soil Filling, HFL Level & Soil Bearing Capacity/Earth Resistance	Being a design & build contract, the system contractor will have to interface with civil contractor. The scheme is indicative only.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	The contractor shall judiciously consider the location of Auxiliary sub-stations as per requirement of stations, Depots and other Buildings etc. *not exceeding the voltage drop 3%.*	b) Need of additional Aux SS Other than Station for IMSD, Staff Quarters, Guest house c) Location as Chainages and approximate Building distance from nearby Track. d) Typical Drawing of Buildings –Station, IMSD, Staff Quarter. 3. Also provide the Access to every building for E&M works for all Buildings in Boraki Stations in CP-105. It is not possible for the bidder to confirm the E&M Cable Size, Run & voltage Drop 3% Limitation, Required for additional Aux SS ***without knowing where the Building will be*** with respect to only known info of Centre Line of Station Building. **Request you to provide the required information please, as the Issue is critical for design purpose.**	
790.	MAIN TRACTION TRANSFORMER TYPE OF CONNECTION CP-105 PS Vol2 Electrification, Chapter-7, Table 7.3.1 ….In case, the contractor proposes any other connection type transformer arrangement meeting performance requirement, the specification for such proposed transformer shall be prepared by the contractor on the lines of specification of Scott connected	Since this is a Design and Built Contract, everyone should be entitled to offer their own design & Transformer connection as long as Employer Requirements and Specifications are met. It is not appropriate to compare one design with another as every design has its own pros and cons without mention of Parameters to be compared. This will lead to ambiguity as there is no tool to measure such conditions of RFP. Beside this, we would like to state that the clause itself is discriminatory in nature as it has been	Provisions of the Bidding document are self-explanatory and shall prevail.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	transformer matching/ exceeding performance parameter creation without any limitation during the service life on the life cycle cost basis and submitted for approval of the engineer, whose decision shall be final and binding to the contractor	mentioned that bidders considering connections other than Scott will have to prove that their design is matching or exceeding performance than Scott, however bidders offering Scott connection is not required to prove that their design is matching or exceeding other connections, thus giving unfair advantage to bidders considering Scott. Internationally both connections are widely used and just some countries Geographical adoption only. Also mentioning the Decision of Engineer is final & Binding to the Contractor, pushes fear to even a better Design & Solution adopted worldwide internationally. Thus we request you to delete this condition to provide level playing field as long as Employer requirements are met	
791.	**Voltage Unbalance** CP-105 PS Vol2 Electrification, Chapter 3,3.2.4 (5)6.7.2 **Voltage imbalance and THD** imposed at PCC with IR's transmission line network at normal rated capacity as well as extended feed scenario in full load conditions and mitigation measures thereof, including sizing of mitigation equipment	1. Please advise relevant power supply authority for the same and specify the document/regulation to be considered to deciding PCC to avoid any issue during project execution stage. 2. Please advise Point of common coupling (PCC) is at Grid Substation end or TSS end. 3. Please confirm the existing short circuit level of feeding sending substation and approximate distance between sending end	PCC will be at TSS end. Please also refer response to query no.588 & 696. Bidders are requested to survey the section and collect the required information.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	Maximum Permissible Voltage Unbalance The limit of voltage unbalance permitted according to Central Electricity Authority (CEA) standards are as follows: 132kv 3%	substation and TSS & the Type of conductor used for Transmission Line which are one of the important factors for power quality study. 4. Technically **Power Quality cannot be ensured for the RFP conditions without this Data/information** and thus required to be defined. 5. If data is not available at this stage, data to be assumed/ considered should be specified by the employer based on available information. It is not possible for the bidder to evaluate the Voltage unbalance at 132kv side within 3% Limitation for the costing in the absence of the above mentioned basic information? **Request you to provide the required basic information please, as the Issue is critical for design purpose**	
792.	**1. AT for TSS** **2. Spare AT of TSS Type.** CP-105 PS Vol 2. Electrification, Chapter 3, 3.3.1 (1) v (c) Auto-Transformers shall be provided at the TSS (as required as per design) and at SSP's	1. If bidder design is with V-connected Traction Transformer scheme and simulation shows that **Auto Transformer requirement is not required in Traction Substation** then this line item will not be required. 2. Please confirm whether provision of AT in TSS is obligatory as the word "as required as per Design" is not clear and such ambiguity may lead to dispute later. 3. Also confirm the 1 AT Spare requirement of "TSS Type" cannot be determined as Vee	Provisions of the Bidding document are self-explanatory and shall prevail. Please also refer Addendum no. 11, S. No. 2.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
		connected TSS solution does not envisage any AT and also any future AT provision or space. 4. Please confirm “As required” or “if required” or “as required as per Designs” phrases all represent on applicability of Design requirement only and will not be compelled as Mandatory / Obligatory. If otherwise to be clearly specified, to avoid any ambiguity/mis-interpretation. **Please confirm on all the above points which are critical from design point of view.**	
793.	**Maximum Voltage 60kv/30kv for SSP** CP-105 PS Vol2 Electrification, Chapter 6, clause 6.1.4 (1) Circuit breakers for 2x25kV AT system with protection relays as required to automatically isolate faulty section/equipment, control relay panel and CT’s, PT’s as per application duty of Max. 60kV or Max. 30kV rated voltage and suitable BIL in conformance to EN 50124-1	Since the System is designed for 2 X 25 KV, the standard rated nominal voltage (Un) of 25 KV & rated insulated voltage (Unm) of 27.5kV is acceptable and available. Beside that there is no Un or Umn of 30 KV specified in EN 50124-1. Important consideration should be BIL of System voltage and 95kVrms & 250kVp is a standard BIL as per international practice. Thus request you to kindly amend your clause to “control relay panel and CT’s, PT’s as per application duty of Max. 55kV or Max. 27.5kV rated voltage” which is aligned with EN Standard and International Practices and the bid document specifies EN standards. We request you to issue an addendum to avoid any ambiguity.	Provisions of Bidding document shall prevail

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
794.	**Non-Std Short Circuit Level as MVA instead of Standard 31.5/ 40/ 50kA** CP-105 PS Vol 2 Electrification, Chapter 6, clause 6.5 Table 6.5.1 Design short circuit levels for 132kV – 10000MVA0	Based on MVA levels provided, Calculated fault level for 132 kV is 43.74 kA which is nonstandard and no such product exist. IEC-62271-1 recommended 31.5kA & 40kA for 132kV Equipment as per clause No. 4.5 (R10 series) Please amend the short circuit levels of: -132kV equipment's as 31.5 kA (i.e. 7201MVA) or 40kA (i.e. 9145MVA) to align with IEC and the same was adopted in CP-104. So that bidder ensures equipment availability as per IEC. Request you to confirm Fault Current of 31.5/40kA for 132kV Eqpts. As Short circuit are internationally defined in terms of standard kA level, please issue addendum as above to align this requirement to international standards and overcome this non-standard Data and ambiguity.	Please refer Addendum no. 11. S. No. 1. This supersedes the earlier response to Query no. 702.
795.	**Use of Power Utility Equipment** CP-105 PS Elec Vol 2, Chapter 4, Clause 4.4.2 (5.a) Three years satisfactory performance on **AC Traction** system from one month prior to date of second stage of bid opening or later. (For **circuit breaker and interrupters above 25kV, 25kV feeder wire, AEW, BEC**	1. Request you to kindly change /amend the clause to: "Three years satisfactory performance on AC Traction system from one month prior to date of second stage of bid opening or later. (For Circuit breaker and interrupters above 25kV & 220, 132kV Current Transformer (CT), & 132kV Potential Transformer (PT), 25kv	Provisions of Bidding document shall prevail.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	as required and SCADA system, Three (3) years satisfactory performance **on Power utilities** shall also be permitted.)	cables, 132kV Disconnector, 25kV feeder wire, AEW, BEC and SCADA system and, Three (3) years satisfactory performance on Power utilities shall also be permitted)". 2. Please note Eqpts above 33kv are generally used in Power Utilities only and will not have Indian Railway AC Traction usage. Even in Indian Railways such eqpts are used in Transmission Division and not in Traction Division. This change will enable smooth execution and delivery of the Project in time without impacting the quality, performance or functionality of the system without impacting reliability or quality of design in any manner. In view of above Standard products which are meeting the RFP & Design requirements may please be accepted. We request you to issue an Addendum while incorporating above suggestion which is critical for design.	
796.	**Access of Blanket & Track for System Works** CP-105 PS Vol 2 Electrification, chapter 18, Table 18.4.1 (7)	1. Please confirm Bidder will can have the access to his Plants & Machineries and Materials on to the Embankment after the designed Thickness is ready (before Laying of Track) for the following works of bidder a) OCS foundation works	Provisions of Bidding document shall prevail.

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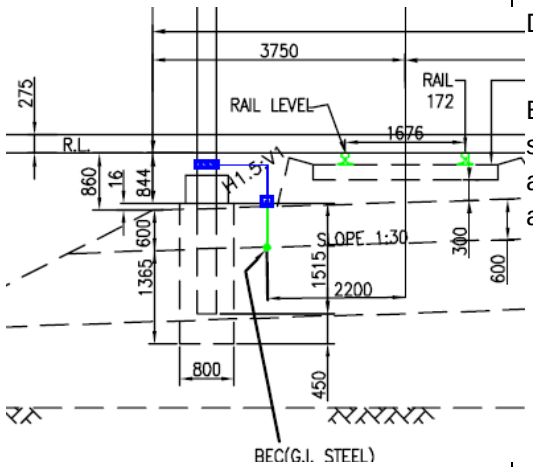
(1)	(3)	(4)	(5)
	System Works Contractor (CP105) Shall coordinate with the civil contractor so that the BEC is installed while the formation work is in progress by the civil contractor and formation is not required to be excavated for laying of BEC	b) Mast Erection & Grouting c) Stringing of AEW, Negative Feeder d) BEC (GS Steel Flat/Rod/Conductor) e) S&T Cables <u>Machineries will differ with blanket access and without blanket access.</u> For Catenary, Contact wire Stringing, Post stringing activity Track access is a Must. 2. Else DFCC shall confirm that Finished Blanket cannot be used for works in Sl.no.1 above and only with Track Access to be used for plying Machineries, Materials for the above works. 3. Note that the above information is very important for Sequence planning of the activity and thereby the Costing of Bid also. 4. For example Planning Sequence , Machinery & Costing differs for works as below a) Only Use Track with Rail machineries for System works (1). b) Using Road Machineries on Blanket also, before Laying Track for above System works & Use Track also. c) Cannot use Blankets at all for Plying Road vehicles for System works Request you to kindly provide clear information about above access dates/milestone to enable bidder to plan sequence, access Machinery reqd.	

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
		& Costing the Bid in a proper manner.	
797.	**BEC Requirement & Laying Sequence** CP-105 Tender drawing: Typical arrangement on OHE Mast on Embankment **(Drg No. GC/DFCC/OHE/EMBKT/TYP/501-1)**	 1. Need of BEC (GS) 2. Location of BEC laying 3. Please confirm whether requirement of BEC is derived from EMI & E&B Simulation being Design Build Contract (or) BEC requirement is Obligatory. 4. Since CP-302 CST contract may complete the Designed Blanket confirm will the Embankment will be allowed for BEC Laying before Ballast Spreading, Track Laying **(or)** BEC to be laid after Track laying with Rail Machinery.	Drawing is indicative only. Being a Design build contract, the design shall be proposed by the Contractor and approved by the Engineer at design stage after award of contract.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
		5. Is the Location of Laying BEC is Fixed as shown in the Drawing (close to track bed) or it can be changed to behind OCS Foundation. 6. Being Design Build Contract, is Bidder permitted to provide alternative Solution to BEC Solution or Laying BEC is Obligatory. Please provide your reply for the above, to evaluate the Planning Sequence & Cost. 7. Request to allow alternatives to BEC, Laying proposal.	
798.	**Insurance** CP-105 Sub clause 18.5 Professional Insurance Sub-Clause 18.5 Professional Indemnity Insurance Add the following new Sub-Clause: "The Contractor shall obtain the professional indemnity insurance, to cover the **risk of professional negligence in the design of the Works** carried by him, for the amount(s) stated in the Appendix to Tender and **the insurance shall be maintained in full force and effect from the Commencement Date of the Works until 03 (three) years after the expiry of the Defects Notification /Extended Defects CILNotification Period**. The insurance policy is required to indemnify	Generally in all Railways/Metro projects Contract Period Ends with the expiry of Defect Notification Period (DNP) or 2 years from Taking of the works. So any Contract Condition shall not be beyond the end of DNP Period. In light of above Time period for professional indemnity insurance may please be reduced from "DNP + 03 (three) years " to "Expiry of Defect Notification Period (DNP). We request you to amend the clause accordingly, as per Universal Practice.	Provisions of Bidding document shall prevail.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	the Employer as joint insured and the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. The Engineer will not certify any Payment Certificate until the Contractor has provided evidence of this insurance.		
799.	**Power Simulation Software** CP-105 Section III Evaluation and Qualification Criteria; 2.4 ** (A Bidder shall also be required to submit a certificate, from the developer / vendor of the software, that the simulation..….	Since generally Simulation Software Developer / Vendor sell their software to Engineering companies for them to use and they have no control over the Projects it is being used, it is not possible to get a certificate from Developer / Vendor. Such condition does not help in using internationally used software for want of such certificate, when bidders themselves are using such software for very long years. Software adopting the Standards and Norms shall be acceptable; thus request you to delete this specific note / requirement.	Provisions of Bidding document shall prevail.
800	**SPLICE on Catenary & Contact Wire due to Theft** CP-105 Part 2 / Section VI / Volume 2 / Particular Specifications–2x25kV, AC Traction Electrification and Associated Works / 8.4 OHE CONDUCTORS / Clause No: 8.4	Use of Splice shall be modified due to unavoidable situation as under. 1. No Splice will be used in Installation but for the below unavoidable Situation. 2. Please confirm that Splices are acceptable	Provisions of the Bidding document are self-explanatory and shall prevail.

Sr. No.	Reference to Bid Documents	Clarification Sought by the Bidders	DFCCIL response
(1)	(3)	(4)	(5)
	(2) (b) The contact wire shall be continuous, i.e. splicing or jointing of the conductors is not permitted between terminations or between cut-in insulators. Splices are primarily used during maintenance and shall not be used in the contact wire and /or catenary wire ***by way of installation or repair unless approved by the Engineer.***	due to theft for special conditions as below a) on Catenary wire, which is not in Panto zone b) on Contact wire only on Out of Run from Panto Zone. 3. DFCC is requested to permit Section wise charging of 25kv, on its readiness to charge sanctioned by EIG/DFCC/Engineer. 4. If the above conditions are not acceptable, then DFCC is requested to suggest the alternative to overcome such Theft situations, as it's a known fact that such Situations may arise even if the section is anti-theft charged.	
801.	**Pre-bid Queries & Answers** Pre Bid Queries & Answers are issued by DFCC and also available at Website	Please confirm the following: 1. Pre-bid Answers have the status of Addendum to the RFP whether replies are added in DFCC issued Addendum or not, as those replies are considered as Clarifications to the Tender/RFP. 2. Pre-bid Queries & Answers will form Part of the Contract Agreement with Addendum Status, as the Replies are the considerations base on which Bidder frames his proposal.	1. Response to Pre-bid queries are for clarifications only. Wherever addition or amendment to bid documents is required, an Addendum is issued. 2. Pre-bid queries and response will not form part of the Contract agreement.