

Dedicated Freight Corridor Corporation of India Limited

(A Government of India Enterprise)

ADDENDUM NO. 08 Dated 03/09/2015

Addendum /Amendments to the Bidding Document for

“CONTRACT PACKAGE CP-204: DESIGN, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF 2X25 KV ELECTRIFICATION, E&M AND ASSOCIATED WORKS OF DOUBLE TRACK RAILWAY LINES ON A DESIGN BUILD LUMP SUM BASIS FOR MUGHALSARAI – NEW BHAUPUR SECTION OF EASTERN DEDICATED FREIGHT CORRIDOR”

ICB No.: HQ/EL/EC/D-B/Mughalsarai-New Bhaupur

Following Amendments are hereby made to the Bidding Document, issued on 08.04.2015 for submission of Stage-1 (Technical Proposal) Bids for 2x25kV, AC traction Electrification, E&M and Associated Works (Contract Packages 204), in accordance with ITB 8 as follows:

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
52	Part-2, Vol. 3	Clause 7.4.1	745 of 887	Replace the contents of sub clause 7.4.1(1) at page 745 of 887 with the following: <i>“Underground cables below road/ passages/railway tracks etc. shall be laid through GI/ HDPE pipes. Laying of cables at other places including recessing in platform/ wall as required shall be done as approved by the Engineer and shall include RCC/ HDPE/ GI pipe as required, digging of cable trench in ground, making chase in wall/ platform, sand cushioning, protective covering with second class bricks, refilling of the trench/ making good the chase, making end termination with aluminium, crimping socket/ lugs etc. shall be as per the approved drawings.”</i>
53	Part-2, Vol. 3	Clause 7.4.4	746 & 747 of 887	(i) Replace the contents of sub clause 7.4.1(9) and 7.4.1(10) at page 746 of 887 with the following :

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document																							
				<p>(9) Minimum depth of directly buried in ground Cable / pipe at various locations from the ground surface shall not be less than as indicated here under:-</p> <table border="1" data-bbox="947 418 1755 1211"> <thead> <tr> <th data-bbox="947 418 1039 553">Sl. No.</th> <th data-bbox="1039 418 1285 553">Location</th> <th data-bbox="1285 418 1535 553">Depth of top of directly buried in ground Cable / pipe</th> <th data-bbox="1535 418 1755 553">Remarks</th> </tr> </thead> <tbody> <tr> <td data-bbox="947 553 1039 724">1.</td> <td data-bbox="1039 553 1285 724">Under-ground</td> <td data-bbox="1285 553 1535 724">Not less than 750mm for LT cables , and 1000mm for HT cable</td> <td data-bbox="1535 553 1755 1211" rowspan="6">Cables to be laid in single tier formation</td> </tr> <tr> <td data-bbox="947 724 1039 797">2.</td> <td data-bbox="1039 724 1285 797">Under road</td> <td data-bbox="1285 724 1535 797">Not less than 1000mm</td> </tr> <tr> <td data-bbox="947 797 1039 902">3.</td> <td data-bbox="1039 797 1285 902">On Platform</td> <td data-bbox="1285 797 1535 902">Not less than 750mm for LT cable</td> </tr> <tr> <td data-bbox="947 902 1039 1065">4.</td> <td data-bbox="1039 902 1285 1065">Under Railway Track</td> <td data-bbox="1285 902 1535 1065">1500mm measured from the bottom of sleepers to the top of the pipe</td> </tr> <tr> <td data-bbox="947 1065 1039 1138">5.</td> <td data-bbox="1039 1065 1285 1138">In wall/ floor</td> <td data-bbox="1285 1065 1535 1138">To be recessed (for LT cable)</td> </tr> <tr> <td data-bbox="947 1138 1039 1211">6.</td> <td data-bbox="1039 1138 1285 1211">Other than above</td> <td data-bbox="1285 1138 1535 1211">As approved by the Engineer</td> </tr> </tbody> </table> <p>(10) Minimum width of cable trench for laying of Cable at various locations shall be as under:-</p>	Sl. No.	Location	Depth of top of directly buried in ground Cable / pipe	Remarks	1.	Under-ground	Not less than 750mm for LT cables , and 1000mm for HT cable	Cables to be laid in single tier formation	2.	Under road	Not less than 1000mm	3.	On Platform	Not less than 750mm for LT cable	4.	Under Railway Track	1500mm measured from the bottom of sleepers to the top of the pipe	5.	In wall/ floor	To be recessed (for LT cable)	6.	Other than above	As approved by the Engineer
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54	Part-2, Vol. 3	Clause 11.1 (5)	763 of 887	<p data-bbox="905 1084 1896 1161">Replace the contents of sub clause 11.1(5) at page 763 of 887 with the following: <i>“DG set shall be silent type with the mandatory canopy conforming to CPCB norms.”</i></p>																														

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55	Part-1 Section – IV Bidding Forms	Form POA-1	75 of 887	<p>Delete entire note “(For Bidders in India to be executed on into account the Notes shown below.)” below the heading of Form POA-1 and replace with the following note:</p> <p><i>“Firms from India shall execute Form POA-1 on non-judicial stamp paper of appropriate value. Firms from outside India shall execute Form POA-1 according to the applicable Law in the Bidder’s (Firm’s) country, as applicable in Bidder’s (Firm’s) country and by taking into the account the following text”</i></p>
56	Part-1 Section – IV Bidding Forms	Form POA-2	77 of 887	<p>Delete entire note “(For Bidders in India to be executed on into account the Notes shown below.)” below the heading of Form POA-2 and replace with the following note:</p> <p><i>“Firms from India shall execute Form POA-2 on non-judicial stamp paper of appropriate value. Firms from outside India shall execute Form POA-2 according to the applicable Law in the Bidder’s (Firm’s) country, as applicable in Bidder’s (Firm’s) country and by taking into the account the following text”</i></p>
57	Part-2, Vol. 2	Clause 5.1.3.(5)	424 of 887	<p>Delete the contents of entire clause 5.1.3(5) at page 424 & 425 of 887 stating as under:</p> <p>“In case of taking any Transformer..... short time paralleling if any.”</p>
58	Part 4	TYPICAL ARRANGEMENT OF OHE MAST ON EMBANKMENT		<p>Replace the Drawing “no. GC/DFCC/OHE/EMBKT/TYP/501” with the revised Drawing “no. GC/DFCC/OHE/EMBKT/TYP/501 Rev.01”.</p>

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59	Part-2, Vol.1	3.7 Simulation Study Plan.	169 of 887	Replace the contents of sub clause 3.7.1(11) with the following: “The Simulation Results shall conform and validated to Standards EN 50119, EN50317, EN50318, EN50329, EN50388, EN50367, EN50641, EN50163, EN50122-1, EN50124-1 , EN50121 (all Parts), IEEE80:2013, IEC 60909 and other standards as specified in Part 2- Employer’s requirement”. Refer Sr. no. 12 of addendum No.4. Dt 24.07.2015, the same stands deleted.
60	Part-2, Vol.3	3.2.3 (3)	703 of 887	Replace the contents “Tower Wagon shed” of Sub clause 3.2.3 (3) at page 703 of 887 with the following: “Tower Wagon Sheds at all Integrated Maintenance Depots(IMDs) locations”
61	Part 1	Form ELI 1.2: Party to Bidder Information Sheet	65 of 887	Replace “Articles of Incorporation or Registration of form named in 1, above, in accordance with ITB Sub-Clauses 4.1 and 4.2.” with “Articles of Incorporation or Registration of form named in 2, above” against item no. 7 of Form ELI-1.2.
62	Part 3, section VIII	Sub clause-2.1 Particular conditions,	850 of 887	‘Delete the Contents regarding provisions of Sub-Clause 2.1-Right of Access to Site, Section VIII, Particular Conditions Page No. 850 of 887 and replace with the following:- “ Insert ‘Formation, Track’ between the words ‘plant’ and ‘or’ in 5 th line of paragraph 1. Delete the contents of Sub-Clause (b) in para 3 and replace with:- “Payment of any such cost plus reasonable profit subject to a maximum of Rs.2000.00 (Two Thousand) per day for every km. For length less than a kilometre pro-rata amount shall be calculated provided further that if such delay in handing over does not affect the execution of Electrical Works, provisions under para 2.1(b) of this sub-clause shall not apply.”

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63	Part-4			Replace the Drawing “no. GC/DFCC/ASS/506” with the revised Drawing “no. GC/DFCC/ASS/506 Rev.01”.
64	Part-2, Vol. 2	Clause 6.9.8 (e)	439 of 887	Delete sub clause 6.9.8 (e) at page 439 of 887.
65	Part-2, Vol. 2	2.2.1	395 of 887	Replace the contents of sub-clause 2.2.1 with the following: <i>“Power supply for the Mughal Sarai – New Bhaupur section shall be tapped from Indian Railways owned 132kV, 3-Phase double circuit transmission line network through Loop In Loop Out arrangement at each Traction Substations (TSS).</i>
66	Part-2, Vol. 2	2.2.2	395 of 887	Replace “220/132 kV” with “132kV”
		5.1.2, 5.1.2(1),5.1.2(2)	423 of 887	
		5.1.3(1)(a), 5.1.3(1)(b),5.1.3(2)(a)(i)	424 of 887	
		6.1.3(2)a, b, c, d, e, f, g, h, l & q.	429 & 430 of 887	
		6.2.2	431 of 887	
		6.2.4 & 6.2.6	432 of 887	
		6.6.1(2)	436 of 887	

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		6.9.8(a),(b),(c)	438 of 887	
		6.13.1(1)	440 of 887	
		7.11	457 of 887	
		Table 10.1.1	487 of 887	
		11.5.1	524 of 887	
		12.4.4	529 of 887	
		15.2(1)	559 of 887	
		16.4.1(4)	561 of 887	
		16.7.2(9)	563 of 887	
		17.1.2	564 of 887	
		Appendix-8,19.1	633 of 887	
		Appendix-9,4.1.2	653 of 887	
67	Part-2, Vol. 2	3.1.1.(9)	397 of 887	Replace "State DISCOM/ power utilities" with "IR"
68	Part-2, Vol. 2	3.1.1	397 of 887	Delete "220 or "
		5.1.2	423 of	

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			887																												
		7.2.3	447 of 887																												
69	Part-2, Vol. 2	6.5	435 of 887	Replace "State Power DISCOM" with "IR"																											
70	Part-2, Vol. 2	6.13.6(1)	443 of 887	Replace "220/132/2x25 kV" with "132/2x25 kV"																											
71	Part-2, Vol. 2	Table 7.3.1	448 of 887	Replace ratings "220/132kV" at Sr.5 with "132 kV" and "245/145kV" at Sr.6 with "145 kV".																											
72	Part-2, Vol. 2	Table 13.2.1	535 & 536 of 887	Replace contents of table 13.2.1 with the following revised table: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>S. No</th> <th>Item Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td colspan="3">A. OHE Spares</td> </tr> <tr> <td>1</td> <td>All types of structures including portal parts</td> <td>2 % of each type used for the project subject to min of 20 nos. and maximum of 40 nos.</td> </tr> <tr> <td>2</td> <td>catenary and contact Conductors, Fittings, hardware and all types of Jumpers& droppers</td> <td>2% of Installed quantity km</td> </tr> <tr> <td>3</td> <td>Set of Cantilever Brackets with insulators</td> <td>150 nos</td> </tr> <tr> <td>4</td> <td>9-T insulators</td> <td>200 nos.</td> </tr> <tr> <td>5</td> <td>Feeder Conductor</td> <td>4kms</td> </tr> <tr> <td>6</td> <td>Aerial Earth Wire and BEC as required</td> <td>20 km each</td> </tr> <tr> <td>7</td> <td>OHE Section Insulators</td> <td>20 sets</td> </tr> </tbody> </table>	S. No	Item Description	Quantity	A. OHE Spares			1	All types of structures including portal parts	2 % of each type used for the project subject to min of 20 nos. and maximum of 40 nos.	2	catenary and contact Conductors, Fittings, hardware and all types of Jumpers& droppers	2% of Installed quantity km	3	Set of Cantilever Brackets with insulators	150 nos	4	9-T insulators	200 nos.	5	Feeder Conductor	4kms	6	Aerial Earth Wire and BEC as required	20 km each	7	OHE Section Insulators	20 sets
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				8	OHE Auto-tensioning device sets	30 sets
				9	Counter weights for ATD	20 sets
				10	Stainless steel wire rope for ATD	50 sets
				11	PTFE type Neutral Section	10 sets
				12	Splices for conductors, feeders	25 nos. for feeder wire 100nos. for Contact wire 100 Nos. for Catenary Wire And Minimum of 25 nos. of splices of each type of other conductors used such as Large Span wire etc, AEW, BEC as required.
				13	Spares for OHE other than above (1 to 12)	2.5 % subject to minimum 20 nos. and subject to quantity in whole nos. next higher no/ weight for hardware items
				B : PSI (TSS,SP,SSP) - Spares		
				1	LA for 132 kV (or as per incomer supply)	6 nos. LAs for 132kV
				2	LA 42 kV	10
				3	25kV PT	12
				4	25kV CT	5 each type
				5	Double pole Interrupter 54/2x25kV	5

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				6	Double pole Isolator motor operated 54/2x25kV	10
				7	Double pole CB 54/2x25kV	4
				8	132kV CB	4 nos. 132kV
				9	132 kV CT	4 nos. 132kV
				10	Isolator 132 kV	2 nos. 132kV
				11	String insulators 132 kV	6 sets of each Type of 132 kV as per the TSS supply voltage
				12	Post Insulators 132 kV	10 nos. 132 kV
				13	Post Insulators 25 kV	50
				14	Auto Transformer	2 Nos - (1 No suitable for TSS and 1 no for SP/SSP based on short circuit capacity)
				15	Auxiliary Transformer 25 KVA	2 nos.
				16	Auxiliary Transformer 10 KVA	10 nos.
				17	Auxiliary Transformer 100 KVA	1 no.
				18	54/60 kV Circuit Breakers, CTs, PTs and other accessories as installed	Minimum 5% subject to Minimum of 5 nos.
				19	PSI (TSS, SP, SSP) - Spares other than item 1 to 18 above (connectors, jumpers, hardware, bus bars etc.)	5 % subject to min of 5 nos./ meter/kg and max of 20 nos./ meter /kg

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				20	Spares of Autotransformer	As per list of spares included in the specification given in relevant Chapter for required rating.	
				21	Spares of traction transformer	As per list of spares included in the specification given in relevant Chapter for required rating.	
				C. Protection and Metering			
				1	Control and auxiliary relays	3 set of each type	
				2	Protection relay	3 set of each type	
				3	Metering Relay	2 set of each type	
				4	Transducers	3 set of each type	
				D. SCADA System			
				1	Spare Cards for RCC/OCC	Minimum 10% spare cards but not less than five of each type	
				2	Spare Cards of Each type	10% spare cards but not less than five of each type at the time of Handing over	
73	Part-2, Vol. 2	3.3.1(1)(v)(a)	400 of 887	Replace the Content of sub clause 3.3.1(1)(v)(a) with the following: "Provision of 7(seven) Traction Sub Stations(TSS) for traction power supply to			

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				2x25kV AT feeding system with double circuit 132 kV supply tapped for each TSS. Typical indicative TSS arrangement is enclosed in Part-4 Reference Documents. The provisions at TSSs shall include the gantry for termination of 132 kV Loop In Loop Out (LILO) feeders of IR, associated switchgears as required for satisfactory LILO operation along with SCADA interface and LILO control workstation at IR end, through secured Web server(s) as required shall be executed by the contractor.”
74	Part-2, Vol. 2	3.3.1(11)	403 of 887	Replace “State power DISCOM Network” with “IR Transmission Network ”
75	Part-2, Vol. 2	3.3.4(1)b	408 of 887	Replace the content of sub-clause 3.3.4 (1) b with the following: “132 KV transmission line to TSSs Gantry (however the provisions related with gantry, associated switchgears in TSSs along with SCADA interface and LILO operation control workstation at IR end through secured Web server(s) as required shall be executed by the contractor for termination of 132 kV Loop In Loop Out Feeders of IR)”
76	Part-2, Vol. 2	6.1.3(1)	429 of 887	Replace the content of sub-clause 6.1.3(1) with the following: “The Power for Mughal Sarai – New Bhaupur section of EDFC will be tapped from Indian Railways owned 132kV, 3 Phase, double circuit transmission line network (Loop In Loop Out) for each Traction Substation (TSS). TSS equipment and Bus bars shall be suitably designed and capable to feed the extended feed zone as per application duty requirement.”
77	Part-2, Vol. 2	6.9.3	437 of 887	Replace “State power DISCOMs” with “Indian Railways and State power DISCOMs (if any)”
78	Part-2, Vol.2	6.9.8(a)	438 of 887	Replace the Contents of Sub clause 6.9.8(a) with the following: a) 132kV Loop in Loop Out Transmission Line Protection as required

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79	Part-2, Vol. 2	6.9.6	438 of 887	<p>Replace the contents of Sub clause 6.9.6 with the following:</p> <p>The Contractor shall design protection system for Power Supply Equipment to ensure:</p> <p>“(1) Adequate protection and relay coordination with Indian Railways.”</p> <p>(2) Adequate discrimination between load and fault condition under normal and extended feed condition.</p> <p>3) Adequate, required type of monitoring, control & protection system including the protection relays, Control Relay panel and CTs/PTs etc.”</p>
80	Part-2, Vol. 2	7.2	447 of 887	<p>Replace the contents of entire sub Clause 7.2 with the contents as under:</p> <p>7.2 EXTRA HIGH VOLTAGE POWER SUPPLY TO TSS</p> <p>7.2.1 The Contractor shall provide all requirements for EHV Line Termination at the TSS to enable the Indian Railways to complete their work and release power supply.</p> <p>7.2.2 The Point of Interface between the Indian Railways owned 132kV, double circuit transmission line and the Contractor will be at the TSS’s Incomer Gantry, provided by the Contractor. The Gantry will be provided by the Contractor as per the Transmission line Termination requirement of IR as well as the TSS. Indian Railways will terminate the transmission line at the gantry. All the Metering bay structures, foundations and equipment after the point of interface towards the TSS shall be provided by the contractor CP 204.</p>
81	Part-2, Vol. 2	17.1.2(ix)	564 of 887	<p>Replace the word “ State power Distribution Company (DISCOM)” with “Indian Railways”.</p>
82	Part-2, Vol. 2	18.4.5	584 of 887	<p>Replace the Contents of Sub Clause 18.4.5 as under:</p> <p>18.4.5 Interface with Indian Railways for POWER SUPPLY</p> <p>1) Items of interface With IR for 132kV Power</p> <p>Interfacing with the IR will be required for</p>

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document										
				a. Power Supply Interface at Traction Substations (TSSs), b. 132 kV incoming gantry to allow termination of three phase transmission line. c. Protection Coordination with IR d. Shall share Design data regarding short circuit level, harmonic suppression, and ascertain that these data is used for system design. e. Railways in parallelism with DFCC Line 2) Information Exchange The Electrical Contractor (CP-204) shall share the information related to protection coordination and system design to establish compatibility with Indian Railways 3) Interface requirements The Interface requirements are described in Table –18.4.5.										
83	Part-2, Vol. 2	Table-18.4.5	585 & 586 of 887	Replace the entire contents of Table-18.4.5 with the revised Table18.4.5 as under: Interfacing Requirements with Indian Railways for Power Supply <table border="1" data-bbox="905 849 1782 1330"> <thead> <tr> <th data-bbox="905 849 968 1013">Item No.</th> <th data-bbox="968 849 1115 1013">Item Description</th> <th data-bbox="1115 849 1444 1013">Electrical Works Contractor (CP-204)</th> <th data-bbox="1444 849 1661 1013">Indian Railways</th> <th data-bbox="1661 849 1782 1013">Remarks</th> </tr> </thead> <tbody> <tr> <td data-bbox="905 1013 968 1330">1</td> <td data-bbox="968 1013 1115 1330">Equipment For Connection at IR's Grid Substations(GSS)</td> <td data-bbox="1115 1013 1444 1330">Shall co-ordinate with Indian Railways and ascertain the provision of necessary bay equipment including CB's and instrument transformers by IR in their GSS with necessary protection and measurement.</td> <td data-bbox="1444 1013 1661 1330">IR will install Equipment in their GSS as per agreed scheme.</td> <td data-bbox="1661 1013 1782 1330">TSS</td> </tr> </tbody> </table>	Item No.	Item Description	Electrical Works Contractor (CP-204)	Indian Railways	Remarks	1	Equipment For Connection at IR's Grid Substations(GSS)	Shall co-ordinate with Indian Railways and ascertain the provision of necessary bay equipment including CB's and instrument transformers by IR in their GSS with necessary protection and measurement.	IR will install Equipment in their GSS as per agreed scheme.	TSS
Item No.	Item Description	Electrical Works Contractor (CP-204)	Indian Railways	Remarks										
1	Equipment For Connection at IR's Grid Substations(GSS)	Shall co-ordinate with Indian Railways and ascertain the provision of necessary bay equipment including CB's and instrument transformers by IR in their GSS with necessary protection and measurement.	IR will install Equipment in their GSS as per agreed scheme.	TSS										

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document					
				2	132 kV Incoming Bay at DFCC's Traction Substations	Shall provide 132 kV incoming gantry to allow IR to terminate duplicate three phase transmission line (LILO).	Shall coordinate with DFCC and with the Electrical Contractor (CP-204).	TSS	
				3	Design Data of Traction Installation	Shall propose a protection scheme and obtain approval from IR. Shall ascertain the adequacy of the provisions as per the requirements of IR and share Various design information viz. <ul style="list-style-type: none"> ▪ TSS Protection Scheme & Relay coordination ▪ Harmonic suppression, ▪ short circuit level 	Shall verify and approve the final scheme of protection. Shall coordinate with DFCC's Electrical Contractor (CP-204) and share the relevant information.	TSS/GSS	
				4	Metering Equipment	Shall provide necessary check meters for measurement of voltage, current, p.f., kVA, kVARh, kWh, at TSSs. Shall co-ordinate with IR for proper readings. Transmit the Energy and power quality data	Shall provide necessary tariff meters for measurement of voltage, current, p.f., kVA, kVARh, kWh, at PSA GSS end or at TSS end.	TSS	

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document				
						to OCC		
				5	Earthing	Shall propose an earthing arrangement at the TSSs in consultation with IR. Shall make necessary arrangement for earthing.	Shall scrutinize and approve earthing arrangement.	TSS
				6	Interface	Issues on interaction during design, construction and execution be resolved to the satisfaction of IR. These issues may relate to metering, and on timing of completion, testing and commissioning.	Shall coordinate with DFCC and with the Electrical Contractor (CP-204).	TSS & GSS
				7	Design considerations due to feed from IR's Transmission line network through LILO arrangement	The Contractor design simulation as required should be undertaken in consideration of the source of power supply from Indian Railways Transmission Line Network.	Indian Railways will share the information regarding the sources of Power supply to Transmission line, parameters of Transmission line and Feeding Grid	TSS, source of supply

S.No	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document			
							Substation as required for Design.
84	Part-2, Vol. 2	4.1.2	607 of 887	Replace the contents of sub-clause 4.1.2 with the following: “The power supply shall be obtained from the 132 kV, three-phase, effectively earthed transmission network of the Indian railways at each TSS. The spacing between adjacent substations is normally 60 km.”			
85	Part-4			Replace the drawing “no. GC/DFCC/PS/TSS/SCH/TYP/101, REV-01” with the revised drawing “no. GC/DFCC/PS/TSS/SCH/TYP/101, REV-03”.			
86	Part-4			Add new item-7 in Part 4 Reference Document IR 's Transmission line Network and DFCCIL's Traction Sub Station (TSS) Connectivity			