Lekhnath Damauli 220 kV Transmission Line Project BMZ 2016 67 773 Package B: Substations Re-tender

Response to Clarification Request
Pursuant to Bidding Documents, Part 1 - Bidding Procedures, Section I - Instructions to Bidders, Item 7.1

Response No. 5, 17 September 2024

Nο	Reference	Clarification Request	Response
Tech	nical		
1	Part 2 VII-5 Technical Specification 13 Cable Systems 132 KV grade cable	Bidder request to clarify and confirm the following points. 1. As per clause 13.2.7.3 cable required with corrugated Al sheath but as per data sheet cable required with Cu screen + Poly Al tape. Please confirm. 2. If cable required with corrugated Al sheath then please confirm corrugated Al sheath short circuit rating with duration. 3. If cable required with Cu screen + Poly Al tape then please confirm Cu screen short circuit rating with duration or nominal area of Cu screen.	 The sub-section 13.2.7.3 does NOT prescribe a corrugated sheath. The specification makes reference to a SMOOTH longitudinal welded aluminium sheath. If the Bidder does not provide this type of sheath then the specification allows aluminium laminated with PE copolymer. If the latter does not ensure the required single-phase short circuit current, the Bidder can propose a copper wire screen (CWS) beneath the aluminium laminated sheath. Please see response to1.) above. Regarding short circuit rating with duration, please refer to VII-8, Item 11.1.1.8. Please see response to2.) above.
2	Part 2 VII-5 Technical Specification 13 Cable Systems 33 KV grade cable	 Bidder request to clarify and confirm the following points. Complete cable construction details are not specified in Technical Specification; however bidder will offer the cable as per data sheet. Inner & outer sheath material Cu screen short circuit rating with duration 	 Cables shall be offered with key construction details as per data sheet. Inner & outer sheath material shall consist of a halogen free and low smoke thermoplastic compound Please refer to VII-8, Item 11.2.1.13

Nō	Reference	Clarification Request	Response
3	Part 2 VII-5 Technical Specification 13 Cable Systems 11 KV grade cable	Bidder request to clarify and confirm the following points. 1. Complete cable construction details are not specified in Technical Specification; however bidder will offer the cable as per data sheet. 2. Inner & outer sheath material 3. Cu screen short circuit rating with duration	See response to Item 2 above.
4	Part 2 VII-5 Technical Specification 13 Cable Systems LV cables	 Bidder request to clarify and confirm the following points Please provide Technical Specification of LV cable or complete cable construction details. For PVC insulated cable LSZH inner & outer sheath material are not suitable. However, if inner & outer sheath required LSZH then XLPE insulation will be applicable, hence please confirm. If cable required with PVC insulation, then please confirm inner & outer sheath material. Please check shielded cable, cable size & also provide its specification. Please provide flexible cable technical specification or cable construction details. For offering the cable bidder will refer IEC: 60502-1 	 The key requirements as specified in VII-5, Clause 13.3.6.1 and VII-8, Item 11.4 shall be followed. Cable construction details shall be proposed by the Bidder / Contractor at design stage, subject to approval. LV power and control cables shall be flame retardant and low smoke zero halogen (LSZH) as specified in VII-5, Clause 13.3.6.1 and VII-8, Item 11.4. PVC insulation is not required by the specification. Such details shall be proposed by the Bidder / Contractor at design stage, subject to approval. Such details shall be proposed by the Bidder / Contractor at design stage, subject to approval. Confirmed.
Con	nmercial	1	
5	ITB clause 46,	"Critical Equipment The following components of the Facilities, GIS, Power/Autotransformers, Control relays panel, Substation Automation System (SAS) and Communication System are defined to	The request is not a request for clarification pursuant to Parti I Bidding Procedures, Section I. Instructions to Bidders, Item 7. It is effectively a request of amendment to the Bidding Documents and as such it cannot be entertained.
J	Section 9 Particular Conditions (PC)	be the Critical Equipment. For time period as stipulated in the Contract Data 11.12, they shall be subject to an extended Defect Liability Period.	

Nō	Reference	Clarification Request	Response
	PC- 4.2- Critical Equipment	Such obligation of the Contractor shall be in addition to the Defect Liability Period specified under Sub-Clause 1.1.3.7 Part A Contract Data".	
	Section 9 Particular		
	Conditions (PC)	As per ITB clause 46, bidder understands that 10% Performance Bank Guarantee (PBG) of Contract value shall be submitted within	
	PC- 11.12- Critical Equipment	28 days in three (03) parts by the bidder as mentioned below:	
	Equipment	1) 10% PBG for Supply portion of non-critical items contract value in USD currency valid till defect liability period of 730 days from Taking Over Certificate.	
		2) 10% PBG for services portion contract value in NPR currency valid till defect liability period of 730 days from Taking Over Certificate.	
		3) 10% PBG for Supply portion of critical items contract value in USD currency . (i.e. GIS, Power/Auto transformers, Control relays panel, Substation Automation System (SAS) and Communication System) and valid till defect liability period of 730 days and extended Defect Liability Period of 1095 days i.e. Total 1825 days from Taking Over Certificate.	
		Please confirm our understanding is correct.	
Civil	I	ı	
6	Annex D5-22 Damauli Substation Boundary Features and Project Phasing	Bidder understands that the development of the 220kV substation platform may require Bought out earth before compaction for Phase 1.	It is Contractor's responsibility to identify suitable borrow areas and to submit data for approval, as defined in VII-6, Clause 2.5.4.4. The relevant measures outlined in Section VII shall also be considered.

No	Reference	Clarification Request	Response
	3 Project Phasing Phase 1 shall comprise (Figure 3-1): Development of the 220kV substation platform (excavation, filling and compaction)	Hence requests to provide the source of bought out earth and distance Damauli site.	
7	Bought Out Earth	Bidder understands that earth filling is not required at Lekhnath as per scope of work. However, if land filling is required during execution stage, then bidder requests to provide the source location for bought out earth and distance from Lekhnath. Any Additional scope shall be mutually discussed and agreed for any cost and time compensation.	Confirmed, no filling is foreseen at Lekhnath site, however, potential soil improvement shall be the responsibility of the Contractor. Provisions of Item 6 above shall apply in this case.
8	VII-6 Technical Requirements - Civil Works Page 14 of 93 1.6.3 Building - General Building Roof Type	Bidder understands that they are free to design the roof as 1. A type Steel Truss with Puff Panel Sheeting for PEB buildings. 2. RCC slab for RCC buildings Kindly confirm.	Please refer to Clarification Request Response No. 2, Item 46

Nº	Reference	Clarification Request	Response
9	Annex D5-22 Damauli Boundary Features and Project Phasing Figure 3-1 - Phase 1 main works Page 9 Hill Side Protection	The Price Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of price items. Improve Schedule reflects the phases described above, allowing removal of phases	Not confirmed, stabilization and protection of slope shall be Contractor's responsibility, please refer to VII-6, Clause 2.5.4.1
		Bidder understands that any retaining structures and slope protection works at the hill side beyond the External Drainage Collector No 1 as shown in attached Figure 3-1. are not in Bidder scope of works. Kindly confirm our understanding is correct.	
10	VII-6 Technical Requirements - Civil Works 1.6.15 Roads, paving and surfacing	 Bidder understands that the access road for Damauli shall be considered as Flexible/Asphalt road as per Annex D5-25 New Damauli Substation Access Road Typical Sections. Kindly confirm. Bidder understands that the internal roads for Damauli shall be considered as Concrete roads. Kindy confirm. 	All roads inside the substation area shall be concrete as identified in Annex 9 D5-4. The permanent access road from the permanent bridge up to the entrance gate of the Substation, as identified in Annex 9 D5-24 shall be asphalt concrete, for details see Annex 9 D5-25. The construction and quality of concrete shall comply with international standards.
11	Annex D5-22 Damauli Substation Boundary Features and Project Phasing 3 Project Phasing	"2 Site Boundary Features 2.1 Site Fencing Depending on the MCA project timeline, the fence towards the future 400kV site (dotted line in Figure 2-1) may or not be constructed. "	Variations are regulated by GC sub-clause 13.3.

Nº	Reference	Clarification Request	Response
		Depending on the MCA project timeline, the fence towards the future 400kV site (dotted line in Figure 2-1) may or not be constructed. Figure 2-1- Site foncing We refer the scope of fence marked in dotted line may or not be constructed at MCA side, however any price deduction from the contract is not applicable incase fence is not constructed. Please	
		confirm.	
12	Part 2 VII-5 Technical Specification 11 Telecommunication Systems Annex D5-21 Telecommunications System - CHAPTER 19: Fiber Optic Based Communication Equipments	Bidder observes that there are 2 specifications attached in the bidding documents for Telecommunication in vol 2. Annex D5-21 Telecommunications System - CHAPTER 19: Fiber Optic Based Communication Equipments along with Drawings. And Chapter 11: Telecommunication Systems (Page 223 of 336 to Page 240 of 336) Please clarify to proceed.	Annex D5-21 provides further details and specific data to supplement the functional specification in VII-5, as outlined in VII-5, Clauses 11.1 and 11.2.

No	Reference	Clarification Request	Response
	Part 2 VII-5 Technical Specification	1. As per technical specification page no 32 of 39 clause 13.3.5.1 each core shall be provided with a copper wire screen with a copper equalizing tape. Please provide the copper wire screen area to be provided over each core.	1. Cross section area of copper wire screen shall be proposed by the Bidder / Contractor, based on the design criteria specified in VII-8, Item 11.2 / 11.3, subject to approval at design stage.
	13 Cable Systems	2. Kindly confirm outer sheath for Medium Voltage cables shall be	2. Outer sheath for Medium Voltage cables shall be LSZH type.
		LSZH type FRLS type.	3. Metering and protection cables are a subcategory of power and control cables and therefore are included in Schedule No. I
		3. As per technical specification page no 36 of 39 clause 13.3.6.3 Metering, and protection cables shall be overall shielded. Kindly	/ II, Items 1.14.2 / 2.15.7.
13		confirm which cables are metering type as per price schedule.	4. Please refer to VII-5, Clause 13.3.6.7 regarding definition where fire resistant cables are required. Fire resistant cables are a
		4. Kindly confirm is any Fire-Resistant cable is required or not as per price schedule.	subcategory of power and control cables and therefore are included in Schedule No. I / II, Items 1.14.2 / 2.15.7.
		5. As per technical specification page no 35 of 39 clause 13.3.6.1 All power and control cables shall be provided with proactive (PE) conductor. Kindly note that we shall provide offer as per BOQ received. If any PE conductor is required than please confirm the same in BOQ.	5. The word "proactive" in Clause 13.3.6.1 shall be read as "protective". Please note that the requirement for a PE conductor is based on IEC 60364 and is to be provided as required by the specification. The PE conductor is part of power and control cables and therefore included in Schedule No. I / II, Items 1.14.2 / 2.15.7.
	UPS for Substation	Bidder request to clarify following input related to UPS	
14	Automation System	 Please clarify the Input Voltage of the system. How much Battery Backup time is desired. Weather Bypass equipment is required or not Please share SLD of the system, if available. Please share ACDB details (if required) 	1) Please refer to VII-9 Annex D5-10 / D5-11 and VII-8, Item 7.9. 2) The UPS is supplied from the station battery. Station batter backup time shall be 10 h, as clarified in Clarification Request Response No. 4, Item 33 3) Please refer to VII-9 Annex D5-10 / D5-11. 4) Please refer to VII-9 Annex D5-10 / D5-11. 5) Please refer to VII-5, Chapter 7

No	Reference	Clarification Request	Response
15	Insulator	Please provide GTP for Composite Insulator for each voltage level.	The clarification request / meaning of "GTP" is not clear
16	VII-1 Project Description and Scope of Works CCTV 3.2.18 CCTV system 3.3.19 CCTV system indoor and outdoor pan tilt zoom (PTZ) cameras (minimum forty (40) sets) with remote	Bidder request to confirm all location as mentioned in Project Scope of work clause "3.2.18 CCTV system" and "3.3.19 CCTV system" will require only pan tilt zoom (PTZ) cameras (min 40 Nos.). While Ceiling mounted dome cameras or Fixed perimeter cameras (Bullet type) is also mentioned in Specification and GTP format. Please confirm bidder can decide type of camera 40 nos. as per below: • 6 x PTZ Camera for Transformer Area • 34 x Bullet Type Camera at Entrance / Exit area and Dome Type Camera at Indoor area	"Minimum forty (40) sets)" shall be the minimum number of cameras to be supplied for guidance. Split of quantities for different types shall be proposed by the Bidder / Contractor at design stage, subject to approval
17	vII-5 Technical Specification CCTV 17.3.1.3 Thermal camera	Bidder request to confirm Thermal camera is not required in the project. Please confirm.	Thermal cameras shall be provided as defined in VII-5, Clause 17.3.1.3 (included in the total 40 cameras as clarified in item 12 above).
18	VII-1 Project Description and Scope of Works CCTV 3.2.18 CCTV system	Bidder request to confirm Network Video Recorder capacity will be as per Data Sheet only. Please confirm.	The data in VII-8 Data Sheet are the minimum requirements.

Nō	Reference	Clarification Request	Response
	3.3.19 CCTV system		
19	CCTV UPS	Separate UPS is not required for CCTV. Please confirm.	Confirmed, separate UPS is not required.
20	CCTV Storage	90 days recording is required then a separate Storage array (NAS/SAN) for recording having capacity of 90 TB Usable (and Total 180 TB in case redundancy req.) on RAID1 which is a costly affair. Now bidder understand for 90 days with 40 Cameras (10 Frame/Sec, 24-hour recording, resolution 720P, compression H.265 and Video Quality as Medium) the Storage capacity of Hard disk will be more than 8TB. Hence in order to meet above condition (as max.) bidder request to confirm 10 TB hard disk to be offered. Also confirm Redundant Storage Facility is not required in the project.	Confirmed, 10 TB hard disk to be offered.
21	CCTV Monitor	1 no. x 32" Monitor is required within control room only. Please confirm.	Minimum two numbers of monitors to be provided, as defined in VII-8, item 16.7.1 (for control room and gate house, as defined in VII-5, Clause 17.3.5).
Instr	ument Transformer		
22	Project Description and Scope of Works, 132 kV Switchyard - Lekhnath substation	As per referred clause of specification, The two new bays will be provided with two sets of air-insulated capacitive voltage transformers to be used for the voltage control of the new 220/132/33 kV auto transformers. Whereas in BPS and Specification clause 3.2.1, voltage transformers are mentioned. Please confirm whether the requirement is CVT or VT?	The two new bays shall be provided with capacitive voltage transformers as defined in the VII-8 Technical Data Sheets

Nō	Reference	Clarification Request	Response		
MV S	/IV Switchgear (33kV and 11kV)				
	VII-5 Technical Specification	Offered panels are designed for IP4X degree of protection without any gaskets. Hence no neoprene gaskets required as per panel design. Also the offered panels are type tested for IP-4x externally	Subject to approval at design stage.		
	4.2.1.2	& IP-2X within compartments as per IEC 62271-200. Also note the offered panels are not totally enclosed, dust-tight, damp proof and			
23	6.3.4	vermin proof.			
	Each compartment				
	must have, as a	Please confirm your acceptance for the same.			
	minimum, IP51 as				
	degree of protection				
	VII-5 Technical	Offred panels have self-supported busbars so busbar supporting	Subject to approval at design stage.		
	Specification	insulators are not applicable.	Subject to approvar at design stage.		
	Specification	insulators are not applicable.			
	4.2.1.3	Please confirm your acceptance.			
24	Busbars will be	, ,			
24	supported by				
	appropriate				
	insulators and				
	connectors.				
	VII-5 Technical	Offered panels will be tested as per attached painting procedures	Subject to approval at design stage.		
	Specification	with shade RAL 7035.			
	•				
	6.3.3	Please confirm your acceptance.			
25	Panel enclosures				
	shall be provided				
	with a coating in				
	accordance with a				
	proven industrial				
	coating				

Nº	Reference	Clarification Request	Response
	system, compliant with Section VII- 3 General Technical Requirement. The thickness of the dry film shall be at least 80 µm; the adhesive strength shall be GT1 or better according to the standard		
26	ISO 2409 Numerical Relay	Please note protection relays shall be of numerical type. Any hardware such as laptop, SCADA, interfacing cables, connectors etc required for relay programming / communication is not included in the scope. Kindly confirm BI/BO for relay with communication protocol.	The requirement of the specification shall be followed with regards to interfacing and completeness of scope.
27		As you are aware that the complete type tests are not possible to conduct at Third Party/ Independent laboratory because of their limitation on test facility. Hence, manufacture understand that complete type tests will conduct except Dynamic Short Circuit test at our own test laboratory (NABL Accredited) in presence of independent laboratory representative and NEA representative. Please re-confirm your acceptance.	Please refer to Clarification Request Response No. 2, Item 85
28		We presume that the BCPU of respective 33kV & 11kV bays as required, shall be an integral part of the respective switchgear bays itself. We do not envisage separate relay panel for 33kV & 11kV bays. Please confirm.	Confirmed

Nō	Reference	Clarification Request	Response		
Tran	Transformer Transformer				
29	Part II, Section VII-5, Technical specification, clause- 5.2.2.27 QR Requirements Ability to withstand the dynamic effects of short circuit the Bidder/ Contractor shall submit a proof that the sourcing transformer factory has already successfully demonstrated the same by test for at least two similar transformers	As per IEC 60075-5 A.3.3.3, dynamic short circuit withstand capability of the transformers can be performed using design review of the offered transformer. Hence, we shall prove SC withstand capability by using design calculations as per IEC during detail engineering stage —Please confirm We can furnish higher rating (MVA and KV) SC test report. Also, if more than one higher rating SC test report is required then it may be older than 15 years as transformer manufacturers do not often conduct the SC test, unless otherwise insisted as per contract. Please confirm	The clarification request is not clear. The published bidding document does not include VII-5, 5.2.2.27 and does not call for two tests. The requirements according Part 1, Section IV, Conformity of the Facilities Requirements, Note 1 and VII-5, Clause 5.2.2.26 shall be followed. Test of similar and or Higher rated transformers are acceptable (Please refer to Clarification Request Response No. 2, Item 84.)		
30	Part II, Section VII-5, Technical specification, clause- 5.2.2.27 QR Requirements Ability to withstand the dynamic effects of short circuit	We would like to mention that the IEC 60076-5 CI 4.2 says "If required by purchaser; the ability to withstand the dynamic effects of short circuit shall be demonstrated either by tests, or by calculation and design and manufacture considerations." And we understand NEA accepts the IEC 60075-5 A.3.3.3, dynamic short circuit withstand capability of the transformers can be performed using design review of the offered transformer.	Not confirmed The requirements according Part 1, Section IV, Conformity of the Facilities Requirements, Note 1 and VII-5, Clause 5.2.2.26 shall be followed. Test of similar and or Higher rated transformers are acceptable (Please refer to Clarification Request Response No. 2, Item 84.)		

Nō	Reference	Clarification Request	Response
	the Bidder/Contractor shall submit a proof that the sourcing transformer factory has already successfully demonstrated the same by test for at least two similar transformers	Hence, the manufacturer will not prove Short Circuit similarity with existing short circuit tested (with reference) transformer. Please reconfirm	
31	Part 3 PC 13.8	As per the Adjustment table, the reference price for following commodities for adjustment shall be: Core Steel - LME CFR India Copper - LME Cash Construction Steel - LME CFR India We wish to inform that the London Metal exchange does not publish any indices for Core Steel and Construction Steel on CFR India basis. For these two commodities we propose to use Indices as published by IEEMA. These indices are widely used and accepted by all transformer manufacturers	The clarification is not clear. The quotes source indices are not included in the published version of the bidding document. PC 13.8 of the published version of the bidding document shall be followed.
32	Transformer condition monitoring	Please confirm, condition monitoring is not required, for 63 MVA,30 MVA and 8 MVA transformers.	Please refer to Clarification Request Response No. 3, Item 24
Civil			
33	Grade of Reinforcement Steel	Bidder request to confirm for acceptance of below grade of reinforcement steel as per the availability in Nepal.	Please refer to Response to Clarification Request No. 4, Item 74

Nō	Reference	Clarification Request	Response
		Thermo mechanically treated HYSD Fe-500d bars confirming to IS 1786(latest revision) shall be provided. Please confirm.	
34	Grade of Reinforcement Steel	Bidder understands that the reinforcement steel shall not be corrosion resistant type. Please confirm our understanding is correct.	There is no requirement for corrosion resistant reinforcement steel bars. Any alternative proposals will be considered against the Specification, but acceptance will be subject to Employer approval.
35	Grade of Cement	As per Specifications "The cement used for concrete, reinforced concrete, mortar, grout and plaster works shall be a moderate sulfate resisting Portland cement in accordance with DIN 1164, EN 197-1, or another equivalent standard" Bidder request to confirm for acceptance of below grade of Cement as per the availability in Nepal.	Please refer to Response to Clarification Request No. 4, Item 74
		1. Cement OPC Grade 43 conforming to IS:1489	
36	mercial Custom Duties	Bidder intends to source all Steel Structure including Foundation bolts, Reinforcement Steel and other Steel structure e.g. (MS Steel, Cable trays, Sheeting, PEB Structure, Chequer Plate, Rail etc.) from India (outside from Nepal). Kindly confirm that the custom duty will also be reimbursable for Schedule 4 quoted in NPR against above mentioned steel materials in line with provision of the bidding documents.	Items in Schedule 4 imported from abroad will be subject to custom duties, to be borne by Contractor.
37	Custom Duties	Bidder intends to source Cement from India.	See response to Item 36 above.

Nº	Reference	Clarification Request	Response
		Kindly confirm that the custom duty will also be reimbursable for Cement also which is part of Schedule 4 quoted in NPR in line with provision of the bidding documents.	
	Custom Duties	Bidder intends to source the Cement, Aluminium sections, Tiles, Kotastone, Granite, False ceiling, False flooring, Pipes, Paint and other Finishing Items, Foundation bolts, Reinforcement Steel and Steel structure e.g.SS Rails, MS Steel Sections, Cable trays, Sheeting, Aluminium Plate, Chequer Plate, Rail etc. from India. Kindly confirm that the customs duties, tariffs, import and export taxes or other taxes imposed as applicable for above mentioned materials will be either exempted or reimbursed by NEA - Nepal.	See response to Item 36 above.
38		Since there is no separate price schedule for above items like supply of cement, reinforcement steel etc it should not be a concern with the tax authorities during execution while crossing the borders that this is not billable and will not be exempted. Therefore, M/s NEA needs to provide us the exemption certificate item wise at the start of the project which will be acceptable to tax authorities in India as well in Nepal. Kindly confirm the same.	
39	Area Requirement - Buildings	Bidder seeks flexibility is designing the GIS and Control Room Building with optimized area in compliance with the Codal provisions mentioned in the Technical Specifications. Kindly confirm.	Please refer to Response to Clarification Request No. 2, Item 128 / 129

No	Reference	Clarification Request	Response
40	Construction Material Border Crossing	As a past experience of working in Nepal; Bidder has faced issues to procure Construction material like Gun powder, metallic hardener etc. Bidder requests NEA to provide alternate material approval if such a situation is faced by Bidder during execution. Kindly confirm.	Shall be subject to approval at design stage.
41	Part II VII-6 Technical Requirements - Civil Works 1.5.6 Earthquake load Lekhnath and Damauli	 Bidder understands that the local standard mentioned for Seismic calculation of buildings & others shall be considered as Nepal National Building Code NBC :105: 2020. Kindly confirm And if any other local standard is applicable, please provide the same 	 This shall be subject to approval at design stage Please refer to Response to Clarification Request No. 2, Item 58