

Electricity Grid Modernization Project
Design, Supply, Installation, Testing and Commissioning of Ghorahi-Khungri (Madichaur) 132 kV Transmission Line and Associated Substations at Khungri and Ghorahi.
OCB NO:PMD/EGMP/GKTLSS-077/78-01

Clarification-2

S. No.	Reference Section and Clause	Description in Bid Document	Bidders Query/ Comments	NEA's Clarification
1	Volume-IIB, Section-11, Technical Schedules, 33/11kV, 6/8MVA Distribution Transformer AND Volume-IIB, Section-3 – General Technical Requirement – Power Transformer – Clause 6.1 – Technical Particulars of 6/8 MVA.	Section-11, Technical Schedules	The following Parameters mentioned in Technical Schedules are not matching with the Section 3-Technical Particulars: 1. Temperature Rise 2. Impulse withstand Please clarify whether Bidder should offer the values in line with Technical Particulars under Section 3 OR in line with Technical Schedules.	Please read these data as per Section-11, Technical Schedules.
2	Volume-IIB,Section-1, Project specific requirement - Bay extension works at Ghorahi Substation		Please provide the existing make of Busbar relay and Substation automation system at Ghorahi station	Recommended to visit the site as per your own.
3	Volume IIA, Section-1, Project Specific Requirement, 2.3-Air insulated switchgear (AIS)	For the 132 kV System, Bus bar protection scheme with static type low impedance differential relay shall be provided. The provision shall be provided for minimum 10 numbers of bays (Includes 2 nos future spare bays)	We offered low impedance centralized busbar protection for 10x Bays in line with requirement, Please confirm	This will be finalized during detail engineering.
4	Volume-III, Price schedule of Khungri, 10.1 Breaker failure relay	The requirement of the breaker failure relay is 1.	Breaker failure relay is an inbuilt functionality of busbar protection relay, Hence we understand same is not required.	Acceptable.
5	Ghorahi and Khungri substation Detail.		Please confirm/ provide the following: 1. Soil Parameters for estimation of Civil quantities. 2. We assume that the leveled Land will be handed over to the Bidder for construction activity. Please confirm our understanding is correct. 3. Approach Road from Main Road / Highway upto substation Site is available?	This is bidders scope. Please visit the site for initial idea.
6	Ghorahi Substation Detail		Please provide the existing drawings, namely - i) Single Line Diagram (SLD) ii) Electrical Layout - Plan and Section drawings	Single line diagram is attached in the Bid documents. For Electrical Layout - Plan and Section drawings of Ghorahi SS, you are requested to visit the site.
7	Ghorahi Substation Detail		1. We assume that space is available in the Control Room to accommodate our Panels. Please confirm 2. We assume that space is available in the existing Cable Trench to accommodate cables from new bays. Please confirm.	confirmed.
8	Volume IIB, Section-21-Technical Schedule,1.13.2-Technical Particulars for 11 kV Switchgear AND Volume IIB-Section-8B,Clause 1.6, Main Equipments Characteristics		As per the Technical Particulars for 11kV Switchgear the Rated Lightning Impulse Withstand Voltage (kVp): 95 Whereas Chapter 8B – Clause 1.6 mentioned the Rated Lightning Impulse Withstand Voltage (kVp): 75. Please confirm the exact value to be followed	Please read the rated lightning impulse withstand voltage (KVp) as 95 V.
9	Volume IIB, Section-21-Technical Schedule,1.13.2-Technical Particulars for 11 kV Switchgear AND Volume IIB-Section-8B, RATING AND FEATURES OF EACH 12 kV SINGLE TIER SWITCHGEAR PANEL COMPLETE		As per the Technical Particulars for 11kV Switchgear; the Rated Continuous Current: 800 A. Whereas as per Appendix 8B: Sr. NO. 6A the current rating mentioned is 2000A (i/c) and 1250A (o/g). Please confirm the exact value to be followed.	Please read these as 2000A and 1250A.
10	Volume-IIB, Section-1, Project Specification Requirement, Khungri and Ghorahi Substation		We wish to inform that, the General arrangement layout for Proposed Khungri SS & Ghorahi SS is not attached with the tender document. Kindly provide the same. In order to estimate the quantum of work.	This is in the bidders scope to propose the layout for Khungri substation subject to approval from Project after check survey.
11	Volume-IIB, Section-1, Project Specification Requirement, Khungri Substation		Please furnish the following details for the proposed Khungri Substation:- 1. Soil investigation report. 2. Contour layout indicating spot level 3. Drain disposal Point	This is in the bidders scope to carryout soil investigation, survey and layout proposal subject to approval from Project.



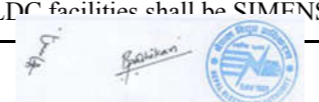
12	Volume III, Bid Price Schedule Schedule 4a (Part 1) ,Part-D Civil work,Khungri Substation : AND Volume III, Bid Price Schedule Schedule 4a (Part 1) ,Part-C Civil work, Ghorahi Substation		Based on scope of work & price schedule, we understand that pile foundation is not envisaged in the proposed Khungri SS & Ghorahi SS substation. Kindly confirm, If required, we trust that the same shall be paid as an additional item.	Though Project has not envisaged the need of Pile foundation yet but incase this is needed after soil investigation by successful bidder, payment management will be accordingly.
13	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, Khungri Substation		We trust that, the following civil works are not in bidders scope, 1. Land acquisition for proposed substation (including approach road land) 2. Construction of Approach Road from main road to substation boundary 3. Boundary wall along with main gate. 4. Rain water harvesting 5. Dewatering Arrangement 6. Borewell for water supply Please confirm	Confirmed except dewatering arrangement and water supply management. Water supply for construction work shall be managed by contractor at its own but for Project need, please see clarification-1.
14	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, Ghorahi Substation		We do not envisage any building extension or modification works in the Existing control room under present scope of work in Existing Gorahi substaion. Kindly confirm. If not add an item for the same in price schedule and also provide the existing control room building drawings	Confirmed.
15	Volume II B, Section-20,General Technical Requirement - Civil Works, Clause 2.3.1 (a) , Khungri Substation Volume III, Bid Price Schedule Schedule 4a (Part 1) ,Part-D Civil work, Clause -3,4,5, Khungri Substation		As per referred clause, the control building, staff quarter, Guard house is in bidders scope. However in price schedule, the finishing works for control building, staff quarter, Guard house item only is included. We trust that, the foundation works such as (Excavation, PCC, RCC,Reinforcement) is also to be included in the same clause. Please confirm.	This includes complete works including finishing, furniture to furnish this work.
16	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, Khungri and Ghorahi Substation		If earth fill depths are high, the foundations can be rested on filled up soil after ensuring proposer compaction formed by plate load test or the applicable Geo-tech tests. Kindly confirm	Confirmed but site doesn't look to demand high filling depths.
17	Volume II B, Section-20, General Technical Requirement- Civil Works, Clause-5.2, Khungri & Ghorahi Substation		As per referred clause, it is mentioned that "Separate measurement and payment of BOQ item Crushed rock surfacing including laying of sand and plastic as per technical specifications shall be made in Sq. m as per BOQ". However in price schedule the measurement of Crushed rock surfacing is given in Cu.M. Please clarify.	Please read this as Cu.M for complete work.
18	Volume-IIB, Section-1, Project Specification Requirement, Khungri and Ghorahi Substation		We trust that, the diversion of the water stream or nalla(If any) inside proposed area is not in bidder scope. Please confirm	confirmed.
19	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, Khungri and Ghorahi Substation		As per referred clause, the site levelling is in bidder scope. We trust that the proposed Substation present scope of work area & staff quarters building area only need to be levelled and the remaining untouched area within property line/ boundary wall to be left as it is. Please confirm.	no need of levelling in Ghorahi SS but levelling of work area & staff quarters building area at Khungri SS will cover all area of Khungri SS including levelling of future bay extension.
20	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, (r), Khungri Substation		As per referred clause, it is mentioned that "The substation area shall be developed in terraces at single or multi levels by cutting and filling". Please specify the proposed Finished Ground Level for Substation area & staff quarters building area. In order to estimate the founding depth.	Successful bidder need to fix furnish level but khungri SS area is quite possible for single level substation construction.
21	Volume-IIB, Section-1, Project Specification Requirement, Clause-1.26, Khungri and Ghorahi Substation		As per refered clause, the Complete Drains system including RCC slab cover is paid in lumpsum basis.However the provision of drainage system is not mentioned in the technical specification. Please specify the provision of drains, whether drains are to be provided on both sides of road or single side.	The drainage system shall be proposed by the successful bidder after assessing the site for successful drainage achievement.
22	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1, Ghorahi Substation		We trust that, the dismantling of existing Road, drain, building & any other structures with in the extension area is not in Bidders scope for Ghorahi substation. Please confirm.	Confiremd.



23	Volume II B, Section-20, General Technical Requirement- Civil Works, Clause-8.1,9.2, Annexure-B, Drawing		As per the referred clauses the grade of concrete is mentioned as M25 & grade of steel is mentioned as Fe 500. However as per the tender drawings, the concrete grade is specified as M20 and grade of steel is mentioned as Fe 415. Please confirm, which grade to be followed for concrete and steel	Please read this as M20 & Fe 415.
24	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1(f), Khungri Substation		As per the referred clause, "fire resistant concrete wall between Transformers" are in the bidders scope. However there is no separate item for the same in Price Schedule. Please include the line item	There is only one 132/ 33 kV 3-phase Power transformer to be installed. So there is no need of Fire wall.
25	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.3.1(j), Khungri Substation		As per the referred clause, "Antiweed treatment" is in the bidders scope. However there is no separate item for the same in Price Schedule. Please include the line item	Please be notified that this is Turnkey Project. So such costs is deemed to be included in related headings. Load this cost on the crossed rock surfacing work.
26	Volume-IIB, Section-1, Project Specification Requirement, Clause-1.1, Ghorahi Substation		We wish to inform that the detailed scope of work for Ghorahi Substation is not clearly indicated the tender document. We trust that, the following civil works are under bidders scope for the proposed bay extn. 1. Tower and equipment structures along with its foundation 2. Cable Trench and crossing 3. Complete Drains system including RCC slab cover 4. Site grading with earth filling by borrow pit earth including compaction and leveling etc all to complete for the present bay extension work 5. Crushed rock surfacing including laying of sand and plastic 6. Concrete for protection work. Please confirm	confirmed.
27	Volume III, Bid Price Schedule Schedule 1 (Part 1) ,Part-C, Civil work,Ghorahi Substation : AND Volume III, Bid Price Schedule Schedule 1 (Part 1) ,Part-C Civil work, Khungri Substation		As per the referred clause, "132 kV Double circuit dead end galvanized lattice tower as per employer provided tested drawings" is in the bidders scope. However tower drawing is not attached in the tender documents. Please provide the same	Tower design drawing is in bidders scope.
28	Volume-IIB, Section-1, Project Specification Requirement, Clause-2.5, Khungri Substation General Layout Drawing AND Volume III, Bid Price Schedule Schedule4a,1 (Part 1), Part-D Civil work, Khungri Substation		As per the referred layout, Gravel road is shown (880.85 sq. m.) near the entrance. However in price schedule there is no item for gravel road. Please provide the line item	Not in the Scope.
29	Volume-I, Section-1, Instruction to bidders, Clause-21.3		Bid security from an eligible country is acceptable. Accordingly, we understand that Bank Guarantee towards Bid Security issued from reputed source in India (Not having branch in Nepal) is acceptable to NEA. Counter Guarantee from Branch of Bank in Nepal is not required. Please confirm.	Your understanding is ok.
30	Volume-I, Section-1, Instruction to bidders, Bidding form, Bid security		The bid security format provided allows banks to issue open ended bid security where validity of the bid security cannot be ascertained. So we request you to allow the bidder / Bank may explicitly mention the date in closed bracket after " " expiration of bidders bid.	Bid validity is mentioned in IFB. You are required to submit bid security up to that date or beyond.
31	Volume-IIA , Section -7, INSULATOR AND ACCESSORIES,Table 7.1; ANNEXURE 7-B, BASIC INSULATION LEVELS OF INSULATORS, Clause-2.6.2, Basic Insulation Levels Volume IIA,SECTION - 2 GENERAL TECHNICAL CONDITIONS & Clause-11.9, Schedule A.9 LONG ROD POLYMERIC INSULATORS		Please confirm the Rated Lightning Impulse withstand (dry) as 950kVp as applicable for the project requirement.	Confirmed.



32	Volume-IIA , Section-11, Technical Schedule, Schedule A3 & Section-4, Clause 4.3.		The range of MSL for the proposed TL is given as 900m-2600m. Please confirm whether, the electrical clearances provided in , Section 4, clause 4.3 and minimum clearances mentioned in schedule A3, are calculated based on the increased MSL.	The variations of altitudes of the proposed 132 kV transmission line ranges from approximately 614 m above MSL to approximately 1845 m above MSL
33	Volume-IIA , Section-11, General technical condition, Clause-2.6.3		The clause mentions that "....Ice load shall not be considered for design of towers.". However in Section 4, Cl:4.5.3, sag tension tabulation also includes ice loading. Please confirm if ice loading to be considered fro deisgn of towers. If so, please provide the thickness and desity of ice , temeparature and wind pressure to be considered for ice loading.	Ice load is nill in Cl:4.5.3. Please go through documents in detail.
34	Volume-IIA , Section-11, Technical Schedule, Schedule A4.		Design Parameters for design of DA type tower (suspension) are provided in the schedule. However, in Vol-III, Schedule No. 3: Design services, design of DA type tower and its foundations are not included. Hence, it is understood that, design of DA type tower need not be done at execution stage. Please confirm.	Refer clarification-1, SN-5
35	Volume-IIA , Section-11, Technical Schedule, Schedule A6.		Please confirm , if transmission line towers and their foundations has to be deisgned for seismic zone, since, IS 802-part 1/Sec1 and CBIP manual do not envisage the earthquake loadings.	Confirmed.
36	Volume-IIA , Section-4, Transmission Line Tower, Clause-4.6.5		In Schedule A6, factor of safety of conductors and ground wire based on UTS is given as 2.5. However, in section 4, Cl:4.6.5 , "....Provided that the ultimate tension under everyday temperature and 100% design wind pressure, or minimum temperature and 36% design wind pressure does not exceed 50% of the ultimate tensile strength of the conductor/ ground wire". Please confirm the FOS to be mainted for conductor and ground wire.	Refer clarification-1, SN-9
37	Volume-IIA , Section-4, Transmission Line Tower, Clause-4.9		The clause mentions that "....The special tower with deviation angle more than 60° or Leg extension greater than +9 meter and up to +18 meter shall be treated as DF Tower." Hence, under stand that, DF tower is to be designed with 60 to 90 deg devaition with maximum body extension of +18m . Leg extension combinations are not envisaged for DF tower. For extensions above 9m, design shall be done by considering reduces span. Please confirm the same.	Confirmed.
38	Volume-IIA , Section-5, Tower Foundation		In the clause, it is mentioned that, " The base slab in RCC foundation may be single stepped or uniform. The design of concrete foundation shall be done as per Limit state method of design given in IS: 456". In the typical drawings DWG012 , stepped foundations without chamfering has been indicated for 132kV Towers. Please confirm, if two stepped foundations, with chamfering can be considered for design if found to be economical.	Confirmed.
39	Volume-IIA , Section-5, Tower Foundation		Please confirm whether, foundation drawings with undercut shall be provided for Dry/wet/submerged fissured rock . The minimum size of undercut shall be 150mm. CBIP manual PB no:n 323 also, mentions regarding usage of undercut foundations. If undercut can be considered, please provide the angle of repose and unit weight of fissured rock to be considered in design.	Confirmed. Angle of repose and unit weight of fissured rock to be considered in design shall be taken from Soil Investigation which is in bidders scope.
40	Volume-IIA , Section-14, Tender Drawing, Tower Outline Drawing		In the drawings , it is mentioned that, " INCASE THERE IS LEG EXTENTION, THIS SECTION SHOULD BE AS BASIC BODY PART WITH GIRDER CONNECTION". Please confirm, if required leg extension arrangement from -3m to 9m, can be designed by connecting to basic body or normal tower without girder arrangement	This will be as per Bid documents.
41	Volume-IIA , Section-14, Tender Drawing, Tower Outline Drawing		Understand that, the outline diagram for 132kV tower is indictaive only. The dimensions and patterns shall be as per the actual calculations based on technical specifications/relevant codes/vendor details for conductor/OPGW/insulators. Please confirm.	Confirmed.
42	Transmission Line		Please confirm, if preliminary design documents pertaining to 132kV Towers are to be submitted along with the bid.	No need.
43	Volume IIB, Section-10, Substation Automation, Clause 10.3		Regarding Khungru substation automation system , the LDC facilities is Siemens Germany as per tender technical specification page No 307 clause 10.3 .But as per tender technical specification page No 307,the LDC facilities shall be SIMFENS, India .Please clearly.	You can provide any of two compatible to LDC system.



44	Volume III, Bid Price Schedule Schedule -4a, (Part 1) ,Part-C Civil work, Khungri Substation		We didn't find that substation steel structure in BOQ schedule 1, please clarify.	Refer carefully to the Volume III, Khungri substation, Schedule-1, (C) Civil Works.
45	Volume III, Schedule-4a, (Part 1) ,Part-D,Civil Works, khungri Substation		There is a 132kV dead end tower in BOQ, please clarify if it is used in Khungri substation or Ghorahi substation?	Obviously needed in the both substation.
46	Volume III, Schedule-4a, (Part 1) ,Part-A,Electrical Works, Clause-I, ERECTION & MISCELLANEOUS MATERIALS, 8- Air Conditioning, khungri Substation		The quantity of HVAC in the electrical list is not enough, and there is a lack of air conditioning in the guard room.Please clarify.	Please follow as per the BoQ. And air conditioning in the guard house is not in the scope.
47	Volume I, Section-03, Evaluation and Qualification Criteria, Clause 2.5, Subcontractor.		The Type test time requirement which in Volume I 2.5 Subcontractors is different from technical specification, please clarify which we shall refer.	Please follow as per the technical specification.
48	Volume IIB, Section 21, Substation equipment datasheet		Regarding VCB, CB, main protection relays, energy meters etc brand limited, please confirm the bidders may offer equipment/ Brands equivalent with regards to quality and performance substantiated with appropriate documents.	Please Refer Clarification-1, SN-2
49	Volume IIB, Section-02, General Technical Requirement & Volume IIB, Section 21, Substation equipment datasheet		As per TS HV BIL: 650kvp/275kvrms ; LV BIL: 170kvp/70kvrms. But as per datasheet HV BIL: 750kvp/325kvrms ; LV BIL: 250kvp/95kvrms. Please clarify which one is to be followed?	Please read this as HV BIL: 750kvp/325kvrms ; LV BIL: 250kvp/95kvrms.
50	Volume IIB, Section-02, General Technical Requirement, Power Transformer & Volume IIB, Section 21, Substation equipment datasheet, Power transformer		Creepage distance of bushing for 30MVA T/F. Data from TS & datasheet both are different. Please clarify which one is to be followed?	Please follow the data from Technical data sheet.
51	Volume IIB, Section-02, General Technical Requirement & Volume IIB, Section 21, Substation equipment datasheet		As per TS HV BIL: 170kvp/70kvrms ; LV BIL: 95kvp/28kvrms. But as per datasheet HV BIL: 250kvp/95kvrms ; LV BIL: 95kvp/28kvrms. Please clarify which one is to be followed?	Please read this as HV BIL: 250kvp/ 95kvrms ; LV BIL: 95kvp/28kvrms.
52	Volume IIB, Section-02, General Technical Requirement & Volume IIB, Section 21, Substation equipment datasheet		For 8MVA T/F, As per TS Oil/Wdg temp. rise: 35/40°C. But as per datasheet Oil/Wdg temp. rise: 50/55°C. Please clarify which one is to be followed?	Please read this as Oil/Wdg temp. rise: 50/55°C
53	Volume IIB, Section-02, General Technical Requirement & Volume IIB, Section 21, Substation equipment datasheet		For 8MVA T/F, As per TS vector group is Dyn11. But as per datasheet vector group is YNyn0. Please clarify which one is to be followed?	Please Refer Clarification-1, SN-1
54	Volume IIB, Section-02, General Technical Requirement & Volume IIB, Section 21, Substation equipment datasheet		For 8MVA T/F, As per TS constant ohmic type impedance pattern required. As per past supply history of our Manufacturers & recent quoted tenders for the same rating, NEA doesn't asking for the ohmic pattern. Please clarify whether it is required in 8 MVA Transformer or Not.	It is not required but it should be compatible with the system operation to meet requirement.
55	Volume IIB, Section 13, Power and control cable		Earth fault requirement is not clear, in Tech spec system Max. short ckt is mentioned of 31.5 kA for 3 sec. Please provide the fault current rating & duration requirement.	Please consider the rating compatible with the system requirement during detail engineering.
56	Volume IIB, Section 13, Power and control cable		In Tech Spec FR, FRLS & LSOH are mentioned. Kindly clarify which outer sheath to be considered.	Please consider any of the mentioned type.
57	Volume IIB, Section 13, Power and control cable		Armouring Details not clarified. Please clarify the same.	Please consider the type compatible with the system requirement and as per standards.
58	Volume IIB, Section 13, Power and control cable		Type of radial water barrier to be considered in cable design. Please provide the type of barrier to be considered.	This should be as per standards.
59	Volume IIB, Section 13, Power and control cable		Specific fault current required. Please provide the same	31.5 KA for 3 sec
60	Volume IIB, Section 11, Battery and Battery Charger		1. Continuous load with duration 2. Momentary load with duration. Please provide the required details in with Battery requirement.	Bidders need to propose subject to approval during detail engineering.

Note: Some queries irrelevant to this bidding has been avoided in this Clarification. Bidders are advised to make site visit for getting site related information rather than putting queries. For Ghorahi SS, General layout drawing is attached with this clarification-2. Please refer this.

