



# Nepal Electricity Authority

(Nepal Government Undertaking)

Project Management Directorate

Marsyangdi-Kathmandu 220kV Transmission Line Project

Matatirtha, Kathmandu  
Phone: 01-5164143  
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Ref No 335



July 08, 2016

To,

All Prospective Bidders,

Subject: ICB-PMD-MKTLP-072/073-03:Design, Supply, Installation and Commissioning of 220 kV Air insulated Substation (AIS) in Matatirtha, Kathmandu and 220kV Gas Insulated Substation (GIS) in Markichowk, Marsyangdi  
Clarifications No.-2

Dear Sirs/Madams

In reference to the captioned Tender published on 20 May 2016, we hereby issue Clarification No.-2 [Clarifications No. 1 to 52, 09 pages] pursuant to ITB Sub-clause 7 and 8, Vol-I of the Bidding Document.

You are requested to acknowledge the receipt of the addendum.

Encloses:

1. Clarification No.-2 (Clarifications No. 1 to 52, 09 pages)

Sincerely Yours,

Tara P. Pradhan  
Project Manager

# NEPAL ELECTRICITY AUTHORITY

## Project Management Directorate

### Marsyangdi-Kathmandu 220 kV Transmission Line Project

**ICB-PMD-MKTLP-072/073-03: Design, Supply, Installation and Commissioning of 220 kV Air insulated Substation (AIS) in Matatirtha, Kathmandu and 220kV Gas Insulated Substation (GIS) in Markichowk, Marsyangdi**

#### CLARIFICATION No.2 - RESPONSE TO PRE-BID QUERIES

S.No	Clause No.	Bidder's Queries	NEA's Clarification
1.		Please confirm that contract price is not including tax fee.	The contract price is exclusive of Custom Tax and VAT.
2.		If type test report of main equipment over 10 years, can it be accept? Please confirm.	Bidder to quote as per requirement of bidding document.
3.		When can the substation be provided with electricity? Please clarify.	Please refer to the Vol-I, Section-3, 1-Evaluation, 1.2.2 Time schedule for the construction period of the project.
4.		Is fibre - optical for electric fence dispatching system on site? Please confirm.	Bidder to quote as per requirement of bidding document.
5.		Please confirm ratio of local labor to foreign labor.	It is under the responsibility of Contractor.
6.		Do Company registration documents need to be notarized? Please clarify.	Please also follow the Vol-I, Section-2 Bid Data Sheet (BDS), C-Preparation of Bid, ITB 11.2(k).
7.		If the test report including 4 items of instrument transformers over 5 years, can it be accept? Please confirm.	Bidder to quote as per requirement of bidding document.
8.		Please provide topographic map of project.	Please follow the Response No. 102 and 339 of Clarification No.-1.
9.		Bid security will be issued by a Chinese bank, do it need to re-issued by a Nepal bank? Please confirm.	Bid security issued by foreign bank not needed to be counter guaranteed by Nepalese bank. Please also follow the Response No. 63 of Clarification No. -1.



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10.	Volume I, Sec I, Instruction to Bidders Clause no 7	Estimated distance between Existing 132 kV Substation and new 220/132 kV Transformers bay.	Design & development of layout in scope of successful bidder during detailed engineering based on provision of bidding documents.
11.	Volume I, Sec I, Instruction to Bidders Clause no 19.1	Please clarify on the currency of payment in the Employer's country related to design, installation and other services.	Please also follow the Vol-I, Section-2 Bid Data Sheet (BDS), C-Preparation of Bid, ITB 19.1.
12.	Volume III Price Schedule Sch-1	The rated current for 145kV CT is 800A, while in the Table-IIB and Table-IIC of "Requirements of 145kV CT", the rated current are 1250A and 1200/600A, please confirm which one is correct?	Please refer Amendment No.1.
13.	In 2.2.1 of Chapter 1- "Project Specification Requirement"	(a) ..... 132kV, XLPE insulated EHV cable, single core, Copper conductor cable of suitable rating along with cable terminations at both end for termination of 132kV side of transformer on existing bays. But there is no such EHV cable in the price schedule. Please confirm who will supply such cable and cable terminations?	Please refer Vol-III-Sch-1, Sch-2 and Sch4(a), I-A Extension of 220/132/333kV Matatirtha substation Extension, Part B Contractor Assessed Quantities, A-Erection Hardware, A1.
14.	In 2.2.1 of Chapter 1- "Project Specification Requirement"	(g) Complete Fire protection system. Hydrant & HVW spray system shall be designed as per technical specification meeting the present requirement and provisions for 220kV transformers in future. But no any equipment in the price schedule, Please confirm who will supply "Hydrant & HVW Spray system"?	Complete fire protection system ( i.e. Hydrant system & HVW spray system) is under present scope of work. Please refer BPS items at Part B Contractor Assessed Quantities, B-Fire Protection System. Vol-III-Sch-1, Sch-2 and Sch4(a), I-B for Matatirtha substation & Marsyangdi Substation.
15.		The electrical work scope for 132kV side of 220kV GIS Substation Marsyangdi are as follow: i. 132 kV Transformer bay : 1(one) number bay for bank of 3X53.33MVA, 220/132/33kV, 1-phase autotransformers bank and one spare unit of transformer with suitable connection arrangement for spare transformer. ii. Only gantry structures for two no. of future line bays and two future transformer bay. There are no other works for 132kV area. Please confirm it.	In existing 132 kV switchyard, space for two future line bays to be kept. Thereafter, Transformer bay (Under present scope) and one future Transformer bay ( for future transformer ) to be kept. However, Bus work for above four bays is under present scope. Structure required for bus work for all four bays is under present scope of work. Bidder is to quote as per BPS.
16.		Relaying CTs shall be accuracy class TPS in Table-IIA ~ In Table -IIE, but it is accuracy class PS in Drawing of No.000-000-T-E-L-28. Which one is correct?	All relaying CTs shall be of accuracy class TPS as per IEC 60044-1 as per Technical specification.



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17.		There are some 72.5kV equipments in Sch-1 of the Price Schedule, but no one in the single line diagrams. Where is problem?	Please refer reply at S. No. 3 of Clarification No.-1.
18.		There are Twonship quarter (B,C,D-type) of Illumination System in Sch-1 of Price Schedule, but no description about it in Chapter 6: Lighting System.	Please refer clause no 1.1.6, 1.1.7 and other relevant clause of Chapter Lighting system and refer to the reply at S.No. 239 of Clarification No 1. Design & development of drawings are under the scope of successful bidder during detailed engineering.
19.		There are not 33kV equipments and 33kV/400V transformer in the Single Line diagrams.	Please refer reply at S.No. 5 of clarification no 1.
20.		How many existing devices to connect SCADA system? It is necessary existing substation diagram or description about it.	Bidder to quote as per requirement of bidding document.
21.		220kV line protection configuration is different between the Price Schedule and Specifications. Which one is correct?	Please refer reply at S.No. 9 of clarification no 1.
22.		Where shall 72.5kV equipment be used? There are no such voltage classes within the two substations to be expanded.	Please refer reply at S.No. 3 of clarification no 1.
23.		As for Item No. 7 and Item No.10 in table 2.5 (Subcontractors) in Section 3 of Volume I, they are both SAS with separate different requirements; for this point we wish you could clarify, please.	Please follow the No. 7 for qualification of SAS manufacturer. Please, also follow the Reply No. 24 of the Clarification No. 1.
24.		The rated current of 2400A of 220kV GIS equipment in the bidding document is non-standard parameter, please check to confirm!	Bidder to quote as per requirement of bidding document.
25.		As for the list of preferred (shortlisted) make (01-03 List of preferred make Annexure-III, 01-01 Section Project, Volume II), it is preferred that the equipment be supplied from the manufacturers such as ABB, SIEMENS and so on.  If the origin of country of the equipments such as ABB or SIEMENS is from China, we would like to know whether it is accepted or not?	Acceptable provided that the manufacturer has fulfilled the evaluation and qualification criteria as mentioned in the Vol-I, Section 3, 2.5-Subcontractors.
26.		Shall the existing substations be equipped carrier wave communication or optical fiber communication ?	Optical fiber communication .





27.		Whether have the existing substations been configured the carrier wave communication or optical fiber communication equipment?	Optical fiber communication equipment.
28.		Whether have the optical fiber communication network been built at the local area ?	Yes
29.		Whether have the electric power dispatching center been built at the local area ?	Yes
30.	<b><u>Matatirtha Substation:</u></b>	The land for 220kV switchyard area is outside the boundary wall of existing 132kV Substation. The land is covered with paddy field in numerous steps and living residential accommodations. Kindly ensure / confirm that the land for 220kV switchyard area is being acquired by Nepal Electricity Authority (NEA) and will be ready for site mobilization immediately after the award of contract to successful bidder.	The land has been acquired by NEA will be ready for site mobilization immediately after the award of contract to successful bidder.
31.	“	As per Clause 2.1.1 of Chapter 1, Project Specific Requirement, Volume-II, 132kV two line bays are existing (Currently used for charging of Upper Trishuli 3A Hydro project 220kV Line on 132kV Voltage level), but during the site visit on 20th June 16 it was observed that there is no existence of 132kV Line bays for charging Upper Trishuli 3A project. If the extension work of 132kV Line bays for above transmission line is awarded in other contract, kindly ensure that any delay in completion of above 132kV line extension bays after the award of subjected tender / contract will not be accountable to successful bidder. The augmentation work is involved in existing 132kV substation in present scope of above bid invitation.	Your understanding is generally in order. The expansion work in 132kV switchyard for 2 nos. of 132kV line bays (which shall be used for 220/132kV transformers under this contract) is in construction phase. The Contractor of Upper Trishuli 3A project is about to start the construction work.
32.	“	The approach road to existing 132kV Matatirtha substation is not in transportable conditions for substation major equipment i.e transformers.	The Contractor shall be responsible to select and verify the route, mode of transportation and make all necessary arrangement with the appropriate authorities for the transportation of the equipment. The dimension of the equipment shall be such that when packed for transportation, it will comply with the requirements of loading and clearance restrictions for the selected route. It

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			<p>shall be the responsibility of the contractor to coordinate the arrangement for transportation of the transformer/equipments for all the stages from the manufacturer's work to site. The contractor shall carry out the route survey along with the transporter and finalise the detail methodology for transportation of transformer and based on route survey; any modification / extension/ improvement to existing road, bridges, culverts etc. if required, shall be in the scope of the bidder.</p> <p>Transformer shall also be fitted with sufficient number of Electronic impact recorders (on returnable basis) during transportation to measure the magnitude and duration of the impact in all three directions. The acceptance criteria and limits of impact, which can be withstood by the equipment during transportation and handling in all three directions, shall not exceed "3g" for 50mSec (20Hz) or as per contractor standard, whichever is lower.</p> <p>Please also follow the Vol-I, Section-7 General Conditions of Contract (GCC), 21.-Procurement, 21.3- Transportation.</p>
33.	<b><u>Markichowk Substation:</u></b>	The substation embarkation with boundary wall for substation compound is already completed by NEA, we hereby understand that the land for Markichowk substation is completely acquired by NEA and will be ready for site mobilization immediate after the award of contract / tender.	Your understanding is generally in order.
34.	"	The existing 132kV substation is in its early under construction stage with a few foundations, structure erection and partial control room building construction. Kindly note that any delay in completion of 132kV substation after the award of subjecto tender / contract will not be accountable to successful bidder. The augmentation work is involved in existing 132kV Substation.	Bidder will not be accountable for delay on account of completion of existing/under construction 132 kV substation portion which is not under present scope of work.





35.	According to clause 4.37 of Technical specification-chapter 21 GIS	It is required that contractor shall provide adequate number of UHF sensors in the offered GIS for detection of partial discharge as per IEC60270. Further UHF sensors shall necessarily be provided in close proximity to VT compartments. In terms of PD sensors in bidding phase, how to arrange PD sensors in GIS? And how many sensors need to provide by GIS supplier in total? Or just prepare interface?	Location and number of PD sensors shall be decided based on provision of bidding documents. Design & development of necessary drawings & documents in accordance to provision of bidding documents are under the scope of bidder.
36.	As per BOQ GIS and layout	1 set of 245kV SF6 GIS auxiliary bus to connect spare unit of transformer with air bushing need to be provided. As to this auxiliary bus, there are no specific details about connection with GIS bay in bidding documents. Please clarify because of cost related.	Please refer SLD drawing & S.No. 6 of Amendment No 1 for auxiliary Bus requirement.
37.		In this tender documents, NEA enclosed the basic value of each equipment in Volume II, which is used for technical designing only. However, the Technical Particular Guarantee (TPG) which the bidder should respond, is NOT separately mentioned in the tender documents as in other tenders. Commonly, TPG or the Technical Compliance Sheet is the core part of technical proposal, therefore, for the purpose of submitting integrated technical & commercial proposal without less deviation, we must prepare TPG format of each main equipment ourselves without any detailed value and requirement from this tender. Hence, our manufacturers and we are consuming vast amount of time on this preparation work in compliance to your general technical specification.	Please refer to the Reply at S. No. 278 of Clarification No.-1
38.		Soil report is not attached in your tender documents. As we inspected during site visiting, the site and soil condition is not the best enough since it is with abundant stones and rocks in the Markhichwok, Marsyangdi S/S. Therefore, to perfectly prepare this bidding, soil investigation has to be executed by ourselves which will take some additional time.	Please refer to the Reply at No. 149 of Clarification No.-1



39.		During site visit of Matatirtha, we found that the road from Kathmandu to site is narrow with citizen's houses located both sides of the streets. In addition, several part of road constructed as right angel. Therefore, we consider that the road condition is the best with the general transportation requirement of power transformer because the extralong truck will be difficult to pass such street. Hence, we are required to spend some time to search the higher qualified transportation subcontractors for their proposal and quotation.	Please refer to the reply at S.No. 32 above.
40.		In your Clarification issued on June 26th, at least 351 changes & deviations of bidding documents are explained by you. In order to review and update the technical & commercial proposal, additional time on studying and reviewing these clarification points and associated part of tender documents. Furthermore, we will send your clarification to each of our manufacturers and subcontractors for their updated commercial & technical quotation accordingly. This effort takes time more than 2-3 weeks. All these changes have to be incorporated into the Bid.	Bidder to quote as per requirement of bidding document.
41.		Please provide the exact location of two Substations like the latitude and longitude.	Markichowk S/S (Marsyangdi S/S) – 27.8979°N 84.5117°E Matatirtha S/S– 27.6701°N 85.2283°E
42.	Volume II, Chapter-1, Project Specification Requirement Clarification no 01. Sl.No.01 Price Schedule	As per referred clarification, separate DG room is to be provided. We trust that there is no requirement of DG room building as there is no item in price schedule. However if required kindly provide the specification for DG building i.e. type of Building (RCC or steel), size and finishes.  Also include the item for DG Room building in price schedule.	Clarification regarding DG set building i.e –“As per bid requirement a separate DG room is required to be built” is stand replace by following statement “Please refer clause no 1.6.1.1 of Chapter 11 (DG Set), Technical specification. Separate DG set building is not envisaged.”

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43.		Provide CT ratio of existing 132kV current transformer for busbar protection at matatirtha substation so that the Proposed CT parameters shall be matched with existing CT parameters.	Please refer to Amendment No.1
44.		Provide Make/Type and place of manufacture for remote control station.	Bidder to quote as per requirement of bidding document.
45.		As per SLD, Drawing, C/ENGG/NEPAL/MARSYANGDI (Markichowk)/SLD/01 dedicated supply of 220kV Busduct for 220kV future transformer bay. Hence, please confirm the supply of Bus duct till future transformer location is in scope or not?	Bidder to quote as per requirement of BPS and bidding document.
46.		Please confirm that the fence is to be considered for switchyard only or whole plot area.	Complete plot area will have boundary wall. Requirement of fence will be decided based on layout and same shall be decided during detailed engineering. Bidder is to quote as per BPS & provision of bidding documents,.
47.		220kV Outdoor CB clause 15, page 10 of 15 specifying Rated short circuit current as 40kA/50kA and Rated short circuit making current as 100/125kAp and short time current as 40kA/50kArms. Whereas general Technical Particulars is specified with 40kA for short circuit current and short time current. Hence please clarify the discrepancy.	For 220 kV, short circuit level is 40kA for 1 Sec. Accordingly bidder is to quote as per provision of bidding.
48.		We request you to confirm 220kV GIS main busbar, line & transformer bays are either phase segregated or not.	Please refer clause no 2.2.2.1.1 of chapter1 (PSR)
49.		We request you to provide soil resistivity and accordingly will decide earthing conductor sizing.	Please refer the Reply No. 98 of Clarification No.-1
50.		We request you to provide protection single line diagram for transformer bay and line bay.	Design and development of drawings are under present scope of work and same shall be finalized during detailed engineering.

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51.		As per scope of work page, Chapter-1, page#4 of 28 calls for 7 (seven) numbers of 53.33MVA, 220/132/33kV, 1-phase auto transformers. 132kV XLPE insulated EHV cable, single core copper conductor cable. Hence we request you to provide conductor sizing.	Based on requirement (according to Transformer rating) conductor size shall be decided.
52.		We have forwarded Equipment Enquires to various manufacturers & all have sought one month Extension in submitting their quote. In this view we request you to extend the bid submission date by one month.	This will be as mentioned in the Bidding documents.


