Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

CLARIFICATION 2 ISSUED BY NEPAL ELECTRICITY AUTHORITY

SN	Item	Specification Description	Clarification	NEA's Response
1	General Technical Question: Earthing and lightning protection		Could NEA kindly provide us the soil resistivity of Lapsephedi and Changunarayan S/S, and pls Earthing and lightning protection design documents of Teku and Suichatar S/S.	IT has been enclosed in previous clarification No 1
2	General Technical Question: Fire Protection System		Please confirm the scope of supply for the "Up-gradation of Teku Substation" : 1. Fire Hydrant System- Tapping for which should be taken from pre-existing Fire Fighting Mains. 2. Fire Detection & Alarm System- Supply and installation of detection and alarm system for the upgraded buildings and Integration with existing detection and alarm system. 3. Portable and Wheeled / Trolley Mounted Fire Extinguishers- For the Upgraded Buildings and Instruments. Pls also provide the following drawings of Teku S/S. a. Transformer detail drawing b. Protected buildings' floor plans c. Details of existing fire protection systems	1. No fire fighting system in Teku. The proposed system is new. 2. Confirm 3. Confirm as per BPS Regarding the drawing ofTeku, available drawings will be ptovided to sucessful bidder. Layout, SLD has been provided in the bid document.
3	Volume-III, Schedule No.1 : Plant and Equipment including Mandatory Spares to be supplied from abroad, PART 2 132/11kV Changunarayan S/S C 145kV	1、The quantity of "145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]" in BOQ is two. 2、According to given drawing(drawing page 4 of 59: 132/11kV Changunarayan S/S Single Line Diagram) from technical specifications, the quantity of is one, and another bay of "145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]" was not connected by solid line which means this bay was not connected with system .	Pls clarify which quantity is right ? Bidder should quote 1 bay of "145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]" or two ? And what bidder should do with the "145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification]" which not connected with any other bay ?	Please quote as per BPS

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4	Equipment,1.3 145kV, SF6 GIS ICT feeder bay Module for Transformer [Module description as per Technical Project specification], and Drawings Page 4 132/11kV Changunarayan S/S Single Line Diagram. and Volume 2, CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR) 3. SCOPE OF WORK,	1、According to given drawing(drawing page 4 of 59: 132/11kV Changunarayan S/S Single Line Diagram) from technical specifications, and BOQ, the needed quantity of "145kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]" is two. 2. According to newly issued Techinial Specifications CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR) 3. SCOPE OF WORK, B. 132/11 kV Changunarayan (new) with the following bays (132 kV GIS and 11 kV Inddor) as per Single Line Diagram & as indicated in BPS:. 1 nos. 132 KV bays for 1 x 31.5/45 MVA, 132/11 kV, 3 Phase Transformers. 6 nos. 132kV bays for termination of 132kV Transmission line. 1 no. 132kV Bus Coupler bay. Not mentioned "145kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]" in Scope of work	Pls kindly clarify which quantity is right ? Bidder should quote 2 no. "145kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]" or not ?	Please quote as per BPS
5	Drawings Page 7 of 59, 132/11kV 132/66/11kV TEKU Substaton Single Line Diagram. Volume-III，Schedule No.1 : Plant and Equipment including Mandatory Spares to be supplied from abroad,PART 3 132/11kV Teku Substation upgrade（132GIS & Indoor）and Volume 2, CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR) 3. SCOPE OF WORK,		Pls kindly clarify for Teku Substation, the bidder should provide Cable End GIS bay or SF6/Air Bushing GIS bay, or Bidder should dismantle the existing Cable End GIS bays and upgrade the original GIS bays into SF6/Air Bushing Connecting GIS ? If so, pls kindly inform us how many bays need to be upgraded and also pls provide the original GIS brand. Also, Does NEA authorize the successful bidder to dismantle or upgrade original GIS equipment for EPC projects ? Whether the successful bidder should ask for original GIS manufacturers' permission to upgrade their products ?	The cable end GIS bays are envisaged for Line at Teku Substation. But for connection with the outdoor transformer, the bus duct connection is required. So, SF6 to Air Bushing shall be installed. The cost of busduct within the GIS hall is included in the GIS. Also, the necessary termination shall be ptovided, which is included in the cost of cables.
6			Pls kindly provide how long the branch GIS busbar needed to provide ?	To be decided during DDE
7	General Technical Question TEKU Substation	Accordding all issued given documents, there were no specific detail for original GIS detail (such as diagram) The bidder need the original manufacturer to provide their drawings to perform further upgradation work, without all the connecting details, it would be hard to quote the price of GIS upgradation work.	Pls kindly provide the docking interface detail drawings of teku 66kV S/S, without detailed drawings may cause further troubles during comissioning process.	Shall be provided to sucessful bidder, if available. The make of the GIS are from Pingdingshan HV Switchgears, China (Type HB7-72.5), which we understand is currently owned by Pinggao Group.

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8	Volume-III, Schedule No.1 : Plant and Equipment including Mandatory Spares to be supplied from abroad,PART 3 132/11kV Teku Substation upgrade (132GIS & Indoor) and Volume 2, CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR) 3. SCOPE OF WORK,	1, According to BOQ, item B2 72kV GIS Equiptment 1.02 of Teku s/s BOQ shows 72kV,SF6 GIS ICT bay moudule, bidder should quote 2 sets GIS bays, but according to given drawings only showed one 66kV ICT bay. According to given PROJECT SPECIFICATION REQUIREMENT, SCOPE OF WORK C. 66 kV Transformer bay: 1 (One) number bay 132/66kV, 50/63 MVA 3-phase Outdoor transformers need to be provided. 2. According to BOQ, item B2 72kV GIS Equiptment 1.03 of Teku s/s, bidder should provide 4 sets 145kV,SF6 GIS Line bay moudule, ; but according to given drawings only 3 bays of 66kV line. 3. According to BOQ, item C 1.0 b of Teku s/s, 2 sets of 66kV line control&protection panel with distance relay/differential relay should be provided, but according to item B2 72kV GIS Equiptment 1.03 145kV,SF6 GIS Line bay moudule ,4 sets ; It's not corresponding, please clarify.	Pls clarify according to issued documents, the bidder should take which one as right? Drawings? BOQ? Or given PSR? Also pls clarify which whether the quantity of C&R panel with distance relay/differential relay should be same as B2 72kV GIS Equiptment 1.03 145kV,SF6 GIS Line bay moudule	Please quote as per the BPS. Regarding quantity of BPS, please quote as per BPS. The new 66kV GIS is to be connected with existing CRP of Easun Reyrolle, India make. The bidder is required to provide all auxiliry relays, accessories for connection with the existing CRP and its sucessful operation. The CRP with Distance / differential relay shall be proposed as per the design submitted by the bidder considering the line length, relay characteristics, communication channel etc. If differential relay is deemed to be required, then the relay in the other end of the line shall be also installed.
9	General Technical Question: Suichatar Substation		Pls kindly inform us which SCADA system brand is currently runing in Suichatar substation	There is no SAS currently. GE India make SAS will be installed within a year
10	General Technical Question: Suichatar Substation		According to given all documents, we could not find main wiring diagrams for Suichatar substation.please kindly supply the main wiring diagrams which should also mention the scope of supply.	Will be provided to the sucessful bidder
11	General Technical Question 220/132/11kV GIS Lapsephedi Substation, 132/11 kV Changunarayan S/S, Suichatar Substation Extenson (132V AIS Outdoor)		Pls kindly provide current using brand of the line protection at other end in Lapsephedi and Changunarayan S/S	Will be provided to the sucessful bidder
12	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide Survey drawings of proposed Changunarayan S/S,	The reference value for ERT and Soil test report has been already provided in clarification 1.
13	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide Existing Substation layout plan. elevation, overall SLD and electrical layout of control building existing 66/11kv Substation at Teku.	Will be provided to the sucessful bidder

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14	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide Survey drawing of 132kv GIS area at Teku Substation.	Available drawings are attched with bid document. Other available drawings will be provided to the sucessful bidder
15	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide Switchyard layout plan & elevation. overall SLD and electrical layout of control building at Suichatar existing Substation.	Available drawings are attched with bid document. Other available drawings will be provided to the sucessful bidder
16	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide geotechnical investigation report for Changunarayan and Teku substations.	Available drawings are attched with bid document. Other available drawings will be provided to the sucessful bidder
17	General Drawing and information for 4 substations		Since it's impossible for foreige bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide Soil resistivity values at Changturarayan, Teku and Suichatar substations.	Refer above.
18	General Drawing and information for 4 substations		Since it's impossible for foreign bidder to do any site survey in Nepal before 30th June due to local lockdown and international airplane restriction, in order to provider competitive offer, we kindly ask NEA to provide C. Teku substation: Existing Switchyard layout, Cable Trench layout, Earthing & Lightning Protection layout of 63/11kV Teku substation. D. Suichatar substation: Existing Switchyard layout, Cable Trench layout, Earthing & Lightning Protection layout, Control Building Layout and SCADA & Telecommunication Scheme of 132kV substation part.	Refer above.

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

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CLARIFICATION 2 ISSUED BY NEPAL ELECTRICITY AUTHORITY

S. No.	Substation	Volume	Sec/Chapter	Clause No. / Item No.	Bidder's Queries	NEA's Response
19	Lapsephedi Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. E.1 & Dwg. No. C/ENGG/NEA/ LAPSE/SLD/01	145kV SF6 GIS Spare Line feeder bay module is not considered in Item No. E.1 of Price Schedule No. 4A (Installation and Other Services). In the Single Line diagram of 220/132/11kV Lapsephedi GIS substation, it is shown that one (1) no. 145kV SF6 spare bay module is in present scope. Kindly mention the actual requirement.	Please quote as per BPS
20	Lapsephedi Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities)	Item No. F.1.0	6 nos. 9kV Surge arrester (1 ph.) is mentioned in Item No. F.1.0 of Price Schedule No. 4A (Installation and Other Services). But, 3 nos. 9kV SA is required at 11kV Side of 132/11kV Power Transformer and 6 nos. 9kV SA is required at 11kV Side of 11/0.4kV LT Transformer). Hence, the actual requirement is 9 nos. of 9kV Surge Arrester. Please confirm.	Please quote as per BPS. The remaining LA will be used for the outgoing lines where required.
21	Lapsephedi Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Chapter 1: Project Specific Requirement (PSR)	Item No. G.1.0 & Cl. No. 3.A & Cl. No. 4.1.7	As per Item No. G.1.0 of Price Schedule No. 4A (Installation and Other Services), 11 kV Indoor VCB Switchgear is comprising of the following modules : i.11kV 2500A Incomer : 2 nos. ii.11kV 1250A Outgoing : 6 nos. iii.11kV 2500A Bus coupler : 1 no. As per Cl. No. 3.A of Chapter 1–Project Specific Requirement, "11 kV Indoor Switchyard Panels for 1 no Transformer bays, 2 nos. LT Transformer bays and 1 Bus section Bay. Outgoing Panel- 8Nos" is mentioned. Again, "MV Indoor Switchgear for 2 no. Transformer Incomer bay 132/11kV, 6 nos. Feeders bays, 1 no. Bussection" is mentioned in the Cl. No. 4.1.7 of Chapter 1– Project Specific Requirement. Kindly clarify the actual requirement.	Please quote as per BPS
22	Lapsephedi Substation	Bidding Document – Volume II	Tender Drawings : Single Line Diagram & Chapter 1 : Project Specific Requirement (PSR)	Dwg. No. C / ENGG / NEA / LAPSE / SLD / 01 & Cl. No. 3.A	As per Single Line diagram of 220/132/11kV Lapsephedi substation, it is shown that 630kVA, 11/0.4kV LT transformer bays are feed from "11kV Switchyard and 11kV Line (Lamosanghu)". As per Cl. No. 3.A of Chapter 1–Project Specific Requirement, 2 nos. LT transformer module should be considered in the new 11kV Indoor Switchboard. Please mention whether the 2 nos. LT transformer bays will be feed from the new 11kV Indoor Switchboard.	Confirm
23	Lapsephedi Substation	Bidding Document – Volume II & Bidding Document – Volume III	Tender Drawings : Single Line Diagram & Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities)	Dwg. No. C / ENGG / NEA / LAPSE / SLD / 01	11kV Isolator and Horn Gap fuse are considered in the 11kV Side of 630kVA, 11/0.4kV LT Transformer bays as per Single Line diagram of 220/132/11kV Lapsephedi GIS substation. But, the quantity of 11kV Isolator and Horn Gap fuse are not considered in the Price schedule. Kindly mention the actual requirement.	Please quote as per BPS.

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24	Lapsephedi Substation	Bidding Document – Volume II & Bidding Document – Volume III	Chapter 1 : Project Specific Requirement (PSR) & Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities)	Cl. No. 4.1.5 & Item No. I.1 & I.2	"Control and Relay panels including Bus Bar Protection for 220 kV and 132 kV Double Bus Bar Switching Scheme" is mentioned in the Cl. No. 4.1.5 of Chapter 1– Project Specific Requirement. But Bus Bar protection panel is not considered in 220kV System and 132kV System as per item No. I.1 & I.2 of Price Schedule No. 4A (Installation and Other Services) respectively. Please clarify whether 2 sets of Bus Bar Protection panels for 220kV System and 132kV System can be considered in the present scope of work.	Bus bar protection is envisaged. Please refer earlier clarifications. The busbar protection system is considered as part of the Buscoupler Control and Relay Panel. Please quote and provide the facilities as required.
25	Lapsephedi Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. I.1.1.2 & I.2.2.2 & Dwg. No. C / ENGG / NEA / LAPSE / SLD / 01	As per Item No. I.1.1.2 of Price Schedule No. 4A (Installation and Other Services), 2 nos. Line Control and Protection panel is considered for 220kV Line Bays. As per Item No. I.2.2.2 of Price Schedule No. 4A (Installation and Other Services), 2 nos. Line Control and Protection panel is considered for 132kV Line Bays. We understand that as per Single Line diagram of 220/132/11kV Lapsephedi GIS substation and other items mentioned in Price Schedule No. 4(A), the installation of the spare feeder of 220kV & 132kV GIS is considered in present scope of work. Kindly clarify whether the quantity of Line Control & Protection panel for 220kV & 132kV spare line bays can be considered in the present scope of work.	Please quote as per the BPS
26	Lapsephedi Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Chapter 1 : Project Specific Requirement (PSR)	Item No. J.1.4 & Cl. No. 3.A & Cl. No. 4.1.7	For Substation Automation System, 7 nos. 11kV Indoor Switchgear panels are considered as per item No. J.1.4 of Price Schedule No. 4A (Installation and Other Services). As per Cl. No. 3A of Chapter 1–Project Specific Requirement, 12 nos. 11kV Indoor Switchgear Panels (Incomer : 1 no; Outgoing : 8 nos.; Panel for LT Transformer: 2 nos.& Bus-Coupler : 1no.) are to be considered for Substation Automation System. Again, as per Cl. No. 4.1.7 of Chapter 1–Project Specific Requirement, 9 nos. 11kV Indoor Switchgear Panels (Incomer : 2 nos.; Outgoing :6 nos. & Bus-Coupler : 1 nos.) are to be considered for Substation Automation System. Please mention the actual requirement.	Please quote as per the BPS

CLARIFICATION 2 ISSUED BY NEPAL ELECTRICITY AUTHORITY

27	Lapsephedi Substation	Bidding Document – Volume II & Bidding Document – Volume III	Tender Drawings: General Layout & Chapter 1 – Project Specific Requirement (PSR) & Price Schedule No. 4(A) (Part - A:Owner Assessed Quantities)	Dwg. No. C /NEA / LAPSE / LAYOUT / 01 & Item No. Q.1.0 & Cl. No. 4.1.28.g	In the General Layout drawing of 220/132/11kV Lapsephedi GIS substation, the location of 11kV Outgoing Pole is not shown. NEA is requested to indicate the 11kV Outgoing Pole location in layout drawing for proper estimation of the length of 11kV Outgoing Cable and associate civil works. As per the Cl. No. 4.1.28.g of Chapter 1–Project Specific Requirement, "Foundation for structures of LM, 220/132kV Towers, equipment support structures, 11kV double pole structure and other equipments" is mentioned. We understand that the construction works for 11kV Outgoing Pole Structure are in bidder's present scope. But, no items (such as 11kV Isolators & 11kV LAs) for 11kV outgoing lines is not considered in the Single Line diagram of 220/132/11kV Lapsephedi GIS substation and Price schedule. Kindly confirm that the required items to complete the scope of work at 11kV outgoing lines can be considered in the present scope	The location of the 11kV poles will be near the substation boundary, which will be decided during DDE. All items required shall be included
28	Lapsephedi Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - B:Vendor Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. A.1.1.1 & Item No. A.2.2.1 & Dwg. No. C / ENGG / NEA / LAPSE / SLD / 01	Erection Hardware of 2 nos. 220kV Line Bays and 2 nos. 132kV Line bays are considered in Item No. A.1.1.1 & A.2.2.1 of Price Schedule No. 4A (Installation and Other Services) respectively. We understand that as per Single Line diagram of 220/132/11kV Lapsephedi GIS substation and other items mentioned in Price Schedule No. 4(A), the installation of the spare feeder of 220kV & 132kV GIS is considered in present scope of work. Kindly confirm whether the erection hardware of spare bays is to be considered in the present scope of work.	Please quote as per BPS
29	Lapsephedi	Bidding	Price Schedule	Item No. E.3.2	Fire Protection system for 5MVA, 132/11kV Power	Fire protection system shall be designed for power Transformers as well as for the GIS hall See clarification 1 also.
30	Substation	Document – Volume III	No. 4(A) (Part - B: Vendor Assessed Quantities)		Transformer is considered in item No. E.3.2 of Price Schedule No. 4A (Installation and Other Services). We understand that due to some writing error, 5MVA is shown in place of 22.5MVA. Please confirm.	Corrected Data Sheet is attached
31	Lapsephedi Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part - C: Civil Works)	Item No. 10.3	Kindly provide NEA Standard layout (Plan & section)/ Dimensions for each of Township Quarters (B Type, C Type & D Type) for design and estimate of Civil works as well as electrical works (e.g. Illumination system).	Attached with clarification 1
32	Lapsephedi Substation	Bidding Document – Volume II & Bidding Document – Volume II	Chapter 14– General Technical Requirement, Civil Works & Price Schedule No. 4(A)	Section-14.2 (Part-I): General Information & Scope	In Cl. No. 1 of Section-14.2 (Part-I): General Information & Scope (Chapter 14–General Technical Requirement, Civil Works), "pile foundation work envisaged in 220 kV Lapsephedi substation" is mentioned. But, items regarding Pile foundation works have not been considered in Price Schedule No. 4A (Installation and Other Services). Kindly clarify whether Pole Foundation works are required in the Lapsephedi substation.	Pile foundation for Changunarayan is considered in BPS. Currently, pile foundation is not envisaged at Lapsephedi, however if pile foundation is required, the rate available in the contract will be applicable.

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33	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Price Schedule No. 1(A) & Chapter 1 : Project Specific Requirement (PSR) & Tender Drawings : Single Line Diagram	Item No. B.1.1 & Item No. B.1 & Cl. No. 4.2.5 & Dwg. No. C / ENGG / NEA / CHANGU /SLD / 01	615kVA, 11/0.4kV LT transformer is considered in item no. B.1.1 of Price Schedule No. 4A (Installation and Other Services). 630kVA, 11/0.4kV LT transformer is considered in item no. B.1 of Price Schedule No. 1A (Plant and Equipment including Mandatory Spares to be supplied from abroad) and Single line Diagram of 132/11kV Changunarayan GIS Substation. 315kVA, 11/0.4kV LT transformer is considered in Cl. No. 4.2.5 of Chapter 1–Project Specific Requirement. Please mention the actual requirement of 11/0.4kV LT Transformer.	The rating of transormer is 630 kVA.
34	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. E.1.1.3 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	6 sets of 145kV SF6 GIS Line bay module is considered in item no. E.1.1.3 of Price Schedule No. 4A (Installation and Other Services). As per Single line diagram of 132/11kV GIS Changunarayan substation, total 7 sets (6 sets for 6nos. 132kV Line bays and 1 set for 132kV Spare Line bay) of 145kV SF6 GIS Line bay module is shown. Kindly confirm whether the 145kV Line bay module for 132kV spare Line bay is to be considered.	Please quote as per BPS
35	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. E.1.1.4 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	2 sets of 145kV SF6 GIS ICT feeder bay module is considered in item no. E.1.1.4 of Price Schedule No. 4A (Installation and Other Services). As per Single line diagram of 132/11kV GIS Changunarayan substation, only one (1) no. 145kV SF6 GIS ICT feeder bay module is in present scope of work. Kindly clarify the actual requirement.	Please quote as per BPS
36	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings: Single Line Diagram & Chapter 1: Project Specific Requirement (PSR)	Item No. F.2.0 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01 & Cl. No. 13 : Specific Requirement	As per in item no. F.2.0 of Price Schedule No. 4A (Installation and Other Services), 12 nos. 9kV Surge Arresters are considered. As per Single line diagram of 132/11kV GIS Changunarayan substation, 9 nos. (3 nos. at 11kV Side of 132/11kV Power Transformer, 6 nos. at 11kV Side of 2 nos. LT Transformer) 9kV Surge Arresters are required. Again, in point no. y in Cl. No. 13.0 of Chapter 1–Project Specific Requirement, 24 nos. are required for 8 nos. 11kV Outgoing Lines. Hence total 33nos. 9kV Surge Arresters are required.Kindly confirm whether above mentioned 9kV Surge Arresters can be considered.	Please quote as per BPS

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37	Changunarayan Substation	Bidding Document – Volume II & Bidding Document – Volume III	Chapter 1 : Project Specific Requirement (PSR) & Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities)	Cl. No. 4.2.4 & Item No. I.1	"Control and Relay panels including Bus Bar Protection for 132 kV Double Bus Bar Switching Scheme" is mentioned in the Cl. No. 4.2.4 of Chapter 1–Project Specific Requirement. But Bus Bar protection panel is not considered in 132kV System as per item No. I.1 of Price Schedule No. 4A (Installation and Other Services) respectively. Please confirm.	The busbar protection panel is considered to be included with the buscoupler control and relya panel. Please quote accordingly.
38	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. I.1.1.2 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	6 nos. 132kV Line bay Control & protection panel is mentioned in item no. I.1.1.2 of Price Schedule No. 4A (Installation and Other Services). As per Single line diagram of 132/11kV GIS Changunarayan substation, total 7 nos. (6nos. 132kV Line bays and 1 no. 132kV Spare Line bay) 132kV Line Bays is shown. We understand that as per Single Line diagram of 132/11kV Changunarayan GIS substation and other items mentioned in Price Schedule No. 4(A), the installation of the spare line feeder of 132kV GIS is considered in present scope of work. Kindly clarify whether the quantity of Line Control & Protection panel for 132kV spare line bay can be considered in the present scope of work.	Please quote as per BPS
39	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - A: Owner Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. I.1.1.3 & Dwg. No. C /ENGG / NEA / CHANGU / SLD / 01	2 nos. 132kV Transformer Control & protection panel (for HV Side & MV Side) is mentioned in item no. I.1.1.3 of Price Schedule No. 4A (Installation and Other Services). As per Single line diagram of 132/11kV GIS Changunarayan substation, only one (1) no. 145kV SF6 GIS ICT feeder bay is in present scope of work. Kindly mention the actual requirement.	Please quote as per BPS
40	Changunarayan Substation	Bidding Document – Volume II & Bidding Document – Volume III	Tender Drawings : General Layout & Price Schedule No. 4(A) (Part - A:Owner Assessed Quantities)	Dwg. No. C / NEA / CHANGU / LAYOUT / 01 & Item No. Q.1.0	In the General Layout drawing of 132/11kV Changunarayan GIS substation, the location of 11kV Outgoing Pole is not shown. Please indicate the same in layout drawing for proper estimation of the length of 11kV Cable and associate civil works.	Refer above
41	Changunarayan Substation	Bidding Document – Volume II	Tender Drawings : Single Line Diagram & Chapter 1 : Project Specific Requirement (PSR)	Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01 & Cl. No. 4.2.6	As per Single Line diagram of 132/11kV Changunarayan GIS substation, it is shown that the two (2) nos. 11/0.4kV LT transformers are feed from "11kV Switchyard and 11kV Line (Lamosanghu)". As per Cl. No. 4.2.6 of Chapter 1–Project Specific Requirement, 2 nos. LT transformer bay module should be considered in the new 11kV Indoor Switchboard. Please confirm whether the 2 nos. LT transformer bays will be feed from the new 11kV Indoor Switchboard.	Refer above

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42	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - B:Vendor Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. A.1.1.1 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	Erection Hardware of 6 nos. 132kV Line bays are considered in Item No. A.1.1.1 of Price Schedule No. 4A (Installation and Other Services). But as per Single Line diagram of 132/11kV Changunarayan GIS substation, 7 nos. 132kV line Bays are in the scope of work. We understand that as per Single Line diagram of 132/11kV Changunarayan GIS substation and other items mentioned in Price Schedule No. 4(A), the installation of the spare line feeder of 132kV GIS is considered in present scope of work. Please confirm whether the erection hardware of sparebay is to be considered in the present scope of work.	Please quote as por BPS
43	Changunarayan Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part - B: Vendor Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. A.1.1.3 & Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	Erection Hardware of 2 nos. 132/11kV Transformer bays are considered	Please quote as por BPS
44	Changunarayan Substation	Bidding Document – Volume II & Bidding Document – Volume III	Tender Drawings : Single Line Diagram & Price Schedule No. 4(A)	Dwg. No. C / ENGG / NEA / CHANGU / SLD / 01	11kV Isolator & Horn Gap fuse is considered in the 11kV Side of 11/0.4kV LT Transformer bays in Single Line diagram of 132/11kV Changunarayan GIS substation. But, the quantity of 11kV Isolator & Horn Gap fuse are not considered in the Price schedule. Kindly confirm the actual requirement.	Please quote as por BPS. Refer answer above
45	Changunarayan Substation	Bidding Document – Volume II	Chapter 1 : Project Specific Requirement (PSR)	Cl. No. 4.2.26 (x)	As per the Cl. No. 4.2.26 (x), it is mentioned that "Soil investigation has been carried out. NEA will provide Geotechnical Investigation Report of the substation area for reference." Hence, NEA is requested to provide the Soil Investigation report of Changunarayan Substation.	Please refer clarification 1
46	Teku Substation	Bidding Document – Volume II	Tender Drawings : Indoor High Voltage Equipment Layout	--	NEA is requested to provide the Cable trench layout of existing Indoor 66/11kV Building, if any.	The available drawing will be provided to sucessful bidder.

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47	Teku Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-B: ContractorAssessed Quantities)	Item No. A.b	Please provide the Earthing layout drawing of existing 66/11kV Teku Substation, if any. Or, please mention the following details of existing earthing system :i.Details of main earthing grid conductor ii.Main earthing mat Spacing iii.Details of Risers - Underground Riser - Above ground Riser As per the general layout of existing Teku substation, it is noted that Lightning Mast is used for Lightning protection. So, NEA is requested to provide the height of the existing Lightning Tower at existing 66/11kV Teku substation.	The available drawing will be provided to sucessful bidder.
48	Teku Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities)	Item No. G	New LT Switchgear (415V MSB, 415V ACDB, 415V MLDB, 415V E-LDB, 110V DCDB & 48V DCDB) is considered in item no. G of Price Schedule No. 4A (Installation and Other Services). Kindly confirm whether the existing AC/DC DBs of existing 66/11kV system will be replaced by new one. If yes, NEA is requested to provide the feeder details & installed locations of existing AC/DC DBs. Furthermore, the following details are required for designing of the new LT system : i.The rating of Existing LT transformer. ii.The rating of existing DG Set. The AH rating of existing 48V battery and 48V battery charger rating.	During DDE. The new equipment shall be installed in the new GIS hall, however, if there is space constraint, same has to to be installed at existing facility.
49	Teku Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities)	Item No. C.1.1	NEA is requested to provide the Make & Model number of existing Incomer of 11kV Switchgear.	Will be provided later
50	Teku Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. C.1.0.a (Control Relay Panels) Item No. C.1.0.b (Control Relay Panels) & Item No. B2.1.03 & Dwg. No. C / NEA / TEKU / SLD / 01	As per Item No. C.1.0.a of Price Schedule No. 4A (Installation and Other Services), 4 sets Line Control & Protection Panel with distance relay / Differential relay is given.As per Item No. C.1.0.b of Price Schedule No. 4A (Installation and Other Services), 2 sets Line Control & Protection Panel with distance relay / Differential relay is given. We understand that the panels given in Item No. C.1.0.a is for 132kV Line Bays and the panels given in Item No. C.1.0.b is for 66kV Line Bays. Please confirm. Again, as per Single line diagram of 132/66/11kV Teku GIS Substation and item no. B2.1.03 of Price Schedule No. 4A (Installation and Other Services), 4 sets 72.5kV GIS Line bay module have been considered. Kindly clarify the actual requirement for 66kV Lines.	Please quote as per BPS

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51	Teku Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities)	Item No. C.1.0.c (Control Relay Panels)	4nos. current differential relay for other end of line is considered. Please confirm that 4 nos. current differential relay is required for the following bays: i.2 nos. for 132kV Thapathali 1 & 2. ii.2 nos. for 66kV K3-1 & K3-2.	Refer above
52	Teku Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. C.1.0.f (Control Relay Panels) & Dwg. No. C / NEA / TEKU / SLD / 01	As per item no. C.1.0.f of Price Schedule No. 4A (Installation and Other Services), 1 set of Bus-coupler Control and Relay Panel is considered. But, as per Single line diagram of 132/66/11kV Teku GIS Substation, Bus coupler bay has been considered in 132kV GIS & 66kV GIS. Kindly confirm the total quantity of Bus Coupler Control Relay Panel for 132kV & 66kV System.	Please quote as per BPS
53	Teku Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-A:Employer Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. E.1.a.iii & Dwg. No. C / NEA / TEKU / SLD / 01	As per item no. E.1.a.iii of Price Schedule No. 4A (Installation and Other Services), 14nos. 11kV bays are to be automated by Substation automation system.As per Single line diagram of 132/66/11kV Teku GIS Substation, 2 nos. 11kV Incomer, 10 nos. 11kV outgoing feeder and 1 no. Bus coupler bay are shown. Hence total no. of Automated 11kV bay should be 13nos. Please clarify between the mismatches.	Please quote as per BPS
54	Teku Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities) & Tender Drawings : Single Line Diagram	Item No. J.b & J.c & Dwg. No. C / NEA / TEKU / SLD / 01	As per item no. J.b & J.c of Price Schedule No. 4A (Installation and Other Services), Smoke detection system and Fire detection & Alarm System are considered. Kindly confirm that the Smoke detection system and Fire detection & Alarm System is considered only for new 132kV GIS hall including panel room.	Please refer clarification issued in earlier clarification 1
55	Teku Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-C: Civil Works) & Chapter 1 – Project Specific Requirement (PSR)	Item No. 31	Modification of existing incoming structure to accommodate 132kV line is considered in item no. 31 of Price Schedule No. 4A (Installation and Other Services). "At Teku Substation, the existing line gantry which is designed for 66kV voltage level shall be suitably modified to make ready for 132kV incoming line" is mentioned in the Chapter 1 – Project Specific Requirement (PSR) But, in layout drawing, 2 nos. existing 66kV Feeders are shown which are in still use to feed the existing line feeder to K3 1 & K3 2 substation as per Single line diagram of Teku substation. Kindly clarify the requirement for Modification of existing incoming structure.	Existing structure, both at Teku and suichatar has to be modified to maintian required clearances. All insulators, hardwares, conductors etc required for the sucessful completion of work is in contractors scope.

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56	Suichatar Substation	General	--	--	NEA is requested to provide Tender Single Line Diagram for extension of new 132kV system as well as modification of 66kV System.	Provided with the bid document
57	Suichatar Substation	Bidding Document – Volume III & Bidding Document – Volume II	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities) & Chapter 1 : Project Specific Requirement (PSR)	Item No. C.1.0.a & Cl. No. 4.4	For 132kV System, 1 set of Line Control & Protection Panel with distance relay is considered in item no. C.1.0.a of Price Schedule No. 4A (Installation and Other Services). In Cl. No. 4.4 of Chapter 1–Project Specific Requirement, 2 (Two) Nos of 132kV line bays to be constructed. Hence, two (2) sets of Line Control & Protection Panel are required. Kindly confirm the actual requirement	Please quote as per the BPS
58	Suichatar Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities)	Item No. C.1.0.b	As per Item no. C.1.0.b of Price Schedule No. 4A (Installation and Other Services), 1 set of 132kV Busbar Protection panel is considered. NEA is requested provide the Protection & Metering scheme for 132kV System of existing Suichatar Substation.	Please quote as per the BPS
59	Suichatar Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-B: Contractor Assessed Quantities)	Item No. A.a	As per Item no. A.a of Price Schedule No. 4A (Installation and Other Services), erection hardware for 145kV GIS Termination arrangement is considered. But Suichatar is an AIS substation. Kindly clarify the requirement of 145kV GIS Termination arrangement.	Please read "GIS" as "AIS"
60	Suichatar Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-B: Contractor Assessed Quantities) & Tender Drawings : Layout Drawing Proposed Suichatar Substation	Item No. A.b	Please provide the Earthing layout drawing of existing 132/66kV Suichatar Substation, if any. Or, please mention the following details of existing earthing system : i.Details of main earthing grid conductor ii.Main earthing mat spacing iii.Details of Riser conductor: - Underground Riser - Above ground Riser As per the layout drawing of existing Suichatar substation, it is noted that Shield wires are used for Lightning protection. So, NEA is requested to provide details of the existing Shield wires conductor.	TO be provided later, if available
61	Suichatar Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-B: Contractor Assessed Quantities)	Item No. D.	It is requested to NEA to provide the details of existing Substation Automation system (SAS) for integration of new 132kV Line Bays.	Refer answer above
62	Suichatar Substation	General	--	--	NEA is requested to provide the following to access proper estimation : i.Switchyard Layout (Elevation) including conductor details of 132kV Bus, 132kV Equipment connection, 66kV Equipment connection. ii.Existing Control Building Layout with cable trench details. iii.Existing Switchyard Cable Trench Layout. iv.Feeder list of Existing LT Systems (AC/DC DBs). v.Existing scheme of Telecommunication syetem.	TO be provided later, if available

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63	Suichatar Substation	Bidding Document – Volume III	Price Schedule No. 4(A) (Part-A: Employer Assessed Quantities) & Tender Drawings : Layout Drawing Proposed Suichatar Substation	Item No. 4.0.b & Item no. 6.0	As per Item no. 4.0.b of Price Schedule No. 4A (Installation and Other Services), 60 kV Surge Arrestors is considered. As per Item no. 6.0 of Price Schedule No. 4A (Installation and Other Services), 66 kV Bus post insulators is considered. But as per Layout drawing of Proposed Suichatar Substation, 2 sets of CVT, 1 set of WT, 1 set of CT, 1 set of Isolator for each 66kV line Bay are shown. The above statements conflict each other. Kindly mention the actual requirement of 66kV Modification work.	Please quote as per BPS

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

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Sl N	Reference Section & Clause	Description	Bidder's Query/ Changes suggested	Client Response
			Upgradation of Suichatar Substation.	
64	Bus bar protection		Please furnish the Make & Model number of the existing Busbar protection scheme.	No busbar protection at existing substation
			Common Queries	
65	Chapter 12: Switchyard erection, cl.no.7.0		Please furnish the specification for 72.5kV Bus post insulator	Attached
66	Chapter-1, Cl. 4.1.1, Modifications/Dismantling Works at Siuchatar and Teku Substation		We request NEA to provide a handsketch to understand better the scope as mentioned in the relevant clause	Please refer PSR
			GIS	
67	-	SLD	Please provide us the Single line diagram with bay configurations for our reference and understanding.	Attached with the bid document
68	Section 3- EQC, Clause 2.5 Subcontractors, Power Transformers (220kV or Higher Voltage Class) & Sl No. 9 of Clarification 1	Must have successfully completed the design, manufacture & supply of 220 kV or higher voltage class, power/Auto transformer of three phase 160 MVA or above capacity (or equivalent capacity in banks of 3 single phase units), at least twice the bid quantity as a main supplier over last seven (7) years period ending on the last date of bid submission and same shall have been in satisfactory operation for at least 2 (two) years as on the date of bid opening.	Bid quantity of this item - 4 Nos of 53.33 MVA 1-ph Transformers; out of which 3x53.33MVA will form One Bank and 1 no of 53.33 MVA will be kept as spare. Please confirm to calculate and substantiate "twice the bid quantity", how many numbers of Transformers to be taken into consideration by the supplier to meet the QR in case of a) Single Phase 53.33 MVA Transformer Supplied? b) Three Phase 160 MVA Transformer Supplied?	3 single phase unit will be considered as 1 transformer of 160 MVA.
69	Section 7- GCC, Clause 14 & Sl No. 10 of Clarification 1	Taxes and Duties	We have gone through the link you have provided in the clarification 1; and understood that for this project, the TDS applicable for the items supplied from abroad(sch-1) is 5% and for Civil and Erection works (Sch-4a) at Nepal is 1.5%. Please clarify if our understanding is not correct and in that case provide the english version of the document.	If the firm is registered in Nepal, and the local invoice can be raised TDS will be deducted @1.5%, for other cases it will be 5%. This is existing arrangment, but taxation will be as rules and regulation of Nepal Government
70	Section 7- GCC, Clause 14 & Sl No. 10 of Clarification 1	Taxes and Duties	Please confirm, statutory variation clause will be appalicable in case of any changes made to the prevailing rates (%) of TDS.	Refer to the clause 14.4 GCC
71	Volume -1 Section-3 - Evaluation and Qualification Criteria Clause 2.5	As per the referred clause,all the documents like type test reports,performance certificate,ISO certificate pertaining to vendor qualification need to be notarized for the submission of the same alongwith the bid. Since EPC bidders would propose multiple makes for various equipments and that too from different MNCs, it would be practically difficult to get notary for all these documents at the bidding stage. Also, the volume of documents will be huge.	Hence, we request you to kindly accept the documents without notary at the bidding stage specfically for sub- vendor's credentials. We shall provide necessary Notatarised documents, incase it is required by NEA during bid evaluation. Please confirm.	As per requirement of bid document
72	Volume -1 Section-1 - ITB, Clause 23	Bid Submission Electronically (Soft Copy/Scan Copy)	Due to the travelling constraints casued by COVID-19 worldwide and the the protocol associated with it, as mandatory quarantine in source and destination country. It is not feasible travelling along with the huge volume of tender documents. Also the Courier services does't have a committed deadline for delivering the courier at destination (sometimes it is taking 3 weeks to reach nepal from India). In consideration with above, Please confirm your acceptance of the bid documents in soft copy (scan copy).	As per requirement of bid document

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73	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.146	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.146	From the referred clarification, requirement of (Distributed temperature sensing) DTS for EHV Cable is not firm. We request NEA to re-confirm the requirement and include a separate line item in the BPS (if required), as it will be an additional cost to the Bidder.	The DTS is considered to be a part of UG cable system. The requirment shall be decided during DDE.
74	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.150, 272 & 407	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.150, 272 & 407	As there are contradictions in the clarification nos. 150, 272 & 407, we request NEA to re-confirm your acceptance in line with pre-bid meeting discussions, for three phase gang operated mechanisms for 145kV and 66kV GIS. As the Circuit breaker is three phase gang operated, single pole auto reclosing is not possible. Request NEA to accept the same.	If the CB is three phase, three phase AR will be acccepted.
75	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.159, Percentage impedance at rated tap	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.159, Percentage impedance at rated tap	We request NEA to furnish the exact value of percentage impedance in order to have uniform bidding conditions. As the maximum ceiling limit is not specified, increase in impedance value at a later date will incur additional implications. Otherwise, NEA can propose a range for the impedance at rated tap.	Please consider the impedance as per IEC and values mentioned in the Bid document.
76	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.525	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.525	In the referred clarification, NEA had clarified that GIS VT & LA for ICT bays to be offered as part of GIS module. However, in project specific requirement, cl.no.4.3.1, GIS VT is not mentioned for ICT bays. Hence, we understand that GIS VT is not required for ICT bays. Only GIS LA is required. Please confirm.	Confirm for ICT bay
77	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.140 & 747	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.140 & 747	As per BOQ required sizes for EHV cable are 1C X 240 Sq.mm, 1C X 500 Sq.mm. Hence, as per IEC: 60228, conductor shall be stranded compacted circular instead of Segmental. Circular type conductor construction is also accepted by NEA vide clarification no. 747. But as per clarification no. 140, it shall be followed as per technical specification which is segmental type. As there is a contradiction, we request NEA to re-confirm the type of conductor construction for EHV cables.	The clarification issued earlier for S.No 747 has been corrected as "Please refer the TS".
78	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.210	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no.210	In the referred clarification, it is mentioned that for all three substations all bays are to be terminated using SF6 to air bushing. However, supply of cable for 132kV and 66kV is provided in the Teku BPS and the GIS shall be suitable for cable termination as per clarification-89, 94 & 96. As there are contractions, we would like to summarize the type of terminations in line with BPS, as follows: a) Lasiphedi- GIB termination for both 220kV & 132kV b) Changunarayan- GIB termination for 132kV c) TEKU- Cable termination for both 132kV & 66kV We request NEA to re-confirm.	Confirm
79	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 138	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 138	As per clarification no. 138, *"Price of such items for online monitoring systems for transformers shall be included in the price of transformers. For detail please refer specification of transformer".* But in specification, Chapter-20, only Oil sampling bottle is mentioned. Hence, we understand that other online monitoring systems as mentioend in clarification no. 138 are not required for this package. Further as per BPS, the fire fighting system is HVWS, we do not envisage any NIFPS system for this package. We request NEA to re-confirm.	We have consdiered the Online Oil Drying system, Temperature sensors, DGA (8 gases)etc as specified in the TS, as part of the transformer. Please quote your price accordingly.

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80	Site Land acquisition- Lapsiphedi	Site Land acquisition	During our site visit to Lapsiphedi Substation Area, we have faced the opposition & local people of that area are not in favour of constructing the Substation. During construction this issue may arise; please confirm this will be counted for time extension and the idling period is claimable?	The local problem, if any, will be solved as required. This issue will be considered for time extension as per GCC.
81	Price schedule of Teku S/S,	SMPS based 48V DC power Supply System	Please furnish specification for SMPS based 48V DC power supply system & its battery bank.	Please refer specification.
82	Volume -1 Section-3 - Evaluation and Qualification Criteria Clause 2.5	As per the referred clause,all the documents like type test reports,performance certificate,ISO certificate pertaining to vendor qualification need to be notarized for the submission of the same alongwith the bid. Since EPC bidders would propose multiple makes for various equipments and that too from different MNCs, it would be practically difficult to get notary for all these documents at the bidding stage. Also, the volume of documents will be huge.	Hence, we request you to kindly accept the documents without notary at the bidding stage specfically for sub- vendor's credentials. We shall provide necessary Notatarised documents, incase it is required by NEA during bid evaluation. This was accepted in the same tender previous time	As per requirement of bid document
83	Volume III, BPS Schedule 4a (Part 1) ,Part-C Civil work Page no-10 of 37 & Volume III, BPS Schedule 4a (Part 2) ,Part-C Civil work Page no-19 of 37 & Clarification-1	Clause no-24.16 & BPS Sl no - 11.2 PRE ENGINEERED BUILDING & Sl no. 475	In clarification-1, Sl no. 475 it is replied that, The PEB building is to include all supply materials including structural steel, PEB materials etc complete. It also includes PCC, RCC, reinforcement steel, finishing etc as required for completion of the building. Please quote accordingly However in price schedule for PEB, it is mentioned as including excavation, PCC, RCC & Reinforcement etc. Please clarify, whether the excavation cost also to be included in the PEB Building or quantity of excavation shall be measured & paid separately under respective item of BPS.	No separate payment will be made
84	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 101	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 101	In the referred clarification, NEA has clarified that 110V Battery and battery charger shall be quoted as per BPS. However, as per clarification sl.no.354, two (2) float-cum-boost chargers and two (2) battery sets for each of 220V and 48V systems respectively shall be supplied in all stations. As there is a contradiction, we request NEA to re-confirm the number of 110V battery banks and battery chargers required at Teku station	Please quote as per BPS.
85	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 124	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 124	In the referred clarification, NEA has clarified that 220V & 48V Battery shall be quoted as per BPS. However, as per clarification sl.no.354, two (2) float-cum-boost chargers and two (2) battery sets for each of 220V and 48V systems respectively shall be supplied in all stations. As there is a contradiction, we request NEA to re-confirm the number of 220V & 48V battery set required for changunarayan station.	Please quote as per BPS.
86	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 101 & 124	CLARIFICATION 1 ISSUED BY NEPAL ELECTRICITY AUTHORITY, Sl.no. 101 & 124	For all three stations, we understand that 1 No. battery shall mean 1 no. battery bank and 1 No. of battery charger shall refer to 1x100% float-cum-boost charger. Request NEA to confirm	Please quote as per BPS. 1 No battery mean 1 battery bank of specified capcity, 1 No. battery charger means 1 nos Float cum boost charger, with all accessories.

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

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S. No.	Queries from Perspective Bidder	Reply from NEA	Remarks
87	For Lapsephedi Substation, there are some difference between Chapter 1 page 1-9 (C) (d) Volume II and Volume III schedule no.1 . E 2.2 Please clarify the CVT for Line feeder bay should be the outdoor Independent equipment or involved in GIS?	Please quote as per BPS and refer replies in Clarification No. 1.	
88	For Changunarayan substation, as per Volume III and reference drawings. there are 8 nos. 132kV bay which should be served with 8 no measuring and control device but there 9 plce In Volume. Please clarify.	Please quote as per BPS and refer replies in Clarification No. 1	
89	For Chungunarayan and Teku substation. the battery is 11 OkV but the charger Is 220kV. Please clarify	Please refer replies in Clarification No. 1	
90	For Teku substation as per Volume III, there are 4 sets Current differential protection devices for both side of the line. But as per Volume II chapter 15 18.5 Is required that Main protection: Numerical distance protection schemer Back up protect: Directional Over Current and Earth fault Protection only. please clarify.	Please quote as per BPS and refer replies in Clarification No. 1	
91	For Teku substation. Is the image monitor system is required?	Please refer BPS and Technical Specifications	
92	For Lapsephadi substation, as per the reference drawing, a road is required under the inlet side of main Iraformer. The said road can not be executed that the ground clearance is not enough. Please clarify the design scheme.	The detailed design shall be decided during DDE	
93	For lapsephedl Substation, Volume III schedule no.1 Part•B D-1.4. what is the requirement of this outdoor switchyard and there is no equipment list of this outdoor switchyard in the price schedule.	Outdoor Switchyard Lighting Inside the main Boundary of Substation	
94	for Changunarayan substation. Volume III the 6 no. 132kV GIS bay served with 27 no. 120kV lightning anester, 21 no. 145kV CVT which are not matching. Please clarify the quantity of LA and CVT. As per reference drawing, 1 transformer and 2 circuit 1 11cV Substatiori inlet line is designed. but in Volume III there are S sets 11 kV ungrounded disconnecting switch and 12 no.9kV LA. Please clarify the said quantity.	Please quote as per BPS and refer replies in Clarification No. 1	
95	For the Teku substation. For 11kV indoor switch cabinet. there are 2 circuit inlet 2 no_ busbar.but in reference drawing. there are 2 circuit Inlet. 10 circuit bus couple. 1 circuit PT. This two do not match, And there is no detail requirement of Teku GIS Substation in Volume II chapter 1 clause 4	Please quote as per BPS; final quantity shall be decided during DDE	
96	For Teku Substation, there is no quantity of underground trench in Volume III. please clarify.	Cable trench is requied in each substation, final design and quantity shall be decided during DDE; payment for such works will be made from available rates in price schedules.	

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

CLARIFICATION 2 ISSUED BY NEPAL ELECTRICITY AUTHORITY

No.	Volume / Section / Clause / Item / Page	Substation	Bidder's comment / Query / Clarification	NEA's Reply / Clarification	Remarks
97	According to ADB procurement Guideline 2.23 states	General	" 4 The bidding documents shall clearly indicate whether price adjustments are allowed in the event changes occur in major cost components of the contract such as labor, equipment, and materials, over which the contractor has no control. Price adjustment provisions are not necessary for simple contracts involving short delivery periods. However, for contracts with long delivery or completion periods (generally beyond 18 months), including major civil works contracts, price adjustment provisions shall be provided." **CNTIC:** Since the project duration 24 month, termed as the long delivery periods. Hence, we request you to have price adjust for this contact. Or if ADB suggest then will NEA agrees for Price adjustment?	It will be Fixed Price Contract. Please refer Section -2 Bid Data Sheet ITB 18.6 and Section-9, Contract Forms, Appendix 2 - Price Adjustment "(Not Applicable to this Contract)" and document has been approved by ADB.	
98	Consultant role in this project?	General	Since this is a design bulit contract where mostly the design risk and financial risk is on the contractor side, what will be the roles of the consultant in this project? Can you please elaborate us the duties and responsibilites of the consultant ?	Consultant assists NEA for the implementation of the Project such as in approval of designs / drawings/ document submitted by Contractor, construction supervision etc.	
99	Extend The deadline for bid submission	General	CNTIC: Due to the COVID-19 pandemic, lockdown has been imposed and international flights have been cancelled since long time. We hope that extend the deadline for bid submission at least 30 days.	The deadline for bid submission has been extended upto 15 July 2020.	

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

CLARIFICATION 2 ISSUED BY NEPAL ELECTRICITY AUTHORITY

S. N.	Volume / Section	Clause No.	Text as per Bid document	Prebid Query	NEA Reply
100	Vol II, Technical Specifcation for Transfromers	Chapter 20 – Technical Specification for Transformers, Page 20-43 & Chapter 23 –Technical Datasheet, Page 23-3	Tap range & No. of steps: –10% to +10% in the step of 2.5% for HV variation, 9 steps 12.2 Tap Step: 1.25% 12.5: No of steps: 17	Data sheet in the TS shows tapping range as –10% to +10% in the step of 2.5% for HV variation, 9 steps whereas GTP shows –10% to +10% in the step of 1.25%, 17 taps. Please confirm which to follow	–10% to +10% in the step of 1.25%, 17 taps
101	Vol II, Technical Specifcation for Transfromers	Chapter 20 – Technical Specification for Transformers, Page 20-38	Insulation LV: Uniform	As per Technical Data Sheet cl.1.33. vi), it is stated that winding insulation is required for LV side "UNIFORM INSULATION". Kindly confirm it is required or not?	As per TS and Data Sheet
102	Vol II, Technical Specifcation for Transfromers	Chapter 20 – Technical Specification for Transformers, Page 20-42	Vector Group (unless specified differently elsewhere): YNyn0 (D11)	As per cl.1.34 (Page 20-42), the vector group is stated that YNyn0(D11). Kindly get the confirmation whether TV winding is required or not?	TV winding is required for 1-phase units (53.33 MVA, 220/132 kV), for 3-phase transformers requirement of TV will be decided during DDE.
103	Vol II, Technical Specifcation for Transfromers	Chapter 20 – Technical Specification for Transformers		Request to confirm, whether bidder to cosnider RIP or OIP bushing for Transformers	RIP Bushing
104	BOQ/ Price schedule-CRP	3.2, 2.2, D 1.0	3.2 Relay Test Kit 3.2 Relay Test Kit D.1.0 Relay Test tool kit	We understand that against the requested item we can offer ABB Combiflex Tool Kit and not a Dynamic Relay Testing kit. Please confirm	As per TS and Data Sheet
105	BOQ/ Price schedule-CRP	132/11 kV Teku Substation upgrade (132V GIS & Indoor) - C1.(g)	Bus Bar Protection Panel	We understand the busbar protection scheme asked here is for 132kV Bays only. Please confirm.	Confirm
106	BOQ/ Price schedule-CRP	132/11 kV Teku Substation upgrade (132V GIS & Indoor) - C1.a,b,c	Current Differential Relay for other end of line is 4No.s	The total No. of bays are 6 Nos with Line differential Relay, but Losse Current Differential for other end of Line called is 4 no.s please clarify.	Shall be decided during DDE
107	BOQ/ Price schedule-CRP	132/11 kV Teku Substation upgrade (132V GIS & Indoor) - C1.(f)	Buscoupler Control & Protection Panel	We understand the Buscoupler quantity shall be 1 No. of each 132kV and 66kV Voltage levels. Please Confirm.	Please quote as per BPS
108	BOQ/ Price schedule-CRP	Suichatar Substation Extenson (132V AIS Outdoor)	Line Control & Protection Panel with distance relay	The scope includes only supply and commissioning of 132kV Line Bay, there is no Busbar /SCADA integration scope called here. If yes, please confirm the Make and Type of same.	132kV Busbar Protection is not in the present scope
109	Chapter 1 – Project Specific Requirement (PSR)	4.3.2 Air insulated switchgear(AIS) and Other Main Equipments at Teku: (d)	Main-I Protection shall be distance Protection Scheme as per specification section control & Relay Panel	As per the Price schedule/BPS its calls for "132 kV Line Control & Protection Panel with distance relay / Differential relay", but as per Specificationand PSR it calls for Distance Relays. Hence please confirm for the no. of Bays with Line distance Relays and No. of Bays with Line Differential Relays for 132kV and 66kV .	Please refer the reply in issued Clarification No. 1

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S. N.	Volume / Section	Clause No.	Text as per Bid document	Prebid Query	NEA Reply
110	Chapter 1 – Project Specific Requirement (PSR)	13.0 SPECIFIC REQUIREMENT	The 220/132/11kV bays under present scope at both the substations shall be integrated by the contractor into existing SCADA system of Siemens 'SINAUT Spectrum"(version 4.3.2) installed at Master Station i.e. Nepal Electricity Authority Load Dispatch Centre (located in Siuchatar, Kathmandu). The integration shall include all hardware and software required at the Control Centre as well as necessary data base, display generation and upgrades for proposed control and monitoring of station and Network Analysis. The manufacturers of the existing SCADA system are:- LDC facilities: Siemens Germany	We shall provide the necessary data and Technical support for integrating the 220kV SACDA into LDC, but any modification in the existing SCADA System of Siemens is not to be considered in current scope of work. Please confirm	Whole scope of work for integration is in contractor's scope
111	BOQ/ Price schedule-SAS	220/132/11kV GIS Lapsephedi Substation, 132/11 kV Changunarayan S/S, Suichatar Substation Extenson (132V AIS Outdoor)	Integration of all 220/132kV Bays under present scope with the SCADA at MCC Baneshwor including supply of Hardware, Software, accessories etc.	Kindly confirm the Make and Type of SCADA at MCC Baneshwor.	The MCC is under contract with GE, India
112	Vol II, Project Specific requirement	Cl. 4.3.2 of Chapter 1 – Project Specific Requirement (PSR)	Dismantling and removal of existing 66/11kV, 22.5MVA Power transformer. The cost shall be included with the installation cost of 132/11kV transformer. Dismantling of other existing equipment, if required, shall be included with the bid prices elsewhere in the price schedule.	Request to provide the BOQ of equipments to be dismantled apart from the mentioned Transformers in the section project	Please refer TS
113	Vol II, Project Specific requirement	Cl. 4.3.3 of Chapter 1 – Project Specific Requirement (PSR)	q) Dismantling and disposal of existing building, gantry structure as required and disposal.	We understand that the debris created during dismantling shall be disposed at the location provided by owner. Kindly confirm the disctance from the site to the disposal area	Within kathmandu valley
114	Vol III, Schedule 4d	d): Maintenance Charges	Maintenance Charges for Communication Equipments including SDH & MUX. for Six (6) years after Warranty period	We shall be providing the manitenance charges for the said equipmenst till the end of warrnty period. We request NEA to consider and obtain the Maintenace charges directly from the suppliers after the warranty period.	Please quote as per BPS. Also refer clarification for similar query elsewhere.

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S. N.	Volume / Section	Clause No.	Text as per Bid document	Prebid Query	NEA Reply
115	Vol II, Technical Specifcation for Power and Control Cable	Chapter 9, Clause 1.2.2.1	The XLPE insulated cables shall be of FR type, C1 category conforming to IEC: 60502 (Part-I) and its amendments read alongwith this specification. The conductor shall be stranded aluminium circular/sector shaped and compacted. In multicore cables, the core shall be identified by red, yellow, blue and black coloured strips or colouring of insulation. A distinct inner sheath shall be provided in all multicore cables. For XLPE cables, the inner sheath shall be of extruded PVC to type ST-2 of IEC: 60502. When armouring is specified for single core cables, the same shall consist of aluminium wires/strips. The outer sheath shall be extruded PVC to Type ST-2 of IEC: 60502 for all XLPE cables.	As per clause 1.2 & 1.12 of Technical Specification, extruded type corrugated Al sheath required. Request to consider the cable with seam welded corrugated Al sheath. Please confirm.	As per TS and Data Sheet
116	Vol II, Technical Specifcation for Power and Control Cable	Chapter 9		We request you to provide fault rating of Aluminum Metal sheath short circuit currrent in kA and duration	Shall be suitable to withstand the short circuit of 31.5kA as per GTR. Shall be discussed and decided during DDE
117	Vol II, Technical Specifcation Instrument Transformer & SLD		CT Ratios in SLD and specification	The SLD CT ratio & ratios given in Specification of Instrument Transformers is also not matching. Request you to confirm the actual requirement.	Shall be decided during DDE
118	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 23 – Technical Data Sheet Cl No: 8.3.3	Tertiary (If Provided)	Please refer to GTP Cl 8.3.3 and in this clause, Tertiary winding rating is mentioned & also it is mentioned as tertiary "if provided" so, transformer is with tertiary or without tertiary winding? As per specification Cl 6 (1.0) it is not mentioned. Also, vector group is mentioned as YNa0 only. If Tertiary is required, it is loaded or unloaded and Request to specify the rating of tertiary winding	Please refer the reply in issued Clarification No. 1
119	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 20 – Technical Specification for Transformers		As per specification cl 6 (1.0) it is 1-phase auto transformer where else in GTP cl 6 it is mentioned as three phases	Please refer the corrected data sheet attached herewith
120	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 20 – Technical Specification for Transformers		Specification cl 1.6 Cooling is required as ONAN/ONAF/(OFAF or ODAF) : 60%/ 80%/100% or ONAN/ONAF1/ONAF2: 60% / 80%/100% where else as per GTP Cl No 7 it is ONAN/ONAF only. Please confirm the actula requirement	Please refer the reply in issued Clarification No. 1
121	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 20 – Technical Specification for Transformers		Specification clause 6 (3.0) sub clause 1.1.14 HV winding basic insulation level is 550 kVp/230 kVrms where else as per GTP cl 23.2 it is 650 /275 kVp/ kVrms - Please check and confirm the requirements	it is 650 /275 kVp/ kVrms
122	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 20 – Technical Specification for Transformers		Specification clause 6 (3.0) sub clause 1.6 Rating in mentioned as ONAN where else as per sub clause 1 it is 18 /22.5 i.e. ONAN/ONAF please confirm your final requirements	ONAN/ONAF (18/22.5MVA)
123	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 23 – Technical Data Sheet Cl No: 8.3.3		GTP Cl 8.1.1; 5 MVA rating is not applicable. Please confirm	Confirm
124	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 23 – Technical Data Sheet	% Impedance value for a) 22.5MVA 132/11kV : >10% b) 45MVA 132/11kV: >11% c) 63MVA 132/66kV: >11%	We request to confirm the exact values of impedance to be considered.	Please refer other clarification

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S. N.	Volume / Section	Clause No.	Text as per Bid document	Prebid Query	NEA Reply
125	Vol II, Technical Specifcation for Transfromers & GTP	Chapter 23 – Technical Data Sheet	Noise Level a) 22.5MVA 132/11kV : GTP: 70dB & Specification: 75dB b) 45MVA 132/11kV: GTP: 70dB & Specification: 75dB c) 63MVA 132/66kV: GTP: 70dB & Specification: 75dB	Noise level mentioned in the specification is not matching with the GTP provided. Request to confirm the exact requirement to be considered.	Please refer TS

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ICB: PMD/PTDEEP/LCSCP-073/74RE-01

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
126	Chapter 1-Project Specific requirements	Clause No. 4.1.28-r) & 4.2.26-q)	GIS Buildings including control room cum administrative building. The GIS hall shall be suitable for mounting of EOT crane. The control room building shall be of RCC structure with Nepalese architecture and GIS room shall be pre engineered steel structure as per Section "Civil".	Bidder request to provide architectural details of GIS & Control Room Building. Also please confirm bidder is allowed to optimise the building dimension as per detailed engg.	Please refer technical specifications and tender drawings. Building dimension may be optimized as decided during DDE
127	Price Schedule	Item No.28	Approach Road	Bidder understand that Right of way is in customer scope. Any kind of government permissions / approval, Local authority permission/ approval, private owner's land acquisition etc. in order to carry out appraoch road works shall be responsibility of NEA. Please confirm.	Confirm
128	Site		PV clause	Due to the volatile market, nationwide lock down and travel rsitrictions due to Covid 19. The Suppliers are not submitting their proposal without PV caluse. Hence, bidder request to add the price variation clause for Transformers and Civil works.	Please refer the replies above
129		10. Employer's Responsibilities	The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the Appendix (Scope of Works and Supply by the Employer) to the Contract Agreement. The Employer shall give full possession of and accord all rights of access thereto on or before the date(s) specified in that Appendix.	Bidder understand that Right of way is in customer scope. Any kind of government permissions / approval, Local authority permission/ approval, private owner's land acquisition etc. in order to carry out appraoch road works shall be responsibility of NEA. Please confirm.	Confirm
130	Volume 1 & Volume 2			400kV & 765kV metioned at many places in the tender documents. It is linked with either Qualificaiton requriement or Techincal Specification and Scope of work. We understand that the substation project is for 220/132/66/11kV voltage level, hence bidder request to please amend the tender clauses and Scope of works.	We confirm that 400kV and 765kV are not in the present scope.

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
131	Section- 1 and 2	ITB and BDS	ITB 39.5 If the Bid, which results in the lowest Evaluated Bid Price, is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Price Schedules, to demonstrate the internal consistency of those prices with the methods and time schedule proposed. After evaluation of the price analyses, taking into consideration the terms of payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.	We understand that Performance bank guarantee applicable for the complete project is 10% of the contract value valid till warranty period. Please confirm.	Confirm. However, for extended defect liability period refer SCC.
132	Section 7	GCC	GCC 24 Completion of the Facilities	Following Completion and Deemed Completion clause to be added to the Conditions: (a) As soon as the Contractor achieves the Works Completion of the contract works, it shall issue to the Employer a notice (Notice of Works Completion) informing about the completion of the work. (b) Within 14 days following receipt of the notice of works completion, the Employer shall issue the Completion Certificate to Contractor, failure to which it shall be considered that the work has been successfully completed as on the date of the contractor's notice & Deemed Completion Certificate will be considered to have been issued. (c) Completion is also deemed to have taken place if the Works or any part thereof are put to use by the Employer. (d) If Commissioning is delayed due to reasons not attributable to Contractor, Contractor shall be allowed to demobilize the site after 2 months waiting and shall provide commissioning support as & when required. Consequently retention payment (if any) to be released against BG. The Defect Liability Period shall be deemed to have be started from the date of the such Deemed Completion Certificate. Please confirm	No Changes will be made in GCC and SCC of the bidding documents

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
133	Section 7 and 8	GCC 27 and SCC 27	GCC 27.2 The Defect Liability Period shall be 540 days from the date of Completion of the Facilities (or any part thereof) or one year from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the SCC pursuant to GCC Sub- Clause 27.10. GCC27.10 In addition, any such component of the Facilities and during the period of time as may be specified in the SCC shall be subject to an extended Defect Liability Period. Such obligation of the Contractor shall be in addition to the Defect Liability Period specified under GCC Sub-Clause 27.2. SCC 27. Defect Liability 27.10 The critical components covered under the extended defect liability are Power Transformers & GIS, and the period shall be 365 Days.	Request for the modification in the existing clause: GCC 27.2 The Defect Liability Period shall be 540 days from the date of Completion of the Facilities (or any part thereof) or one year from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the SCC pursuant to GCC Sub- Clause 27.10. GCC27.10 In addition, any such component of the Facilities and during the period of time as may be specified in the SCC shall be subject to an extended Defect Liability Period. Such obligation of the Contractor shall be in addition to the Defect Liability Period specified under GCC Sub-Clause 27.2. ~~SCC 27. Defect Liability~~ ~~27.10 The critical components covered under the extended defect liability are Power Transformers & GIS, and the period shall be 365 Days.~~	No Changes will be made in GCC and SCC of the bidding documents
134	Section 8	SCC 7.3	The Contractor agrees to supply spare parts for a period of years: 5 Years The Contractor shall carry sufficient inventories to ensure an ex-stock supply of consumable spares for the Plant. Other spare parts and components shall be supplied as promptly as possible, but at the most within 6 months of placing the order and opening the letter of credit. In addition, in the event of termination of the production of spare parts, advance notification will be made to the Employer of the pending termination, with sufficient time to permit the Employer to procure the needed requirement. Following such termination, the Contractor will furnish to the extent possible and at no cost to the Employer the blueprints, drawings and specifications of the spare parts, if requested.	Please clarify the below two points: 1) 6 months delivery is not possible for all equipments. We confirm prompt supply of spares within a reasonable period. Please confirm. 2) Blueprnits of spare parts are intellectual property of the manufacturers. We understand that only the non-IPR related drawings/as-built drawings need to be provided under this clause for the purpose of identification of spare parts. Please confirm. Functionally equivalent spare parts shall also be acceptable.	No Changes will be made in GCC and SCC of the bidding documents

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
135	Section 8	SCC 14	Additional Clause (Taxes & Duties)	Please add to the end of the paragraph as below: Custom Duty shall be issued to the Authorities within 3 days of submission of request for Duty payment by Contractor. In case of delay by Employer, the Contractor shall be entitled to time & cost reimbursement. Any detension or Demurrage due to delay in issuance of Custom Duty payment should be borne by the Employer based on the documentary evidence provided by the Contractor.	No Changes will be made in GCC and SCC of the bidding documents
136	Section 8	SCC 14	Additional Clause (Taxes & Duties)	Please confirm on the following: 1. We understand that as per Nepal Tax law, 1.5% TDS is applicable to contractors i.e. TDS will be deducted on entire onshore contract value, if the Bidder has VAT registeration in Nepal. 2. There is a favourable Double Taxation Avoidance Agreement (DTAA) available between Government of Nepal and contractor's country (India). We understand that as per the Double Taxation Avoidance Agreement (DTAA) agreement between India and Nepal, Customer should not deduct any taxes while making the payments for offshore supplies scope.	1. As per Nepal Tax law, 1.5% TDS (prevailing rate which may change time to time and the deduction will be as applicable) is applicable to contractors i.e. TDS will be deducted on entire onshore contract value, if the Contractor has VAT registeration in Nepal. 2. As per Nepal Tax law, 5% TDS is applicable to contractors while making the payments for offshore supplies scope. Contractor may claim for the subsidy as per the Double Taxation Avoidance Agreement (DTAA) available between Government of Nepal and contractor's country, the Contractor may claim for the subsidy as given by DTAA in their own country. Employer will not be responsible for such claims. TDS is a income tax and is applicable for all payments made, and contractor, its suppliers and subcontractors have to pay income tax that may be levied in the Employer's country on profits made by the Contractor
137	Section 8	SCC 47	SCC 47 (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the Initial Environmental Examination (IEE) and Environmental Management Plan (EMP) and (c) Comply with any corrective or preventive action (d) Allocate the budget required to ensure that such measures are carried out.	Referring to the SCC47, kindly provide us in details what permits and approvals are to be taken by Contractor. Also let us know in details what are these terms like IEE, SEP,EMP,RIPP mentioned in this clause and please share the related plans for contracator to comply.	IEE for the project at Lapsephdei and Changunarayan substation is already completed. Will share the report with the sucessful bidder.

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
138	Section 9	Contract Form	3.1 Effective Date (Reference GCC Clause 1) The Effective Date upon which the period until the Time for Completion of the Facilities shall be counted from is the date when all of the following conditions have been fulfilled: (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor. (b) The Contractor has submitted to the Employer the performance security. (c) The Employer has paid the Contractor the advance payment provided the Contractor has submitted the advance payment guarantee. Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.	Please modify the clause as below: The Effective Date upon which the period until the Time for Completion of the Facilities shall be counted from is the date when all of the following conditions have been fulfilled: (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor. (b) The Contractor has submitted to the Employer the performance security and the advance payment guarantee. (c) The Employer has paid the Contractor the advance payment for both portion - offshore and onshore portion (d) The Contractor has been advised that the letter of credit has been issued in its favor. (e) The employer has established letter of credit for re-imbursement of payment to contractor full value of contract. (f) The Employer handed over clear sites including necessary permits. Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.	Section 9, Contract Form will not be amended
139	Section 9	Contract Form	Payment terms	We understand that letter of credit shall be opened at the time of contract signing for the full value of contract. Please confirm.	Letter of credit will be opened after effective date of Contract and upon the submission of Proforma Invoices by the Contractor for the supply of plants and equipments from abroad
140	Additional clause	Additional clause	Land Avaialbility	Please confirm whether land is acquired or not by the customer.	land is acquired by the Customer
141	Additional clause	Additional clause	Funding Details required	Please confirm : We understand that NEA has signed the financial closure loan agreement with ADB. Please share the copy of same. The funding will cover both off shore and on shore portion payments.	Please visit the website of ADB to get loan agreement (Loan No. 3542- NEP : Power Transmission and Distribution Efficiency Enhancement Project)
142	Additional clause	Additional clause	Contractor's responsibilities	Please confirm: 1. Contractor will provide technical support/ assistance to Employer for taking all necessary approvals, permits & licences from all local, state or national government authorities or public service undertakings or other competent authorities. Contractor shall be responsible for only those permits that has to be taken in his own name. All necessary fees for such approvals shall be paid by Employer only.	As per the bid document

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
143	Additional clause	Additional clause	Additional clause	We understand that Contractor shall not be responsible for statutory approvals,tree cutting, forest clearance, site clearances, access to site and right of way. The same shall be in scope of Employer. Please confirm	Confirm
144	Additional clause	Additional clause	Bid validity	If the award is delayed by a period exceeding forty-five (45) days beyond the expiry of the initial Bid validity, the Contract Price shall be determined as follows: The Contract Price shall be adjusted by a factor reflecting local inflation during the period of extension and the foreign currency portion of the fixed portion of the Contract Price shall be adjusted by a factor reflecting the international inflation (in the country of the foreign currency) during the period of extension. Please confirm	No price adjustment will be made to the Unit Rate as quoted by the bidders.
145	Additional clause	Additional clause	COVID 19	Please amend the following as a seperate clause in tender: The Parties acknowledge the worldwide outbreak of the COVID-19, which is likely to affect the execution of the Agreement. The Parties agree, that Supplier shall be entitled to reasonable adjustments of the Delivery Schedule/ milestones/ delivery dates as well as to reimbursement of costs to the extent the delay and the costs are caused directly or indirectly by the outbreak of COVID-19.	Can not be amended as proposed

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
146	Additional clause	Additional clause	Additional Clause on Sales Contract Clause	The bidder request the inclusion of a below mentioned Sales Contract Clause in the Tender documents. 1. If Owner transfers goods (hardware and/ or software and/ or technology as well as corresponding documentation, regardless of the mode of provision) delivered by Contractor or works and services (including all kinds of technical support) performed by Contractor to a third party worldwide, Owner shall comply with all applicable national and international (re-) export control regulations. In any event Owner shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America. 2. If required to conduct export control checks, Owner, upon request by Contractor, shall promptly provide Contractor with all information pertaining to particular end customer, destination and intended use of goods, works and services provided by Contractor, as well as any export control restrictions existing. 3. Owner shall indemnify and hold harmless Contractor from and against any claim, proceeding, action, fine, loss, cost and damages arising out of or relating to any noncompliance with export control regulations by Owner, and Owner shall compensate Contractor for all losses and expenses resulting thereof, unless such noncompliance was not caused by fault of the Owner. This provision does not imply a change in burden of proof.	Can not be amended as proposed
147	Additional clause	Additional clause	Additional Clause	Bidder request to amend the following clause to the contract: The Customer/Purchaser acknowledges that Works on Site may generate and/or uncover hazardous waste which is subject to specific legal or regulatory requirements under applicable laws “hazardous materials” or “hazardous waste”. If Siemens discovers hazardous materials (including asbestos), environmentally hazardous substances, geological or geothermal conditions, archaeological findings or any other local environmental conditions which have an adverse effect on the Works, the Customer shall be liable for any required remediation and shall also reimburse Siemens for any reasonable additional costs and expenses. Siemens shall also be entitled to a proportionate extension of time to provide the Works. The Customer shall, at its expense, provide containers complying with all legal and regulatory requirements and shall handle, store and dispose of hazardous waste in accordance with the applicable laws. Siemens shall not be obliged to provide the Works on Site in unhealthy or dangerous surroundings. All the necessary safety and precautionary measures shall be taken by the Customer, at no cost to Siemens, before the Works on Site commence and shall be maintained by the Customer during Siemens’ performance of the Works on Site.	Can not be amended as proposed

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S.No	Tender Specification	Clause No.	Description	Query	Reply from NEA
148	Additional clause	Additional clause	Force Majeure	Bidder request the addition of following clause Contractor shall not be obligated to fulfill the Contract if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions.	Can not be amended as proposed
149				The drawings provided for TEKU S/S are not sufficient to develop a layout. As we can understand that some additional land are acquired for the new set up, bidder request to provide exact plot layout of the same	Additional Drawings, if available, will be provided to successful bidder

Procurement of Plant for Design, Supply, Installation and Commissioning of Gas insulated 220kV Lapsiphedi Substation, 132kV Changunarayan Substation and upgradation of Teku Substation and Suichatar Substation.

ICB: PMD/PTDEEP/LCSCP-073/74RE-01

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
150	BPS	Lapsephedi s/s price schedule, item no.L.5 & 6		We understand that 2 nos. of 220V and 48V DCDB shall be required for connecting with the bus coupler. Accordingly the qty in the BPS should be 2 sets. Please confirm.	Please quote as per the BPS.
151	BPS	Bid Price schedule / Item no. - L & M. 132/11 kV Changunarayan S/S	**Batteries** 1 110V 1.1 600 AH - 1 No 2 48V 2.1 600AH - 1 No **Float Cum Boost Battery Charger** 1 220V Float Cum Boost Battery Charger 1.1 80A/80A - 2 Nos 48V Float Cum Boost Battery Charger 2.1 80A/80A - 2 Nos	As per Price schedule, Batteries are considered 1 no. of 110V & 48V each rating, however charger are considered 2 nos. we understand that one charger shall be standby, only one changer shall be working at a time. Accordingly only one DC source to be provided to control and relay panel. Please confirm. Further, We request you furnish the LT SLD for 132/11kV substation to understand the LT Scheme.	We confirm that one charger shall be standby, only one changer shall be working at a time. Suitable switching arrangement shall be provided and is in the scope of the Contracctor. AC/DC SLD shall be prepared by the Contractor as per the specification and it shall be submitted to NEA for the approval during DDE. The battery and battaery charger system shall be suitable for 220V DC at Changunaryan and Lapsephedi and 110V DC for Teku and Suichatar.
152	BPS	Bid Price schedule / Item no. - K 132/11 kV Changunarayan S/S	LT Switchgear (As per Technical specification) 1 400V Main switchboard - 1 Set 2 400V ACDB - 1 Set 3 400V MLDB - 1 Set 4 400V Emergency LDB - 1 Set 5 220V DCDB - Sets 6 48V DCDB - 1 Set	In reference of above point, we also understand that DCDB shall be with one incomer without any bus coupler.	Refer above
153	Drawings		General arrangement layout Suichatar substation.	Please provide the scope demarcation on the layout of Suichatar substation where the 132kV extension to be constructed.	scope demarcation already included in the tender drawing
154	Drawings		Earthmat of Teku and Suichatar substation.	Please provide the layout of Teku Substation and Suichatar Substation to estimate the civil works.	additional drawings, if available, will be provided to successful bidder
155	General	132/66/11k Teku Substation	SLD of Teku substation (C/NEA/TEKU/SLD/1)	Please demark the scope under recent package for our understanding.	scope demarcation already included in the tender drawing
156	BPS	Bid Price schedule / Item no. - B2 (1.03) 132/66/11k Teku Substation	145kV, SF6 GIS Line bay Module [Module description as per Technical Projet specification]	We understand that referred line item should be "72.5kV, SF6 GIS Line bay Module [Module description as per Technical Project specification]' instead of "145kV, SF6 GIS Line bay Module [Module description as per Technical Project specification]". Please confirm.	Confirm. Please find the corrected line item in the attachment.
157	BPS	Bid Price schedule / Item no. - N (ii). 132/66/11k Teku Substation	VRLA type Battery bank for above DCPS system	Please furnish the Ah rating of VRLA type Battery bank for SMPS based 48V DC Power Supply (DCPS) system.	600Ah

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
158	General	Suichatar Substation Extension (132V AIS Outdoor)	Project Specific Requirement (PSR) / Modifications/Dismantling Works at Siuchatar and Teku Substation/ At Siuchatar substation, the employer intends to dismantle the existing 66kV DC dead end tower of Kulekhani -I & 2 and connect the 66kV cable from existing Gantry to next 66kV DC.....	Referred scope is not clear. Whether any 132kV D/C circuit line tower is in present scope. Please confirm.	New 132kV D/C Dead End Tower is not in the present scope, however, dismantling and modification works as mentioned in the Specifications are in the scope of the Contractor. However, suitable dead end gantry system or special gantry arrangement system for termination of the line shall be provided at both Suichatar and Teku, where required.
159	BPS	Bid Price schedule / Item no. - B (a)., (i) Suichatar Substation Extension (132V AIS Outdoor)	1Cx500 sqmm (XLPE) copper cable for bypassing 66kV line along with termination and jointing arrangement as per TS	Kindly confirm the run of 72kV 1Cx500 Sqmm (XLPE) copper cable to be connected per phase.	Single Cable (Single Run) per phase has been envisaged, however, Contractor shall confirm it during DDE.
160	BPS	Bid Price schedule / Item no. - B (a)., (ii) Suichatar Substation Extension (132V AIS Outdoor)	1Cx500 sqmm (XLPE) copper cable for line bay along with termination and jointing arrangement as per TS	Kindly clarify the requirement of 145kV 1Cx500 Sqmm (XLPE) copper cable.	145kV 1Cx500 Sqmm (XLPE) copper cable will be used for linking the new 132kV bays (2 Nos.) to the 132kV (145kV) overhead line termination arrangement (gantry) near to existing 132kV (145kV) dead end tower. The cable will originate from 132kV bay and has to be terminated at existing 4 circuit tower near the 66kV switchyard. The existing 66kV gantry has to be suitably modified to connect 132kV system.
161	BPS	Bid Price schedule / Item no. - B (a)., (ii) Suichatar Substation Extension (132V AIS Outdoor)	1Cx500 sqmm (XLPE) copper cable for line bay along with termination and jointing arrangement as per TS	We understand that above 72kV and 145kV shall be directly laid buried underground. No separate trench shall be made for bypassing the D/C lines. Please confirm.	Cable Trench, if required, as decided during DDE, shall be constructed for laying the 72kV and 145kV D/C cables.
162	General	-	-	We understand that all the 220/132/72/11kV XLPE cables shall be laid buried, without any dedicated trench. Please confirm.	Cable Trench, if required, as decided during DDE, shall be constructed for laying of the cables.
163	General	-	-	Please provide the line item for rod and pipe electrode for all the site under earthing material item as same shall be required and not reflecting in BPS.	Please include the costs in the existing line item
164	Switchyard Erection	Clause No. 8.3.1	The main ground system shall consist of a grounding grid buried minimum 0.6 meter below grade level. The grounding grid shall consist of copper flat conductor cable or stranded copper wire of minimum size (cross sectional area) 160sq. mm.	We understand that main grid shall be bared copper conductor flat or bared stranded cooper wire of size not less that 160sqmm. Please confirm.	Shall be decided during DDE
165	Switchyard Erection	Clause No. 8.3.2	The ground electrodes shall be 16mm diameter and 3.0 meter long (min.) copper clad steel. These shall be driven into ground and connected to the main ground grid.	Kindly confirm the thickness of steel cladding. On 16 mm dia copper rod.	Shall be decided during DDE

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
166	Switchyard Erection	Clause No. 8.4.2	The Contractor shall calculate the cross-section considering the maximum fault level of 40 kA.	Referred clause is not applicable for all substations. We understand that cross section size shall be calculated on the basis of highest fault level of the respective substations. Please confirm.	Please refer TS
167	General	All Sites		We understand that the line side insulator shall not be under present scope for all the voltage level applicable under the present scope.	For all sites, the conductor, insulator and hardwares from dead end tower to line gantries, where required shall be provided by the Contractor without any extra cost. Such cost shall be included in the respective BPS items. If any intermediate tower between deadend tower and gantries is required duing DDE, shall be designed and supplied by the COntrctor, such item will be paid through the line item "Lattice structure".
168	Chapter 6 – General Technical Requirement, Lighting System	All Sites		Please confirm outdoor lighting shall be LED type or conventional type.	LED type may be used as decided during DDE
169	Chapter 6 – General Technical Requirement, Lighting System	All Sites		Kindly provide the fixtures catalogue no. and description of LED type fixtures.	Shall be decided during DDE
170	Power and Control Cable	Clause No. 1.1.4	Employer has standardized the sizes of power cables for various feeders. Bidders are to estimate the quantity of cables and quote accordingly. The minimum sizes of power cables to be used per feeder in different application shall be as follows…….	We understand that bidder can optimize the size on cable on the basis of actual requirement.	Bidder can optimize the size on cable on the basis of actual requirement and the future requirement as decided during DDE, but the minimum size shall be as per TS.
171	Project Specific Requirement (PSR) / cl. No. - 4.3.3(q) /Dismantling of building		Dismantling and disposal of existing building, gantry structure as required and disposal.	We request you to clarify the scope of building dismantling at Teku s/s for our technocomericial considration.	Please visit the site for details. The building to be dismantled is the store building near the gate.
172	General	Existing Control Room Building of 132/66/11k Teku Substation		We understand that the existing control room building has sufficient space to accomadate the present scope equipments.	Existing Control Room building will have sufficient space to accommodate 66kV GIS system under the present scope of works because new 66kV GIS system shall be installed in the replacement of existing GIS system. The 132kV new GIS building shall house both GIS and new panels.
173	General	Existing Control Room Building of 132/66/11k Teku Substation		We understand that the existing 11kV switchear room in control room building has sufficient space to accomadate the present scope equipments. Please confirm.	Confirm
174	General	Existing Control Room Building of 132/66/11k Teku Substation		Plase confirm that no renevation work envisaged in the existing contol room building.	No major renovation work has been envisaged but the modification work in the existing control room building for GIS foundation, Cable Trenches, cable and panel supporting structures etc. as required for sucessful operation of the system shall be done by the contractor.

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
175	Project Specific Requirement: Augmentation and integration work related to SCADA System & CLARIFICATION-1, S. No. 200		The existing communication protocol used for SCADA at LDC Kathmandu is IEC 101. For the present scope of work no RTU is envisaged and the Data for SCADA purpose shall be obtained from the Substation Automation System (based on IEC 61850) using Gateway port with communication protocol IEC 101/104 as per requirement being provided under present contract.	We understand that as proprietary OEM softwares are installed at LDC. Hence any modification by any other bidder is not possible. Only OEM can modifiy & update the system inline with LDC & OEM existing contract & AMC provisions for future bays. However we can provide the data upto the gateway at substation level. Kindly confirm.	Please quote as BPS considering all required conditions.
176	Chapter 7, Substation Automation System	Clause No. 3.3.2 & CLARIFICATION-1, S. No. 202	Clause No. 3.3.2 Remote Control Centre (MCC) Communication Interface Employer will supply communication channels between the Substation Automation System and the remote control centre. & CLARIFICATION-1, S. No. 202 Interface equipments between Substation SAS & MCC & LDC is not considered in Bidder's scope. Please confirm.	We understand that interface equipments at MCC & LDC are already existing. Bidder to supply for present scope staions only & necessary technical coordination with LDC/MCC. Kindly confirm.	The interfacing equipment, if required during DDE, shall be provided by the Contractor.
177	Annexure-V - Specification for Revenue Meter & Metering (Instrument) Transformer. & CLARIFICATION-1, S. No. 198		Accuracy Class: 0.1s, IEC 687 (latest edition) or Equivalent.	Approved make: ELSTER (ABB), ACTARIS (Schlumburger), EDMI, SIEMENS etc. we found the **vendors mentioned doesn't have 0.1s class meters.** Requestng NEA to provide standard vendors list or allow with 0.2 class meters. Also note that CT metering core class as per TS is 0.2S only & not 0.1. Hence analog input provided to meters shall be with 0.2 class accuracy. Kindly confirm.	Class 0.2 is not acceptable as per TS. Please propose the suitable vendor.
178	General	CRP/SAS	Lapsephedi Substation	Please confirm that we do not have to integrate new SAS with the 400kV SAS (Yet to be constructed). It shall be scope of another contract in future.	Confirm but the contractor has to work in coordination with the 400kV upgrade project.
179	General	CRP/SAS	Siuchatar Station :- Availability of space to Mount the new panel is there. however dismanteling of existing unused panels may be needed, which is in the scope of Contractor	Kindly provide no. of panels to be dismantled for correct estimation purpose.	Approx. 2 Nos. of Panels may have to be dismantled; it shall be confirmed during DDE.
180	Project Specific Requirement	Clause No. 13.0 (k)	One number each Energy meter for the record and revenue purpose is to be provided for each 220/132/11V bays (Bus coupler bays to be excluded) at Lapsephedi and Changunarayan substations under present scope of contract, meeting the requirement as specified at Annexure – V.	We understand that energy meter shall be placed in the control panel of each bay. One number each of energy meter, as specified in the specification of the control and relay panel shall be provided (except BUS - Coupler bays). Kindly confirm.	Confirm

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
181	Chapter 15: Control & Relay Panels Chapter 19: GTR, GIS Clarification-1, Sr No. 358		The busbar protection scheme asked for is Main and check busbar scheme, applicable for double busbar system. The busbar protection relays shall be three for each voltage level. One each for busbar I and 2, one check relay.	i) We understand that main & check busbar shall be inbuilt feature of same busbar protection relay numeric unit. Hence separate relay & CT cores for busbar protection is not envisaged. Kindly confirm. ii) Also bidder proposes that the single busbar protection can cater both busbars. Same shall be accepted as standard utility practice. Kindly confirm.	Please refer earlier clarification 1.
182	BPS		General	Please confirm the make of SDH equipment at Barhabise substation, Chapali/Mulpani substations. Also we understand that no modification is envisaged in the existing SDH equipments.	Please refer earlier clarification 1.
183	GIS system		GAS monitoring devices	We understand that SF6 gas monitoring shall be done using respective bay BCU. Bidder shall provide communicable SF6 density switch for interconnection with BCU, not any transducer. Kindly confirm.	As per TS.
184	CRP/SAS		Type of panel	Type of panel shall be C&R panel with BCU mounted on control panel. No conventional items, indication meters, mimic & annunciator on control panel are envisaged as the substations are SAS based.	As per TS.
185	Vol II specific requirement Cl. 13.0		For Changunarayan S/S having indoor type 11 kV switchgear, each outgoing 11kV line feeder, take off gantry/tower shall be suitable for accommodating 01 set structure mounted isolator and 01 set surge arrestor.	We understand that 11kV relays shall be hooked with substaion SAS. Further downstream LT system control & interlocking is not in present bidder scope.	Confirm but indications of LT system shall be included in the SAS as station auxiliary
186	CRP/SAS		Type of panel	Synchronization shall be done in BCU. No separate conventional trolley envisaged. Kindly confirm.	As per TS.
187	CRP/SAS		Type of panel	we understand that MAIN-1 & MAIN-2 relays of same make but working on different operation principle shall be acceptable. Kindly confirm.	As per TS.
188	Project Specific Requirement	Clause No.4.1.1 B, C,D (a)	One No. 3-phase, SF6 gas insulated circuit breaker, complete with operating mechanism	We can offer Circuit Breaker of Single Phase Type wherein each phase Circuit breaker is driven by individuval drive mechanism. Please accept.	Please provide as per TS. Decided during DDE
189	Project Specific Requirement	Clause No. 4.1.2 C, D	3 Nos 1PH Voltage transformer, Surge arrester, Current transformer	For 132kV as the offered design is three phase encapsulated, the Qty of SA,VT, and CT shall be 1 Nos. three phase encapsulated as against 3 Nos , 1 Ph type.	Please provide as per TS

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
190	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 3.9, 3.2, GAS SLD	The GIS assembly shall consist of separate modular compartments e,g. Circuit Breaker compartment, Bus bar compartment enclosures, suitably sub-divided into individual arc and gas-proof compartments preferably for: 1) Bus bars 2) Intermediate compartment 3) Circuit breakers 4) Line Disconnectors 5) Voltage Transformers	For 132 kV As per offered design the CT primary shall be part of Circuit breaker compartment. Also there is no intermediate compartment in our design. Request to accept our proposal.	Please provide as per TS
191	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 3.,10	The switchgear, which shall be of modular design, shall have complete phase isolation. The conductors and the live parts shall be mounted on high graded epoxy resin insulators. These	132kV Design shall be three phase encapsulated type. Please accept.	Please provide as per TS
192	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 3.11	Due to safety requirement for working on this pressurized equipment, whenever the pressure of the adjacent gas compartment is reduced during maintenance, this compartment shall be designed so that it shall remain in service to perform its intended duty. The gas tight barriers shall be clearly marked on the outside of the enclosures.	BIL of the GIS is designed considering the SF6 gas insulation level at rated pressure. Due to safety reasons, we recommend to isolate/earth the gas compartment which are not at minimum operating pressure.	Please provide as per TS
193	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 3.12	The material and thickness of the enclosures shall be such as to withstand an internal flash over without burn through for a period of 300 ms at rated short time withstand current..	As per IEC 62271-203 Table -4 Burn through is accptable but No fragmentation. The offered product is in compliant with the said clause. We request customer to accept our proposal.	Please provide as per TS
194	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 3.38	The temperature rise for all enclosures shall not exceed 20 degree C above the ambient temperature of 50 degree C.	The temperature rise shall be as per as per the latest IEC 62271-100 Ed2.0,	Please provide as per TS

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
195	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 4.5.4	The gap between the open contacts shall be such that it can withstand atleast the rated phase to ground voltage for eight hours at zero pressure above atmospheric level of SF6 gas due to its leakage. The breaker should be able to withstand all dielectric stresses imposed on it in open condition at lockout presssure continuously (i.e. 2 pu. power frequency voltage across the breaker continuously)	Test on 8 hrs at zero bar is not specified by any standards. However we confirm Breaker will withstand all Dielectric Stresses imposed on it in Open Condition at Lockout Pressure for 15 minutes (i.e. 2 p. u. Power Frequency Voltage across the Breaker).	Please provide as per TS
196	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 4.5.6	Provisions shall be made for attaching an operational analyzer to record travel, speed and making measurement of operating timings etc. after installation at site. The contractor shall supply three set of transducer for each substation covered under the scope.	As per our understanding only tools / measuring Instruments mentioned in BPS to be quoted. If it is not part of BPS then same need not be offered. Please confirm.	These tools/measuring instruments shall be in the scope of the contrator, the cost of these tools/instrument shall be included in respective item of BPS and no separate payment will be made for such items.
197	TECHNICAL SPECIFICATION FOR GIS Section : GAS INSULATED SWITCHGEAR (GIS)	Clause No. 9.3.6	The arrestor enclosure shall be vertically or horizontally mounted to suit the layout of the switchgear as suggested by the supplier and each arrestor shall be fitted with a Online continuous resistive leakage current monitoring system. The system shall be provided with an interface to integrate with the substation automation system	Online continuous resistive leakage current monitoring meter is not a available in market. We request customer to consider to propose alternative.	Please provide as per TS
198	Clarification No: 1, Point No: 49, NEA Remarks		The distance or differential protection will depends upon the line length, so will be decided during DDE. As it is a turnkey project, contractor is understood to be responsible for design and installation of whole system. If differential relay is envisaged, particularly for changunarayan s/s, relays for both end shall be supplied and installed by the contractor.	Customer to provide the Length of the Lines to decide on Distance or Differential Protection	tentative length of lines will be provided to successful bidder
199	Future Bay & Spare Bay		SLD of Lapsephedi,Changunarayan, TEKU & Suichatar	Bay Control & Protection for Spare Feeder or Future Feeder is not considered in scope.	Bay Control & Protection for Spare Feeder shall be considered in present scope it is in BPS
200	General		Suichatar Substation: Integration of Busbar Protection	Do we need to consider Integration with Exiting Busbar Protection. Please confirm the existing Busbar Protection make. If existing Busbar protection is not present currently, do we need to consider New Supply of Busbar Protection. Please confirm.	No existing 132 kV Busbar Protection in Suichatar Substation;

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
201	Chapter 17, Substation Automation System	Switched Ethernet Communication Infrastructure:	The bidder shall provide the redundant switched optical Ethernet communication infrastructure for SAS. One switch shall be provided to connect all IEDs for two bays of 220kV yard to communication infrastructure. Each switch shall have at least two spare ports for connecting bay level IEDs and one spare port for connecting station bus.	As per clarifications we shall follow the TS for Spec requirement of Ethernet switch at 220KV. For 11KV bays can we use Dinrail Mounted Ethernet Switch to meet the requirement. Alterntively we can consider 1 Switch for 8 Bays. Please confirm.	During DDE
202	Control Panel for Protection		Please Offer Control panel with BCU; Refer Technical Specifications for details	Spec calls for Conventional Control Panel, BCU Based Control Panel is not provided. We will provide BCU Based control Panel. Hence Mimic, Digital Meters & Annunciators are not considered in scope	During DDE. As per TS.
203	Substation Automation		BOQ of SAS for 4 Substation	Please confirm the make of existing SAS at Suichatar substation.	Contract for SAS is in progress. The proposed manufacturer is GE
204	SCADA FOR TEKU SUBSTATION		Bidder understand that new SAS system is required in the tender. Please provide the details of all the existing bays, make, model. Communication protocol to make them integrate. Bidder request to confirm available communication port available in existing BCU in the 11kV or 66kV to make it controllable from SAS. Also provide details including make and Model of exiting BCU	As we have to provide new SAS at TEKU Substation. Please confirm the availability of BCU and Numerical Relays for the existing 11KV bays on IEC61850 Communication Protocol. Also, Please confirm the Meter Available at existing bays and their Communication Protocol. Due to Covid-19 Situtation we will not be able to do the site visit.	The existing make of relays are from Easun Reyrolle. The successful bidder shall provide new relyas and retrofit in the existing panels. Similarly for the metering system.
205	BUSBAR Protection for all Substation clarification Point 358		The busbar protection scheme asked for is Main and check busbar scheme, applicable for double busbar system. The busbar protection relays shall be three for each voltage level. One each for busbar I and 2, one check relay.	We shall provide Single Low Impedance Busbar Protection Centralized Scheme which shall used to protect Double main and Check Scheme. Please confirm	Double busbar Low Impedance Busbar Protection Centralized Scheme which shall be used to protect Double main and Check Scheme.
206	Part 4, Suichatar Substation Extenson (132V AIS Outdoor)		Price Schedule	We understand that any Fire Detection and protection system for extension of line bays is excluded from the bidder's scope of work.	Fire Detection and protection system for extension of bays is included in the bidder's scope of work.

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
207	Project Specific Requirement	Clause 4.1.28 (z) 1 Pg- 1-13 220 /132 KV NEW LAPSIPHEDI SUBSTATION	Contouring and site leveling works: The finished ground level has been finalized and certain volume of cutting has been done. The substation area shall be developed in terraces at single or multi levels by remaining cutting and filling to attain final finished ground level	Request to provide the Contour plan and the FGL/FGL's of the proposed single/mutiple levels.	Lapsephedi: Level 1: 1659.15m, Level 2: 1659.15 to 1657.75, Level 3: 1653. Level 1 & 2 is for switchyard, Level 3 is for Township quarter area Changunaryan: 1357.0m, 1357 to 1356.2m
208	Project Specific Requirement	Clause 4.1.28 (y) 1 Pg- 1-13 220 /132 KV NEW LAPSIPHEDI SUBSTATION	Soil investigation (except Plate load test) has already been carried out. NEA will provide Geotechnical Investigation Report of the substation area for reference. However contractor shall carry out Soil investigation (tests) for confirmation. The cost for such test shall be included in respective item in price schedule.	In "attachments" files the bore log data, Bore hole location plan and other soil parameter details are not provided. Only some extract and recommedations of soil investigations are provided. Request to provide the detailed soil investigation report for better understanding.	will be given to successful bidder for reference only, it shall be reconfirmed by the Contractor.
209	Project Specific Requirement	Clause 4.1.28(i) & (m) Pg-1-13 220 /132 KV NEW LAPSIPHEDI SUBSTATION	Strenthening of approach road: Strengthening of approach road/ bridges, if required during transportation of equipment, shall be included in respective item of price schedule. Employer will not be liable for any additional payment for such work.	WE understand that following- 1. We understand that culverts/Minor bridges are not envisaged in the stretch of 3 km approach road. Please confirm 2. if culverts/Minor bridges within the new approach raod are in the scope of the bidders then the payment for construction of culverts/minor bridges shall be done from the shedule 4(a) items no. 1,2,3,4,6,8 of part C civil works. Please confirm. 3. Strenghting of existing approach road/bridges shall be paid from from the shedule 4(a) items no.1,2,3,4,6,8,28 of part C ciivl works. Please confirm.	1. Please make necessry site visit. 2. Confirm 3. For roads outside the existing 3 km / 1.5 km approach road for Lapsephedi / Changunaryan SS, all strengtheing works shall be as per PSR 4.2.26 Civil works. No extra payment will be made.
210	Project Specific Requirement	Clause 4.2.26(y) ,1 Pg- 1-18 132/11 KV CHANGUNARAYAN SUBSTATION	Contouring and site leveling works: The finished ground level has been finalized and FGL of switchyard area has been achieved. However, the Contractor may have to carry out minor countouring and site leveling works (if required) to complete the scope of works. The cost for such works shall be included in bid prices elsewhere in price schedule and no separate payment will be made for such works.	Request to provide the Contour plan and the FGL/FGL's of the proposed single/mutiple terrance	Refer above

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
211	Project Specific Requirement	Clause 4.2.26(x) ,1 Pg- 1-18 132/11 KV CHANGUNARAYAN SUBSTATION	Soil investigation has been carried out. NEA will provide Geotechnical Investigation Report of the substation area for reference. However contractor shall carry out any Soil investigation(tests) for confirmation. The cost for such test shall be included in respective item in price schedule.	In "attachments" files the bore log data, Bore hole location plan and other soil parameter details are not provided. Only some extract and recommedations of soil investigations are provided. Request to provide the detailed soil investigation report for better understanding.	will be given to successful bidder for reference only, it shall be reconfirmed by the Contractor.
212	Project Specific Requirement	Clause 4.2.26(k), (l) ,1 Pg-1-18 132/11 KV CHANGUNARAYAN SUBSTATION	Strenthening of approach road: Strengthening of approach road/ bridges, if required during transportation of equipment, shall be included in respective item of price schedule. Employer will not be liable for any additional payment for such work.	WE understand that following- 1. We understand that culverts/Minor bridges are not envisaged in the strench of 3 km approach road. Please confirm 2. if culverts/Minor bridges within the new approach raod are in the scope of the bidders then the payment for construction of culverts/minor bridges shall be done from the shedule 4(a) items no. 1,2,3,4,6,8 of part C civil works. Please confirm. 3. Strenghting of existing approach road/bridges shall be paid from from the shedule 4(a) items no.1,2,3,4,6,8,28 of part C ciivl works Please confirm.	Refer above
213	Project Specific Requirement	Clause 4.2.26(aa) 1 Pg- 1-18 132/11 KV CHANGUNARAYAN SUBSTATION	Dismantling of existing structure, foundation, equipment etc., if required, shall be included with the bid prices elsewhere in the price schedule.	WE understand that there is no disamantling in the scope of the bidder as there is no line item mentioned in the price shedule. Please confirm.	No major dismantling works has been envisaged at Changunaryan Substation, however, minor dismantling works, if any, shall be in the scope of the Contractor and no seperate will be made for such works
214	Project Specific Requirement	Clause 4.3.3(o) Pg- 1-23 132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Contouring and Site leveling: The leveling in the area under present scope of work inside substation boundary wall is to be carried out to achieve finished ground level. The leveling area and finished ground level of switchyard shall be decided during detailed engineering stage. The leveling area shall be leveled in single or multi level as per topographical features/contouring details of substation land	Request to provide the Contour plan and the FGL/FGL's of the proposed single/mutiple level.	Bidder shall access the required data

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
215	Project Specific Requirement	Clause 4.3.3(n) Pg- 1-23 132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Soil investigation	Request to provide the soil investigation report for the existing Teku substation	May not be available with NEA as it is very old Substation. Bidder shall perform the soil test
216	Project Specific Requirement	Clause 4.3.3(r) Pg- 1-23 132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Strenthening of approach road: Strengthening of approach road/ bridges, if required during transportation of equipment, shall be included in respective item of price schedule. Employer will not be liable for any additional payment for such work.	WE understand that following- 1. We understand that contruction of approach road is not in the scope of bidder since the same is not appearing in the price schedule. Please confirm.	Please quote as per BPS
217	Item no. 19 of part C	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Dismantling and disposal of existing building, deducting the salvation cost for reusable materials-LOT -1	Request to provide the detail scope of dismantling to be done in the existing Teku substation.	The existing building is the store buidling near the gate.
218	General	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Modification of existing control room building	As there is no modifcation of control room building modifcation item, we understand any such work is not in the scope of bidder. Please confirm	Minor modification may be required as decided during DDE. Refer clarification above.
219	General	Suichatar Substation Extenson (132V AIS Outdoor)	Civil Scope of work	The civil scope of work for Suichatar substation is not mentioned in the specifc requirement therefore we understand that the scope shall be as per the civil price shedule. Please confirm	Please quote as per BPS, final quantity shall be decided during DDE
220	General	Suichatar Substation Extenson (132V AIS Outdoor)	Contour plan	Request to provide the contour paln with FGL details	additional drawings, if available, will be provided to successful bidder
221	General	Suichatar Substation Extenson (132V AIS Outdoor)	Soil investigation	Request to provide the soil investigation report for the existing Suichatar substation	Refer above the clarification for Teku SS
222	Item no. 19 of part C	Suichatar Substation Extenson (132V AIS Outdoor)	Dismantling and disposal of existing building, deducting the salvation cost for reusable materials-LOT -1	As there is no dismantling item is present in the civil price shedule-Suichatar, we understand that dismantling is not in the scope of bidder. Please confirm	All works involving dismantling of existing structure, equipments where required and modification of existing structure / equipment shall done by the sucessful bidder. The cost for such works shall be included in the BPS in respective items. No extra cost will be paid.

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
223	Vol.II, Technical Specifications for Fibre optic based Communication System Appendix - A Bill of Quantities, Section-2 , Cl.2.2.1 Vol.III, Schedule-1,Part-1, S.No.T.1.1		SDH Equipment (STM- 4 MADM, upto 3 MSP protected directions) The fibre optic network shall be based on the Synchronous Digital Hierarchy (SDH) having bit rate of STM-4 (upto 3 MSP protected directions) as... SDH Equipment (STM-4 MADM upgradable to STM - 16 upto 4 MSP protected directions)	SDH Configuration type provided under FOTE technical specifications & Price Schedule (BPS) are not matching. As per Specification FOTE BOQ mentioed in Appendix-A, SDH configuration requirement is STM-4, upto 3MSP however as per price schedule SDH configuration is STM-4 upgradeable to STM-16, 4 MSP. Also no. of protectted directions for STM-4 configuration not provided. We understand that STM-4 upto 3 MSP equipments are to be offered for this project requirement. Please confirm. Request NEA to amend SDH configuration type to STM-4,3MSP.	Please quote as per BPS
224	Vol.II, Technical Specifications for Fibre optic based Communication System Appendix - A Bill of Quantities, Section-2 , Cl.2.2.1 Vol.III, Schedule-1,Part-1, S.No.T.1.1		Two numbers of cards considered of same make of equipment installed at Barhabise S/S to integrate with existing equipment at Barhabise S/S. Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks, patch cord, DDF etc fully equiped excluding (ii) & (iii) below, integration with existing SDH equipment at Barhabise 220 kV Substation.	1.Please provide Make/model of existing SDH Equipment. 2. Please provide SDH type STM-1/4/16 3. Please confirm required cards for existing SDH equipment at Barhabise S/S will be provided by NEA . Also NEA will arrange to configure existing SDH equipment for integartion with new proposed SDH equipments under this project.	1,2. barabise substation is under construction. Make / Model not finalized. 3. Confirm
225	Vol.II, Technical Specifications Fibre Optic based Communication System Appendix - A Bill of Quantities, Section-2 , Cl.2.2.1 Vol.III, Schedule-1,Part-3, S.No.O.1.1		BaseEquipment(Commoncards,CrossConnect/control cards,opticalbasecards,powersupplycards,powercabling,otherhardwareandaccessoriesincludingsubracks,patchcord,DDFetcfullyequipedexcluding(i)&(ii)below,integrationwithexistingSDHequipment at LDC	1.Please provide Make/model of existing SDH Equipment at LDC. 2. Please provide SDH type STM-1/4/16 at LDC	Please find the attached Annexure IV regarding current communcation system in NEA.
226	Vol.II, Technical Specifications Fibre Optic based Communication System Appendix - A Bill of Quantities, Section-2 , Cl.2.2.1 Vol.III, Schedule-1,Part-2, S.No.S.1.1.1		Base Equipment (Common cards, Cross Connect/control cards, optical base cards, power supply cards, power cabling, other hardware and accessories including sub racks, patch cord, DDF etc fully equiped excluding (ii) & (iii) below, integration with existing SDH equipment at Chapali or Mulpani Substation.	1.Please provide Make/model of existing SDH Equipment at Chapali 2. Please provide SDH type STM-1/4/16 at Chapali. 3.We understand existing Areva/Alstom DXC will be used/interfaced with new proposed SDH Equipment under this project. Please confirm. 4. Data routing to LDC from substations proposed under this project will be routed through NEA existing backbone. Configuration of existing NEA backbone will in scope of NEA. Please confirm our understanding.	1. Existing make is ABB. For detail please visit Site or LDC. 3. Existing DXC can be used for interfacing. However, if required, the successful bidder has to provide the equipment and perform all necessary interfacing works. 4. The work under the scope is a turnkey project, the contractor has all responsibiltiy for sucessful operation of the system. The NEA will provide the OF connectivity.

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
227	Vol.II, Cl.4.1.21 & Cl.4.1.22 Vol.II,Annexure-III, Specifications Digital Protection Coupler NEA Clarification S.No.41 Vol.III, Schedule-1,Part-2, S.No.J.1		4.1.21 Digital protection Coupler (suitable for interfacing with E1 port of SDH equipment) and associated Power Cables, Communication & control cables between DPC and Relay Panel for both ends of the following lines :- 4.1.22 Changunarayan-Moolpani-132 kV D/C T/L The specification of Digital Protection coupler is attached as Annexure-III The DPC can be either housed in offered Control & Protection Panel / PLCC Panel or in separate panel. As total quantity is 14 Nos, it is intended to be installed in the substation in existing scope and adjoining substations, which will be decided during DDE	We understand Digital protection couplers supplied at existing subsations having exiting SDH Equipment & bidder scope is limited to supply of Digital Protetcion coupler. These Digital Protetcion couplers will be installed in existing CR Panel or PLCC Panel or existing SDH equipment panel & no new panels for DPC's are to be considered. Please confirm our understanding.	Please quote as per BPS, final quantity shall be decided during DDE
228	Vo.II, Annexure- VI Vol.III Part-1, S.No.K.2 Vol.III Part-2, S.No.J.2 (h) Provision of suitable interface for VOIP connectivity (50 Nos) NEA Clarification-1 S.No.467		The offered PABX must be capable of interfacing with 4-wire E&M VF channels provided by Power Line Carrier System (PLCC), E1 (G.703) / Ethernet channels provided by wideband communication equipment and 2 wire LS or 4 wire E&M channels provided by primary multiplexers. The PABX shall also be designed to operate over 2 wire leased telephone land line of other telecommunication provider. IP-PBAX as per TS-1 Set PBAX as per TS-1 Set	Please confirm whethhr requirement of new EPABX at Lapsiphedi & Changunarayan should have only IP Subscibers & should support E1,E&M, PLCC interfaces as well & only 50 IP Subscibers card is to be considered. Alternatively please provide EPABX configuration with required interfaces.	As per TS.
229	Vol.II, Technical Specifications Fibre Optic based Communication System Appendix - A, S.No.2.A1&A2 Bill of Quantities, Vol.III, Schedule-1,Part-1, S.No.T.1.1 Vol.III, Schedule-1,Part-2, S.No.S.1.1.1 Vol.III, Schedule-1,Part-3, S.No.O.1.1.1		Requirement of Termination equipment (Multiplexer a	As per BOQ mentioned in Fibre Optic Technical Specifcations, Termination equipment are to be supplied at 220/132kV Haledi,132/11kV Changunarayan, Kathmandu LD. However no requirement of Termination equipment (Multiplexer) specificed in Vol.III Schedule-1 for 220/132kV Haledi, 132/11kV Changunarayan & Kathmandu LD. Please confirm regarding requiremet of Termination equipment accordingly request to mend price schedule (BPS) after adding Termination equipment.	Please quote as per BPS, final quantity shall be decided during DDE
230	Project Specific Requirement	Pg. No. 17, Clause No. 4.2.2	Contruction of Auxialiary Building for LT Switchgear.	We understand that the LT Switchgear shall be placed in the Control Room. Hence there is no requirement of the auxialiary building. Please confirm.	Confirm

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
231	Project Specific Requirement	Pg. No. 21, Clause No. 4.3.2	Dismantling of 2 Nos 66/11 KV Transformers.	We understand that the dismantling of transformer foundations is also under the scope of the bidder. Please confirm.	Confirm
232	BPS	Sch 1 Lapsiphedi, Sr. No. 11	Digital Protection Coupler	We understand that the qty of DPC shall be 1 no. and not 1 LS. Please confirm.	Confirm
233			Propose to use IEEE for GIS manufacture which is american standard as well as executing in another NEA GIS substation prject also.		As per TS.
Sl. No.	**Reference**	**Clause No**	**Description**	**Query**	**Reply from NEA**
234	220/132/11kV at Lapsiphedi Substation	BPS Item No. Q.1	**Q** Cables along with clamps, glands, lugs and straight joints etc. **1.** 11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV Line	We understand that our scope is limited to 11kV outgoing feeder cable terminal including termintion kit for 11kV VCB end only. Other end cable termination kit and associated work is not in present scope of work.	Cable terminations at both ends is in the scope of the Contractor
235	220/132/11kV at Lapsiphedi Substation	BPS Item No. F	**F. POWER & CONTROL CABLES** **1.** 1.1 kV LV Cables **1.1** Power Cables(PVC)- (1.1kV grade) **1.2** Control Cable (PVC)- (1.1kV grade) **1.3** Cable glands, lugs & straight through joints for Power & Control cables	Please provide the line item in BPS for 1.1kV XLPE cable. Same shall be required to connect the Main Switchboard to Lt Transformer.	Please include the price in BPS items. No line item will be added in BPS.
236	220/132/11kV at Lapsiphedi Substation	BPS - VENDOR ASSESSED QUANTITIES		Please provide the line item for erection H/w for 11kV Transformer bay and Auxiliary Transformer bay.	Please include the price in BPS items. No line item will be added in BPS.
237	132/11 kV Changunarayan S/S	BPS Item No. P.1	**P.** Cables along with clamps, glands, lugs and straight joints etc. **1.** 11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV Line **2.** 11kV HT 3C, 400 Sq.mm Aluminum Cable alongwith accessories and termination equipments for termination of 11 kV LT Transformer **3.** 11kV HT Cable (1CX800 SQmm) Copper for 11k kV side of 132/11 kV Transformer alongwith accessories and termination equipments **4.** Power Cables - (1.1kV grade) **4.1** 3.5Cx300 sqmm (XLPE) cable for filter Machine along with 2 nos outdoor receptacles -250A	We understand that our scope is limited to 11kV outgoing feeder cable terminal including termination kit for 11kV VCB end only. Other end cable termination kit and associated work is not in present scope of work.	Cable terminations at both ends is in the scope of the Contractor

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
238	132/11 kV Changunarayan S/S	BPS Item No. E	**E.** POWER & CONTROL CABLES **1.** 1.1 kV LV Cables **1.1** Power Cables(PVC)- (1.1kV grade) **1.2** Control Cable (PVC)- (1.1kV grade) **1.3** Cable glands, lugs & straight through joints for Power & Control cables	Please provide the line item in BPS for 1.1kV XLPE cable. Same shall be required to connect the Main Switchboard to Lt Transformer.	Please include the price in BPS items. No line item will be added in BPS.
239	132/11 kV Changunarayan S/S	BPS - VENDOR ASSESSED QUANTITIES		Please provide the line item for erection H/w for 11kV Transformer bay and Auxiliary Transformer bay.	Please include the price in BPS items. No line item will be added in BPS.
240	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	General		We understand that our scope is limited to 11kV outgoing feeder cable terminal only. The cable termination kit and associated work for both end are excluded to present scope of work.	Cable terminations at both ends is in the scope of the Contractor
241	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	BPS Item No. E	**E** POWER & CONTROL CABLES **a** Power Cables(PVC)- (1.1kV grade) **b** Control Cable (PVC)- (1.1kV grade) **c** Cable glands, lugs & straight through joints for Power & Control cables	Please provide the line item in BPS for 1.1kV XLPE cable. Same shall be required to connect the Main Switchboard to Lt Transformer.	Please include the price in BPS items. No line item will be added in BPS.
242	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Part- B Item No. A.a - Erection Hardware	**A** Erection Hardware Insulator strings, Disc Insulators, Hardware, conductor, Al tube, bus-bar materials, cable trays, clamps, spacers, connectors including equipment connectors, Junction box, earthwire, buried cable trenches/pipe equipment & lighting, all accessories etc. for the following:	Please provide the separate line item for each voltage level and all kind of bays for our technocommerical consideration.	Please include the price in BPS items. No line item will be added in BPS.
243	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Existing Earthmat Layout		Please provide the existing earthmat layout or share the grid spacing and conductor size of existing earthmat.	Will be provided to sucessful bidder
244	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	Existing Earthmat Layout		We understand that existing earthmat shall be extended for the work under present package. Please confirm.	Confirm
245	132/11 kV Teku Substation upgrade (132V GIS & Indoor)	General		We understand that 145kV line shall be directly terminated in GIS bay. No outdoor equipment and gantry are envisaged.	Outdoor gantry is envisaged, modification of existing gantry or construction of new gantry shall be proposed, designed and get it approved from NEA for termination of 145kV line
246	Suichatar Substation Extension (132V AIS Outdoor)	Existing Earthmat Layout		Please provide the existing earthmat layout or share the grid spacing and conductor size of existing earthmat.	Refer above
247	Suichatar Substation Extension (132V AIS Outdoor)	Existing Earthmat Layout		We understand that existing earthmat shall be extended for the work under present package. Please confirm.	Confirm
248	Suichatar Substation Extension (132V AIS Outdoor)	Existing Single line diagram		Please provide the existing Single line diagram with present extension scope demarcation.	Drawing attached with bid document

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Sl. No.	Site	Reference Section & Claus	Bidder's Query/ Changes suggested	Clarification request from Bidder	Reply from NEA
249	Amendment 2-3, Sr. No. 2 & Clarification No. 1, Sr No. 284	Type Test of 132KV Transformers		As per clarification 1, Sr. No. 284, type test of 132KV Transformer is to be provided. However as per amendment 2-3, Sr. No. 2 type test of 3 different ratings i.e 22.5MVA, 45MVA & 63MVA ratings are required. We understand that type test of only 1 no. 132KV transformer(having minimum rating of 45MVA) has to be provided. For other rating, calculations will be submitted. Please confirm.	Type test report shall be submitted for individual ratings, i.e., i.e 22.5MVA, 45MVA & 63MVA ratings
Additional clarification issued by Employer					
250	Clarification No 1, S.no 438			Existing battery system	Existing battery system is sufficient and shall be used for 66kV GIS system. Howver, new battery and battery charger shall be for 132kV GIS, and shall be installed in suitable location at New GIS hall, or as agreed during DDE.
251			22.5MVA Data Sheet		New corrected data sheet attached
252			66kV GIS Data Sheet		New corrected data sheet attached
253			Technical particulars		New corrected Technical parameter sheet attached
254	Volume 3, Part 1	Schedule 4(d)	BPS		Payment and work details to be discussed during Contract negotiaion.
255			Requirement of DGA		The bidder shall provide online DGA suitable for minimum 8 gases with all ratings of Power transformer, with connectivity with the SAS system.
256			Installation of OPGW from Teku Substation to Suichatar Substation		The cost for dismantling of existing OPGW / Earthwire shall be included with the price quoted for installation of OPGW. No extra cost will be paid. Furthermore, dismatling and installation of OPGW / Earthwire shall be made in live line condition; no shutdown will be availabe for such works.
257			Stone soling for RCC works, substructure work etc		Minimum 100mm thick stone soling shall be provided below all underground structures, foundations, trenches etc. to provide a base for construction.
258			Contract No. and Title		PMD/PTDEEP/LCSCP-073/74 RE-01 and PMD/PTDEEP/LCSCP/073/074 RE-01 refer to the same contract

Attachment for Clarification No: 2

A. Chapter 12 – General Technical Requirement, Switchyard Erection

7.3 **Technical Parameters of Bus Post Insulators.**

Sl. No.	Description	245 kV	145 kV	66 kV
a)	Type	Solid Core	Solid Core	Solid Core
b)	Voltage Class (kV)	245	145	72.5
c)	Dry and wet one minute power frequency withstand voltage(kV rms)	460	275	140
d)	Dry lightning impulse withstand Voltage (kVp)	± 1050	±650	±325
e)	Wet switching surge withstand voltage (kVp)	—	—	—
f)	Max. radio interference voltage (in microvolts) at voltage of 508 kV (rms) , 305 kV (rms) and 156 (rms) for 765 kV, 400 kV &220 kV respectively between phase to ground.	500	500	500
g)	Corona extinction voltage (kV rms) (min.)	156	105	
h)	***Cantilever Strength***			
(i)	Total minimum cantilever strength (Kg)	800	600	600
(ii)	***Total minimum breaking strength (Kg)***	***1000***	***720***	***720***
i)	Minimum torsional moment	As per IEC-273	As per IEC-273	As per IEC-273
j)	Total height of insulator (mm)	2300		
k)	P.C.D Top (mm)	127		
	Bottom (mm)	254		
l)	No. of bolts			
	Top	4	***4***	***4***
	Bottom	8	***8***	***8***
m)	Diameter of bolt/holes (mm)			
	Top	M16	***M16***	***M16***
	Bottom dia	18	***18***	***18***
n)	Pollution level as per IEC-815	Heavy(III)	Heavy(III)	Heavy(III)
o)	Minimum total creepage distance for Heavy Pollution (mm)	6125	3625	1800

B. Annexure IV Existing RTU based SCADA & its Data acquisition system Attached as separate sheet

नेपाल विद्युत प्राधिकरण
स्था. २०१७
ESTD. 1985
NEPAL ELECTRICITY AUTHORITY

Annexure-IV

EXISTING RTU BASED SCADA & ITS DATA ACQUISITION

1.0 GENARAL INFORMATION

1.1 Remote Terminal Units

The Load Dispatch Centre (LDC) controls and monitors the network of Integrated Nepal Power System (INPS) via RTUs located at its various outstations.

In addition to the above, two local RTUs have been installed at the LDC: one to handle local-control-center status inputs and analog inputs and outputs; and the other for training, maintenance and testing purposes.

Manufacturers of existing SCADA system are:

LDC facilities: SIEMENS, Germany

RTU facilities: ABB, Germany

1.2 Data acquisition principles for existing Substation

The existing substations are provided with RTU for interfacing of the following supervisory controls and data acquisitions:

Remote Control

- Remote control of all 220/132/33kV circuit breakers.

Status indications

- Status indications of all 220/132kV circuit breakers, busbar and line isolators.
- Status indications of all 33kV line feeders.

Annexure-IV

Table 1.4 : Alarms to be acquired from each type of bay

Type of Alarm	Line Bay	Transformer Bay	Coupler Bay	Busbar	Station
Main protection trip	MPT	MPT	MPT		
Back-up protection trip	BPT	BPT	BPT		
Bay fault	BFA	BFA	BFA		
Circuit breaker fault	CBF	CBF	CBF		
Auto-recloser operated	ARO				
Temperature Alarm		TAL			
Temperature Trip		TTR			
Buchholz alarm		BAL			
Buchholz Trip		BTR			
General transformer/reactor talarm		GTA			
General transformer/reactor Trip		GTT			
Busbar Voltage status				BVS	
Station urgent fault					SUF
Station none-urgent fault					SNF
Station Control disabled					SCD
RTU alarm					RTU
Communication alarm					COM
Total	**5**	**10**	**4**	**1**	**5**

Measurements

- Busbar voltages (separate for each busbar and section) of all 220/132/33 kV Busbars.
- Active/reactive power for
  - All 220kV & 132kV Line feeders.
  - All 220kV, 132kV and 33kV Transformer feeders.
- Single phase current measurements for all 33kV lines participating in load shedding Scheme.

C. DATA SHEET FOR 22.5MVA POWER TRANSFORMER

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

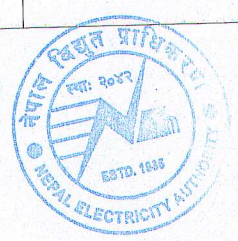
ITEM No.1: 22.5MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
				132/11kV, 22.5MVA
1	**Manufacturer and Country of Origin**			
2	**Year of manufacturing experience**	Years	7	
3	**Manufacturing's Designation as per submitted catalogue**			
4	**Applicable standard**		IEC	
5	**Type**		Outdoor, oil immersed, Core Type	
6	**Winding / Phase**		Three	
7	**Cooling**		ONAN	
8 8.1 8.1.1 8.1.2	**Ratings** Rated MVA ONAN ONAF	 MVA MVA	 18 22.5	
8.2 8.2.1 8.2.2 8.2.3	Rated Voltage Primary Secondary Tertiary(If Provided)	 kV kV kV	 132 11	
8.3 8.3.1 8.3.2 8.3.3	Maximum Voltage Primary Secondary Tertiary (If Provided)	 kV kV kV	 145 12	
8.4	**Number of Phases**		Three	
8.5	**Rated Frequency**	Hz	50	
9	**Noise Level** On ONAN Rating On ONAF Rating Rated Voltage	 dB dB	 <73 <75	
10	**Temperature Rise**			
10.1	Temperature Rise above 45°C ambient - In Oil by Thermometer - In Winding By Resistance	 °C °C	 50 55	
10.2	Hottest Spot Temperature in Winding Limited to	°C	As per IEC	
10.3	Temperature Indicators Make		KHILSTROM, Sweden or Equi.	
11 11.1	**Connection** High Voltage		Star	
11.2	Low Voltage		Star	
11.3	Tertiary(if provided)		Delta	
11.3	Vector Group Ref in accordance with IEC 76		YNyn0	
	Vector Group		YNyn0 D11	

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No.1: 22.5MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
12	**Taps**			
12.1	Type of Tap changer		OLTC Vacuum	
12.2	Tap Step		1.25%	
12.3	Tap Range		± 10%	
12.4	Nos. of Tap		17	
13	**Cooling Equipment (For ONAF)**			
13.1	Manufacturer/ Type			
13.2	Number of Fans Connected	Nos		
13.3	Rated Operating Voltage, Vac	Vac	230/400, 50Hz	
13.4	Rated Control Voltage, V	Vdc	110	
13.5	Rated Power	KW		
14	**OLTC Gear**			
14.1	Manufacturer / Type	MR, Germany, ABB, Sweden or Equivalent		
14.2	Rating - Rated Voltage - Rated Current - Step Voltage - Numbers of Steps	 KV A V Nos	 Suitable for 132kV class 17	
14.3	Control Suitable For - Remote / Local Operation - Auto / Manual Operation - Parallel Operation - Master Slave Operation	 Yes/No Yes/No	 Remote / Local Auto / Manual Yes Yes	
14.4	Rated voltage of Drive Motor	Vac	230/400 50Hz	
15	**Guaranteed losses**			
15.1	No Load Losses at Rated Voltage and Frequency on Max. MVA Base.	kW		
15.2	Load Losses ar rated Current and and at 75°C on max. MVA base	kW		
15.3	Cooler Losses for full load operation on max. MVA base	kW		
16	**Impedance at Rated Current and Frequency at 75°C Winding Temperatures on ONAF, MVA Base.** (Tolerance ±7.5% of the Declared Value)	%		
16.1	Positive Sequence Impedance at nameplate Normal tap	%	> 10 as per IEC	
16.2	Positive Sequence at Maximum Voltage Tap **(Tap 17)**	%		
16.3	Positive Sequence at Minimum Voltage Tap **(Tap 1)**	%		
16.4	Zero Sequence at Nameplate Tap			
17	**Reactance** at rated current and Frequency at 75°C on Maximum MVA base at a nameplate tap			



TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No.1: 22.5MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
18	**Efficiency at 75°C Winding Temperature at PF=0.9**			
18.1	At 100% Load	%		
18.2	At 75% Load	%		
18.3	At 50% Load	%	Above 99%	
19	**Load in Percentage** of Full Load and Power Factor at which maximum efficiency occurs.			
20	**Regulation at full Load and at 75C**			
20.1	At Unity Power Factor			
20.2	At 0.85 Power Factor Lagging			
21	**No Load Current in Percentage** of rated Current referred to HV and 50Hz.			
21.1	At 90% Rated Voltage	%		
21.2	At 100% Rated Voltage	%	<1	
21.3	At 110% Rated Voltage	%		
22	**Clearances**			
22.1	Minimum Clearances in air-HV/LV	mm		
22.2	Between Phases Between Phase and Earth	mm		
23	**Insulation Level**			
23.1	Power Frequency Withstand Voltage (1Min rms)			
23.1.1	Primary	kV	275	
23.1.2	Secondary	kV	28	
23.1.3	Tertiary (if Provided)	kV		
23.2	**Impulse Withstand Voltage**			
23.2.1	Primary	kV	650 (Crest)	
23.2.2	Secondary	kV	75 (Crest)	
23.2.2	Tertiary (if Provided)	kV		
24	**Details of Oil Preservation System**			
24.1	Type		Conservator Type	
24.2	Details of Oil Preservation System			
24.3	If Conservator Type, Urethane Air Cell provided	Yes/No	Yes	
24.4	Volume of Conservator	Cu.m		
24.5	Volume of Oil Between the highest and Lowest Levels	Ltrs		
25	**Pressure Relief Device** Min. pressure setting	Kg/cm2		

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No.1: 22.5MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
26	**Details of Bushings HV / LV / Neutral**			
26.1	Manufacturer / Type			
26.2	Voltage class	KV	145/12	
26.2	Creepage Distance	mm	25mm/kV	
26.3	Weight of Bushing	kg		
26.4	Standard Reference		IEC	
26.5	Dry Flash over Voltage	KV	275/28	
26.6	Wet Flash Over Voltage	KV	275/(28	
26.7	Impulse Withstand Voltage	KV	650/75	
27	**Insulating Oil**			
i	**Manufacturer and Country of Origin**			
ii	**Manufacturer's type designation**			
iii	**Type**		Insulating Oil	
iv	**Applicable standard**			
v	**Technical Specifications**			
v.1	Dielectric Breakdown Strength (Min) at 2.5mm gap	kV	30	
v.2	Flash Point (Min)	°C	135	
v.3	Density at 20°C (Max)	g/Cu.cm	0.895	
v.4	Viscosity at 40°C (Max)	mm^2/s	12	
v.5	Viscosity at -30°C (Max)	mm^2/s	1800	
v.6	Acidity Neutralization Value (Max)	mgKOH/g	0.01	
v.7	Sludge Value (Max)		0.1%	
v.8	Pour Point (Max)	°C	-40 C	
v.9	Corrosive Sulphur		Non-corrosive	
v.10	Water Content (Max)	ppm	40	
v.11	Dielectric Dissipation factor at 90 (Max)		0.005	
v.12	Appearance		clean free from sediment and suspended matter	
vi.	PCB Content		Not Detectable	
vii.	Approx. volume of Oil. ltrs			
Viii	Whether First filled of Oil with 5% excess provided	Yes/No	Yes	
28	**Core Material**			*132/11kV, 22.5MVA*
28.1	Maximum flux density at rated voltage on principal tapping and rated frequency:			

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No.1: 22.5MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
	Transformer legs	T		
	Transformer yokes	T		
28.2	Maximum flux density at 110% voltage			
	Transformer legs	T	< 1.9	
	Transformer yokes	T	< 1.9	
28.3	Grade of core used	Prime core		
	Type of Core	CRGO		
	Thickness of core lamination			
	Rated Loss per kg			
29.1	Maximum current density in windings at rated output:			
	Primary (HV)	A/mm^2		
	Secondary (LV)	A/mm^2		
	Weight of copper in windings:			
	Primary (HV)			
	Secondary (LV)			
30	**Bushing Current Transformers**			
30.1	Numbers of Cores - HV - LV - Neutral	 Nos Nos Nos	 1 / phase 1 / phase 1	
30.2	Accuracy class / Burden/Ratio - HV / HV Neutral - LV / LV Neutral		 PS / 15VA/100/1 PS / 15VA/1200/1	
31	**Lightning Arrestor mounted on** - HV - LV	 Yes/No Yes/No	 No Yes	
32	**Approximate Overall Dimension (L x W x H)**			
34	**Approximate Weights**			
34.1	Core and Coil	Kg		
34.2	Tank and fittings	Kg		
34.3	Oil	Kg		
34.4	Total Weight	Kg		
35	Delivery of Equipment in Months, following the Award of Contract (Allowing the time for Drawing Approval)		Months	
36	Is manufacturer ISO 9001 holder?	Yes/No	Yes	

37	Type test certificate submitted?	Yes/No	Yes	
38	Has manufacturer exported units?	Yes/No	Yes	
39	User's certificate submitted?	Yes/No	Yes	
40	Technical literature / drawings submitted?	Yes/No	Yes	

NOTE: The bidder must submit the user certificate of the manufacturer of Transformer.

Signed.....

As representative for.....

D. DATA SHEET FOR 53.33 MVA

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No. 3: 53.33MVA POWER TRANSFORMER

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
				220/132kV, 53.33MVA
1	**Manufacturer and Country of Origin**			
2	**Year of manufacturing experience**	Years	7	
3	**Manufacturing's Designation as per submitted catalogue**			
4	**Applicable standard**		IEC	
5	**Type**		Outdoor, oil immersed, Core Type	
6	**Winding / Phase**		Three	
7	**Cooling**		ONAN / ONAF1/ONAF2	
8 8.1 8.1.1 8.1.2	**Ratings** Rated MVA ONAN ONAF	 MVA MVA	 53.33	
8.2 8.2.1 8.2.2 8.2.3	Rated Voltage Primary Secondary Tertiary(If Provided)	 kV kV kV	 220 132 33	
8.3 8.3.1 8.3.2 8.3.3	Maximum Voltage Primary Secondary Tertiary (If Provided)	 kV kV kV	 225 145 33	
8.4	**Number of Phases**		Single (Three unit)	
8.5	**Rated Frequency**	Hz	50	
9	**Noise Level** On ONAN Rating On ONAF Rating Rated Voltage	 dB dB	 <73 <75	
10	**Temperature Rise**			
10.1	Temperature Rise above 45°C ambient - In Oil by Thermometer - In Winding By Resistance	 °C °C	 50 55	
10.2	Hottest Spot Temperature in Winding Limited to	°C	As per IEC	
10.3	Temperature Indicators Make		KHILSTROM, Sweden or Equi.	
11 11.1	**Connection** High Voltage		Star	
11.2	Low Voltage		Star	
11.3	Tertiary(if provided)		Delta	
11.3	Vector Group Ref in accordance with IEC 76		YNa0	

E. Data sheet for 66kV GIS

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No.5A : 66kV GIS (CIRCUIT BREAKER)

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
				66kV
1	**Manufacturer and Country of Origin**			
2	**Year of manufacturing experience**	Years		
3	**Manufacturing's Designation as per submitted catalogue**			
4	**Applicable standard**		IEC	
5	**Type**		GIS	
6	**Poles**		Three pole	
8	**Rated Voltage**	kV	66	
9	**Rated current**			
9.1	Continuous at 50 degree ambient	A	1250 2000 (B/C)	As per PSR
9.2	Short time for 1 sec at max. kV	kA	31.5	
10	**Frequency**	Hz	50	
11	**Temperature rise above 45 degree C ambient**		As per IEC	
11.1	Contacts	°C	65	
11.2	Terminals	°C	65	
12	**Rated short circuit breaking current**	**kA**	**31.5**	
13	**Rated short circuit making current**			
13.1	Peak	kA	80	
14	**Interrupting time at 100% capacity**			
14.1	Maximum opening time	mS		
14.2	Total interrupting time	mS		
15	**Closing time**	mS		
17	**Maximum capacitive current breaking capacity (rms)**	A		
18	**Insulation level**			
18.1	Impulse withstand voltage (crest)	kV	325	
18.2	Power frequency withstand voltage	kV	140	
19	**Operating mechanism**			
19.1	Type		Spring operated	
19.2	Number of mechanism per breaker		1	
19.3	Single/three phase auto-reclosure		3	
19.4	Operating voltage of closing and tripping coil	V DC	220	
19.5	Operaing voltage range -Closing -Tripping	% of rated voltage	 85-110% 70-110%	
19.6	Closing and tripping current	A		
19.7	Spring charging motor rating -Capacity -Rated voltage	 kW V	 110V DC	
19.8	Time required by motor to charge the spring completely	Sec	<30	

TECHNICAL DATA SHEET
(To Be Completed By the Tenderer)

ITEM No. 5a : 66kV GIS (66kV CIRCUIT BREAKER)

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
				66kV
20	Anti pumping device provided	Yes/No	Yes	
21	Trip-free feature provided	Yes/No	Yes	
22	**Number of N.C. contacts**	No.	8	
23	**Number of N.O. contacts**	No.	8	

ITEM No. 5b: 66kV DISCONNECTING SWITCH & EARTH SWITCH

	DESCRIPTION	UNIT	NEA REQ	DATA to be Filled
			66kV	66kV
1	**Applicable standard**		IEC	
2	**Type**		3 pole group operated	
4	**Rated Voltage**			
4.1	Nominal	kV	66	
4.2	Maximum	kV	72	
5	**Rated current**			
5.1	Continuous at 50°C ambient	A	1250 / 2000	
5.2	Short time for 1 sec at max. kV	kA	31.5	
6	**Temperature rise above 45 degree C ambient at normal rated current**		As per IEC	
6.1	Contacts	°C		
6.2	Current carrying parts	°C		
7	**Insulation level**			
7.1	Impulse withstand voltage(peak)	kV	325	
7.2	Power frequency withstand voltage (1min, rms)	kV	140	
13	**Main contacts**			
	- Material of fixed contacts		Provide	
	- Material of moving contacts		Provide	
	- Material of the contacts of the earthing switch		Provide	
19	**Auxiliary power supply**			
19.2	Control circuit	V, DC	110V DC	
19.3	Operating motor	V, phase	110V DC	
22	**Number of N.C. contacts**	No.	4 min	
23	**Number of N.O. contacts**	No.	4 min	
25	**Operating mechanism**		Motor & Manual Operated	
	Operating motor	W		
26	**Types of interlocks furnished**		Electrical and manual	
27	**Earthing Switch**			
27.1	Operating Mechanism		Manual and Motor Operated	
	Operating motor	W		

27.2	Type of Interlocks		Electrical and manual	
22	**Number of N.C. contacts**	No.	4	
23	**Number of N.O. contacts**	No.	4	
26	**Operating duty cycle**		O - 0.3sec – CO - 3min – CO	

ITEM No. 5c: 66kV CURRENT TRANSFORMER				
	DESCRIPTION	**UNIT**	**NEA REQ**	**DATA to be Filled**
			66kV	
5.	**Type**		Indoor, Metal enclosed	
7.	**Number of cores in each CT**	NO.	5	
9.	**Rated Primary Voltage**			
9.1	Nominal	kV	66	
9.2	Maximum	kV	72	
11.	**Insulation level**			
11.1	Impulse withstand voltage(peak)	kV	325	
11.2.	Power frequency withstand voltage (1min, rms)	kV	140	
13.	**Short time thermal rating**	kA	31.5	
14.	**Rated Peak Short circuit Current**	kA	80	
15.	**Rated VA burden for each core**	VA	As per PSR	
16.	**Accuracy class**	5P20 for protection 0.2 for metering PS for diff / Bus		
17.	**Current Ratio**	A	As per Technical Data in specification	
19.	**Overvoltage factor**		1.1	
19a	**Rated continuous thermal current**		1.2x	

ITEM No. 5d: 66kV VOLTAGE TRANSFORMER				
	DESCRIPTION	**UNIT**	**NEA REQ**	**DATA to be Filled**
	4. Applicable standard		IEC	
	5. Type		Indoor Metal enclosed	
	7. Rated primary voltage			
	a) Nominal	kV	66/√3	
	b) Maximum voltage	kV	72/√3	
	8. Insulation level			
	a) Impulse withstand voltage (primary)	kV	325	
	b) Power frequency withstand (1 min. rms) (primary)	kV	140	
	10. Rating			
	a) Voltage ratio	kV	66/√3: 0.11/√3	
	b) Rated burden	VA	50	
	c) Accuracy class		3P & 0.2 for metering	
	d) Overvoltage factor			
	- Continuous		1.1	
	- 30 seconds		1.5	
	h) Number of secondary windings		2/ 3	

ITEM No. 5e: 66 kV LIGHTNING ARRESTOR				
	DESCRIPTION	**UNIT**	**NEA REQ**	**DATA to be Filled**
			66kV	**66kV**
5	**Type**		Outdoor, gapless, Metal-Oxide	
6	**Voltage rating of L.A**	kV	60	
7	**Nominal discharge current**	kA	10	
8	**Surge counter with insulating base furnished**	Yes/No	Yes	
14	**Insulation level**			
	a)Impulse withstand voltage(peak)	kV	325	
	b)Power frequency withstand voltage (1min, rms)	kV	140	

5f: GAS INSULATED BUS				
23	**Bus arrangement formation**		Horizontal	
24	**Bus Duct Proposed**	1 or 3 Phase		

5g: GENERAL				
22	**Gas density detector provided**	Yes/No	Yes	
23	**Operation counter provided**	Yes/No	Yes	
24	**Space heater provided for cubicle**	Yes/No	Yes	
28	**Enclosure Protection**		IP55W	
29	Number of possible operations without maintenance under: Rated short circuit breaking current Rated normal current	 No No	 10 2000	
31	**Rated SF6 pressure**	kgf/cm2		
32	**Guaranteed SF6 losses/year**	kg	0.5% per Annum	
33	**Padlocking provision for local cubicle**	Yes/No	Yes	
22	UHF sensors for PD detection	Yes/No	Yes	
	Numbers of sensors			
34	**Total weight of the circuit breaker**	Kg		
35	**Mechanical dimension(LXWXH)**	mm x mm x mm		
36	**Delivery of equipment in months** following award of contract	(Allowing time for approval of drawing)		
37	Is manufacturer is ISO 9001 holder?	Yes/No	Yes	
38	Type test certificate submitted?	Yes/No	Yes	
39	Has manufacturer exported units?	Yes/No	Yes	
40	Technical literature / drawings submitted?	Yes/No	Yes	

Deviations from technical requirements:

Signed.....

Address.....

As representative for.....

Date.....

FC: Foreign Currency

LC: Local Currency

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

Item No.	Item description	Country of origin	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)	Custom, VAT and other taxes
					FC			FC	LC
			Unit	Quantity	Currency#	Unit Rate	Amount	9=8	10
	2	3	4	5	6	7	8 = (7) x (5)		
1									
B2	**72KV GIS Equipment**								
1.01	72kV, SF6 GIS Bus Bars Module [Module description as per Technical Project specification]		Set	2					
1.02	72kV, SF6 GIS ICT bay Module [Module description as per Technical Project specification]		Set	2					
1.03	72kV, SF6 GIS Line bay Module [Module description as per Technical Projet specification]		Set	4					
1.04	72kV, SF6 GIS Bus Coupler bay Module [Module description as per Technical Project specification]		Set	1					
1.05	72kV, 1250A, 31.5kA SF6/Air Bushing for Connecting GIS to AIS alongwith support structure		Nos	6					
1.06	72kV, 1250A, 31.50kA SF6/Air Bushing for Connecting GIS to Transformer alongwith support arrangement		Nos	6					
1.08	**Testing & Maintenance Equipment for GIS**		Set	1					
(i)	Partial Discharge Monitoring System for 145kV GIS System as per Technical Specification, GIS		Set	1					
(ii)	Dew Point meter for 145kV GIS System		Set	1					
(iii)	SF6 Gas Leak Detector for 145kV GIS System		Set	1					
(iv)	EOT crane for 145kV GIS Hall		Set	1					
(v)	SF6 Gas Analyser								
B2	**145KV Outdoor Equipment**								
1.0	145 kV Surge Arrestors		Nos	6					
a	120 kV Surge Arrestors (1- Phase)		Nos	6					
2.0	145 kV Post insulators, as required								
B3	**11kV, 25 kA (3 Phase) Indoor switch gear panel**								
1.0	**11 kV Indoor VCB Switchgear**		Nos	2					
1.1	11kV 2500A Incomer		Nos	2					
1.2	11kV 2500A Trunking								
C	**CONTROL RELAY PANELS (WITH AUTOMATION)**								
1.0	**132 kV and 66 kV**		Set	4					
a	132 kV Line Control & Protection Panel with distance relay / Differential relay		Set	2					
b	66 kV Line Control & Protection Panel with distance relay / Differential relay		Nos	4					
c	Current Differential Relay for other end of line		Set	2					
d	Transformer Control & Protection Panel (For 132/11kV)		Set	1					
e	Transformer Control & Protection Panel (For 132/66kV)		Set	1					
f	Buscoupler Control & Protection Panel		Set	1					
g	Bus Bar Protection Panel								
D	**COMMON EQUIPMENTS**								