

Notice to all Bidders

RE: CLARIFICATION NO. 2

Contract Title: Design, supply, installation and commissioning of the 400/220 kV Kimuka Substation and Associated Transmission Lines

Contract No.: KE-KETRACO-416094-CW-RFB

In accordance with the Instructions to Bidders ITB 7 [Clarification of Bidding Document, Site Visit, Pre-Bid Meeting], the Employer, Kenya Electricity Transmission Company Ltd. (KETRACO) is providing responses to the clarifications requested by bidders in one hundred and twenty-three (123) pages with attachments.



Ag. SENIOR MANAGER, SUPPLY CHAIN

Item	Reference	Clarification	Responses
1	Page 13 OF 85 Section VII. Employer's Requirements- A - Scope of Supply clause 1. "Scope of work"	Internal access roads to switchyard and to buildings shall be implemented to bituminous standard. Please provide the reference drawing for internal roads.	The Detailed Drawings shall be accomplished by the Contractor and approved by the Employer. For details refer to Section VII. Employer's Requirements- B – Specifications of bid docs.
2	Section VII. Employer's Requirements- A - Scope of Supply Clause 1.3, Page 21 1.3. Transmission line Works	Bidder request to exclude Transmission line works from the current scope. Please confirm.	Not accepted.
3	Part 1/ Sec I/ 17.8 Bid submitted with adjustable price quotation will be treated as non-responsive & rejected.	Request PVC may please be accepted for adjustment of price during performance of contract to reflect changes in the cost elements such as labor, material, transport and contractor's equipment linked to labor & material indices	Not acceptable. Refer to item no 1 of Addendum 4.
4	Part 1/ Sec I/ 20.2/ Pg 23 Bid Securing declaration	Can it be given?	In accordance with BDS 20.1, only Bid Security is acceptable. The various forms of the Bid Security are as stipulated in ITB 20.3 and the format for submission are provided in Section IV – Bidding Forms (Form of Bid Security – Bank Guarantee) and Addendum 4 (Form of Bid Security- Bid Bond).
5	Part 1/ Sec I/ 32.2/ Pg 30 Detailed Evaluation of Technical Part	Please clarify what is the minimum score / points required for bidder to qualify / pass the technical evaluation?	There is no minimum score. All Bidders' whose Technical Part are found substantially responsive shall proceed to Financial Evaluation.
6	Part 1/ Sec III/ 1.4/ Pg 57 400kV Switchyard equipment manufacturer's qualification	As per this clause, Manufacturer should have supplied at least 100 units/ year with 400 kV or above rating over last 10 years. We request that this clause may be removed as this will restrict participation from wider set of manufacturers & thereby reduce the competition.	Refer to item no 3 of Addendum 4.

Item	Reference	Clarification	Responses
7	Part 1/ Sec III/ 1.4/ Pg 57 400kV Switchyard equipment manufacturer's qualification	As per this clause, Manufacturer should have supplied at least 50 units of 400 kV or above outside the manufacturer's home country in last 5 years. We request that reference may be allowed from last 10 years instead of 5 years. This will enable wider participation from the manufacturers & increase the competition.	Refer to item no 3 of Addendum 4.
8	Part 2/ Sec VII-A/ 1.3/ Pg 25 Transmission line (T/L) works	We understand that there's requirement of T/L works at three sites totalling to ~2.5 kms. We request that this requirement may be removed from bidder's scope.	Not accepted.
9	Part 2/ Sec VII-A/ 1.5.1/ Pg 28 Right of Way	Please confirm that right of way is not in Bidder's scope. As per this clause 'right of way clearance' is mentioned. We understand that by Right of way (RoW) clearance, only clearance of RoW path of any vegetation e.g. trees, shrubs, bushes etc will be in bidder's scope. Right of Way including land acquisition/approval/compensation etc. will be done by KETRACO. Please confirm our understanding.	This is confirmed.
10	Part 2/ Sec VII-A/ 4/ Pg 32 Transportation	As per this clause, Contractor shall be responsible for all costs incurred by KETRACO or the Employer/ Employer's Representative, arising from repair or replacement due to damage to equipment or materials during transport, off-loading or erection on site, until take-over by KETRACO. We request deletion of this clause or else some limit/ cap may please be put.	Not accepted.
11	Part 2/ Sec VII-A/ 30.5/ Pg 91 Transport for Employer & Employer's Representative	As per this clause, Contractor is to provide vehicles for use of Employer/Employer's Representative, on 24-hour basis. We request that there should be a fixed maximum kilometre or fuel quantity on monthly basis, so that the cost can be calculated for bidding.	There is a fixed amount of fuel to be provided. Refer to clarification no 1 item no 27.

Item	Reference	Clarification	Responses
12	Part 1/ Sec II/ 11.2 (i)/ 5 a & b Type test report	As per sub clause 5 (a) the type test report period is 10 years whereas as per sub clause 5 (b) type test period is 7 years. Please confirm that the period is 10 years.	Confirmed, the period is 10 years. Refer to item 41 of Addendum 4. Note this supersedes item 1 of Addendum 3. .
13	Part 2/ Sec VII/ Cl 2.16.1 & 2.16.2/ Pg 16 & 65 2.16.1 Electrical Endurance Class- E2	A) We understand Electrical Endurance class is not applicable for disconnectors. For earthswitches it is E0 class. Please confirm our understanding is correct.	Not correct. Refer to Clarification no 1 item 176
14	Part 2/ Sec VII/ Cl 2.16.1 & 2.16.2/ Pg 16 & 65 2.16.2 Capacitive switching at maximum temporary overvoltage- C2	B) We understand Capacitive Switching is not applicable for Disconnectors and Earthswitches. Please confirm our understanding is correct.	Not correct. Follow the requirements provided in the bidding documents.
15	Part 2/ Sec VII/ Cl 1.52 & 1.53/ Pg 7,8 & 57 Opening & Closing Time of Circuit Breakers	We understand this will be as per OEM design specification & will be decided during detailed engineering. Please confirm our understanding is correct.	Not correct. The required values are to be provided by the Bidder in the bid.
16	Part 2/ Sec VII/ Cl. 32/ Pg 83 Site power	During site visit it is observed that the nearest power source from New Kimuka Site is approx. 800 metres & under jurisdiction of M/s Kenya Power (KPLC). We understand Employer will extend necessary support in arranging clearance /approval from KPLC for extension of power source to New Kimuka Site. Please confirm our understanding is correct.	The Contractor shall be responsible for getting power to site and shall make their own arrangements as required for application and approvals to achieve this. The Employer may facilitate where possible.
17		Please provide cost of LT power connection for Construction Works which'll be charged by KPLC.	Bidder to conduct due diligence
18	Part 2/ Sec VII/ Cl. 18.13/ Pg 291 Site Surveys	Please provide Finished Ground Level (FGL) for New Kimuka Substation or else please confirm finalising the same will be under bidder scope.	This shall be determined by the Contractor during detailed design and subject to approval by Employer / Employer's Representative
19	Part 2/ Sec VII/ Cl 1.3/ Pg 21 Transmission Line Works	A) Employer is requested provide the existing Type Tested Design, Drawing & Bill of Materials (BOM) of the Transmission line Towers between Suswa 220 kV & Isinya 220 kV circuit LILO arrangement into Kimuka 220/66kV substation. We understand the Towers are designed & constructed for 400kV Voltage class as mentioned in clause 1.3.2 (Page 22).	This information will be provided to the winning bidder.

Item	Reference	Clarification	Responses
20		B) Please confirm Right-of-way (RoW) clearance will be under employer scope.	Not confirmed. ROW clearance is under the Bidder's scope Refer to Section VII, Employer's requirements -A Scope of Supply Clause 1.5.1. However, acquisition of ROW is the Employer's responsibility. Refer also to item 9 of this clarification
21	Section IV – Bidding Forms -Method Statement [Note to the Bidder: (i) As required in BDS 11.2 (i), also include method statement, management strategies, implementation plans and innovations, to manage cyber security risks; (ii) if there are assessed supply chain risks, the method statement must include proposed supply chain risks management plans.] Upon review,we note that BDS 11.2 (i) does not mention any requirements related to the Method Statement or cybersecurity risk management. Instead, BDS 11.2 (i) outlines the submission of: 1. Code of Conduct for Contractor's Personnel (ES) 2. Management Strategies and Implementation Plans (MSIP) to manage ES risks and impacts 3. Technical Schedules 4. Type Test Reports and other technical documentation	Given this discrepancy, we kindly request your confirmation on the following: 1. Whether the cybersecurity risk management and supply chain risk management components mentioned in the note under "Method Statement" are mandatory requirements for the bid submission; and 2. If so, under which section or clause of the bidding documents these requirements are formally stipulated.	Bidder is to comply with requirements stipulated in BDS 11.2 (i).

Item	Reference	Clarification	Responses
22		When carrying out the bidding work for Kimuka, in order to promote the work more accurately and efficiently, our company is in urgent need of relevant materials in the construction drawing stage of the SUSWA~ISINYA line and the Suswa - Kimuka - Isinya 220kV line. I wonder if it would be possible to trouble you to provide the general specification for this stage, as well as the route map (it would be extremely beneficial for the subsequent work if the vector file of the route map can be provided), the tower overview diagram, and the geological exploration report.	The general specification is provided in the bid document. For the tower overview diagram, refer to Clarification no. 1 item no. 53. Additionally, refer to Clarification no. 1 item no. 2 in response to the geological exploration report.
23	Section III -1.Qualification Section IV -Personnel After carefully studying the project documents, we have found that there are inconsistencies between the key personnel requirements in Section III "Qualification" and those in Section IV "Contractor's Representative and other Key Personnel Schedule".	In view of the importance of the personnel configuration standards for the implementation of the project, we would like to consult with you: When filling in the relevant personnel information, should we uniformly follow the personnel requirements in Section III "Qualification"? We earnestly request you to provide clear instructions.	Refer to clarification no 1 item no 122
24	Bid Security	We are actively preparing to participate in the project bidding, and we have some questions regarding the method of issuing the Bid Security. We would like to inquire whether the Bid Security for this project needs to be issued by a local bank in Kenya ? Do you accept guarantees issued directly by banks from other countries?	Refer to clarification no 1 item no 148

Item	Reference	Clarification	Responses
25		Dear Owner, We would like to kindly request you to provide the following information: 1.Regarding Section-VII-2B, Clause 22.8.1, which requires the design of a temporary transition scheme to minimize the outage time of the existing line: please provide the specific details of this temporary transition scheme and its corresponding Bill of Quantities (BOQ). Given that implementing the temporary scheme will also necessitate an outage of the existing line, what is the maximum permissible outage duration allowed for this line?	Temporary transition shall be as per bidder's design which shall be subject to approval by Employer. This is elaborated in Section VII, Employer's requirements -B specification clause 22.8.1 . This is also included in the Price schedules , schedule 1B and schedule 4B In regards to outage duration refer to Section VII, Employer's requirements -A Scope of Supply Clause 1.2
26		3.Section-VII-2B, Clause 22.4.14 mandates the installation of aviation warning markers/devices. Please specify: a) In which line sections are these devices required, and what are the installation methods/requirements? b) Which specific towers require the application of aviation warning paint?	Bidders to price as per the provisions in the price schedules. Exact locations shall be advised to the Contractor during detailed design. Details as to the installation mode are provided in the referenced clause 22.4.14
27		4.Regarding the tower foundations for this project: Is the application of anti-corrosion coating required on the external surfaces of the foundations below ground level (below grade)?	This shall be informed by the site conditions following detailed soil investigation carried out by Contractor during detailed design.
28		5.As this project involves interconnection with existing transmission lines, please provide the as-built documentation for the existing SUSWA-ISINYA line and the Suswa-Kimuka-Isinya 220kV line. This documentation should include, but is not limited to: geotechnical investigation reports, tower drawings, foundation drawings, and details of conductor, earth wire (shield wire), and OPGW configurations and types/models. We specifically require the data pertaining to towers #1 through #8 of the Suswa-Kimuka-Isinya 220kV line section.	Requested details will be provided to the winning bidder where applicable. Refer to item no. 169 of this clarification as well for further details

Item	Reference	Clarification	Responses
29		6.Does the safety factor for the design of tower foundations differentiate between uplift and downward pressure? What are the safety factors for uplift and downward pressure respectively?	Refer to the schedules of technical information for tower foundation safety factors
30	the protection version numbers	Dear Owner, kindly provide the protection version numbers of the 220kV Isinya-Kimuka (Kimuka 220 Substation) line and the 220kV Suswa-Kimuka line.	Refer to clarification no 1 item no 97
31	Clarification of Transformer	Dear Owner, We would like to kindly request you to provide the following information: 1.In Parameter Table 11.14 of the bidding document, is it specified that the step voltage of the on-load tap changer should be 5000V? If so, is it necessary to meet this requirement?	Yes, this is a mandatory requirement.
32		2.The bidding document requires that the conservator, fin radiators, fan grilles, control boxes or compartments, and power distribution cabinets should be hot-dip galvanized and painted. Is it acceptable to respond by only hot-dip galvanizing the fin radiators?	Follow the requirements and specifications provided.
33		3.The distance from the sea is 400 kilometers. What should the anti-fouling grade be (which level of Grade C)?	This shall be as per bidder's design subject to approval by the Employer
34	house structure	Can steel reinforced concrete structures be used for all houses except for the warehouse?	Question is not clear.
35	Site leveling	Is all the land within the scope of land acquisition for Kimuka 400kV substation (approximately 475m x 233m) to be leveled (some of which is outside the substation wall)	Refer to attachment no. 13 of Addendum 4 for the General Layout (scope of work) drawing which shows the extent of the land where levelling and surface gravelling shall be applicable.

Item	Reference	Clarification	Responses
36	ITB 23.1-The deadline for Bid submission is: Date: 10 June 2025 Request for Extension of Bid Submission Deadline	Due to the need for additional time to finalize technical documentation, complete internal approvals, and coordinate with key equipment suppliers, we kindly request the Employer's consideration for an extension of the bid submission deadline. We respectfully propose an extension of one (1) month from the current submission deadline of 10 June 2025 to 10 July 2025, in order to ensure the preparation and submission of a fully compliant and competitive bid that meets the Employer's technical and commercial requirements.	Refer to Addendum No. 2 for the revised bid submission deadline.
37	LV power cable Halogen free according to IEC 60754-1 and EN 50267-2-1 No emission of corrosive gases according to IEC 60754-2 and EN 50267-2-2 Low smoke density according to IEC 61034-1/-2	The technical documentation requires the implementation of the following standards. However, IEC 60754-1/2 and IEC 61034-1/2 are standards for testing halogen acids and smoke density, which are applicable for testing low-smoke, halogen-free jacketed cables. The cables listed are PVC-jacketed cables, and PVC itself contains halogens, so these standards are not applicable for testing them.	Cables are required to be low smoke, halogen free as per Section VII, Employer's requirements -B specification clause 24. See revised Section VII, 2E Schedules of Technical Info Employer's requirements clause x in item no 4 of Addendum 4. This response supersedes that given in Clarification no 1 item 143.
38	LV power cable Shore hardness of outer sheath shall be as follows: . Halogen free material: Shore-D, 40 . Polyurethane (outdoor): Shore-A, 85 Shore hardness of core insulation shall be as follows: . Halogen free material: Shore-D, 48 . Outdoor material: Shore-A, 89	Outer sheath performance : "Outer sheath of the cables shall be widely resistant to oils, greases, acids and bases. "The technical documentation requires the jacket to be resistant to oil, grease, acids, and alkalis. The term "resistance to fgrease" is a very broad concept. The plastic cables of our company are only resistant to mineral oils. IEC 60502-1 does not include requirements for acid and alkali resistance. Plastic cables cannot be used in environments with strong acids or alkalis. We suggest that the assessment of acid and alkali resistance be canceled. Please be informed and confirm whether you can accept our company's technical requirements.	Not accepted.

Item	Reference	Clarification	Responses
39	LV power cable All Power cables shall have one separate conductor (TN-S system) of adequate size for protective earth. At the equipment to be supplied the protective earth is connected to the PE terminal . The cross-section of the neutral conductor shall be the same like that of the respective phase conductors.	IEC 60502-1 does not assess the hardness of materials. Moreover, our company has not tested this item. We suggest that the assessment of this item be canceled. Please confirm.	Question and reference are not clear.
40	LV power cable	In Technical Document 15.2.2, it is required that all cables have a separate grounding wire, meaning a dedicated wire for grounding is needed. Additionally, it requires that the cross-sectional area of the neutral wire be the same as that of the phase wire. However, some specifications in the list are 3+1 with unequal cross-sectional areas. Please confirm the size of the specifications in the list.	Question and reference are not clear.
41	LV power cable Conductor colours shall be selected according to KETRACQ standard.	Please provide the specific requirements for color identification.	Shall be finalised during detailed design.
42	LV power cable 15.2.9. Sealing and Drumming. Immediately after tests at the Contractor's premises, both ends of every length of cable shall be sealed with a metal cap (with pulling eye for power cables) which shall be lumbed to the sheath.	The technical documentation requires that "both ends of each section of cable shall be sealed immediately with a metal cap (for power cables with pulling eyes)." Our company's low-pressure cables are terminated with plastic heat-shrink tubing instead of metal caps. Please confirm whether you can accept our company's technical approach.	Follow the requirements and specifications provided.
43	Control cable The cables shall be designed for nominal voltage of (U0/U) of 300/500 V, the test voltage (50 Hz, 1min) shall be 3 kV.	There are no IEC and other standards required technologies for control cables. The 450/750V control cable complies with the national standard GB/T9330, and the 0.6/1kV control cable complies with the enterprise standard. There is no 300/500V. Please confirm whether the voltage level of the control cable is 450/750V or 0.6/1kV ?	Follow the requirements and specifications provided.

Item	Reference	Clarification	Responses
44	Control cable Outer sheath of the cables shall be widely resistant to oils, greases, acids and bases.	The sheath is required to be resistant to oil, grease, acid and bases. There are no assessment requirements for resistance to grease, acid or alkali in the control cable standards, and no such tests have been conducted. It is suggested not to conduct such tests. Is that okay? Please confirm whether oil resistance needs to be considered. Our company's plastic cables are only resistant to mineral oil (IRM#902).	Follow the requirements and specifications provided.
45	Control cable	The hardness of materials is not evaluated in the control cable standards. Meanwhile, our company has not tested this item. It is suggested that the evaluation of this item be cancelled.	Question and reference are not clear.
46	Control cable The dimensions of the cables shall meet the required operating currents, considering also that the permissible voltage drops are not exceeding the limit. Furthermore, the cables shall resist the expected thermic and dynamic short-circuit currents trouble-free. The maximum permissible voltage drops for all auxiliary power supply and control cable circuits up to the consumer shall be less than 5 %.	Our company's control cables are only used in control, monitoring circuits and protection lines, etc., as control connection lines. The current passing through the control cable is very small and is generally not taken into account. There are no assessment requirements for current-carrying capacity and voltage drop in the standard. It is recommended not to conduct such assessment.	Follow the requirements and specifications provided.
47	15.2.3. Control Cables. Multicore armoured and shielded control cables shall have standard cross section copper cores. The outer covering shall be preferably high density polyethylene, termite resistant, vermin proof, and suitable for the prevailing service conditions at site.	Please confirm whether the size of the conductor complies with the nominal cross-sectional area according IEC 60228?	Confirmed

Item	Reference	Clarification	Responses
48	Control cable Control/ signalling cables shall be of bare copper wires, multi stranded acc. to IEC 60228 Class 5 and with standardised conductivity in accordance with IEC 60228. Cable cores shall be stranded.	Please confirm whether the type of the control cable conductor is a Class 5 soft conductor that complies with IEC 60228 as required by the technology?	The cable shall be bare copper wires, multi stranded acc. to IEC 60228 Class 5 and with standardised conductivity in accordance with IEC 60228 as indicated in the bid document
49	Control cable	The control cable type is WDZB-KYJYP2/23 in the cable list, and the sheath material is low smoke zero halogen polyolefin. Technically, it is required that the sheath material be high-density polyethylene in the technical document. However, the sheath material in the control cable standard does not include high-density polyethylene, and it is uncertain whether high-density polyethylene can meet the low smoke zero halogen requirements. It is recommended that the sheath material be low smoke zero halogen polyolefin material according to the list model.	Follow the requirements and specifications provided.
50	Control cable The printing on the cable sheath shall be repeated in intervals of at least 0.5 m and shall contain -manufacturers name or trade mark -cable type designation -number and cross sectional area of the cable cores -mark of conformity to RoHS	In technology, the distance between the surface marking of the sheath: The distance between the end of one complete marking and the beginning of the next complete marking should not exceed 500mm. The cable control standard stipulates that this distance is 550mm. Can it be implemented according to the cable control index?	Follow the requirements and specifications provided.

Item	Reference	Clarification	Responses
51	Control cable The cable core insulation shall be either colour coded (cables to current transformers and voltage transformers) or black with white numbering acc to EN 50334, consecutive and starting with #1 from the inner core. Repetition of the numbering shall be in intervals of at least 0.3 m.	The cable control standard stipulates that the distance between two adjacent groups of digital marks should not exceed 50mm. It is recommended to follow the cable control standard. Is this acceptable?	Follow the requirements and specifications provided.
52	Control cable	Regarding RoHS, since the production process and packaging cannot fully comply with RoHS, the company uses insulating and sheathing materials that conform to RoHS. Only the insulating and sheathing materials meet RoHS requirements. Can the RoHS logo be printed on the cable sheath? Is this possible?	Follow the requirements and specifications provided.
53	MV power cable :	In the "Cable Inquiry List", the structure is steel tape armor and PVC outer sheath, while in the "Schedules of Technical information", the structure is aluminum sheath and copper wire shielding. The structure in "Section-VII-2B-Specification" is a lead sheath and a halogen-free, low smoke and flame-retardant outer sheath, which are contradictory. May I ask if it should be done according to the cable inquiry list?	The cable should have halogen-free, low smoke and flame-retardant outer sheath, with an aluminium metallic sheath and copper tape metallic screen. See revised Section VII, 2E Schedules of Technical Info clause g and Section VII, Employer's requirements -B specification clause 19 in item 5 and 6 of Addendum 4
54	MV power cable : A contamination check of extruded tape samples of the insulation should be laser checked for contamination prior to manufacture. The contamination level shall be: -Not more than 5 contaminants >100um/100g -Not more than 2 contaminants 90um<X<110um/100g -2kg per tonne of material should be checked	There is no testing method for insulating contaminants in the national standard, and our company has not conducted any tests either. We cannot guarantee that it will pass the test. It is suggested that this item not be considered. Is it feasible?	Follow the requirements and specifications provided.

Item	Reference	Clarification	Responses
55	MV power cable : The oversheath should be legibly embossed along its length with the following information: -66000VElectric Cable,(Manufacturer),(Year of Manufacture) PROPERTY OF KETRACO -11000V Electric Cable, (Manufacturer),(Year of Manufacture) PROPERTY OF KETRACO The embossed letters and figures shall be raised and consist of upright block characters along two or more lines, approximately equally spaced around the circumference of the cable.	Our company cannot perform embossed printing. We suggest printing with ink, which is clear and durable. Do you agree?	Follow the requirements and specifications provided.

Item	Reference	Clarification	Responses															
56	the busbar selection	In the Kimuka 400/220kV substation and related transmission line project in Kenya, the busbar selection includes two types: Φ 250/238mm (6mm wall thickness) and Φ 160/148mm (6mm wall thickness). The wall thickness of the busbars is relatively thin, and they are prone to deformation during transportation, transfer, and installation. It is recommended to refer to the domestic power grid or other overseas project power grid construction selection: Φ 250/230mm (10mm wall thickness), Φ 160/140mm (10mm wall thickness), which have better electrical and mechanical performance. For overseas projects, please refer to: <table><tr><th>Serial Number</th><th>Ordering unit</th><th>project name</th><th>Specification and model</th><th>notes</th></tr><tr><td>1</td><td>China Electric Power Technology Equipment Co., Ltd</td><td>Pakistan builds 500kV Lahore North substation</td><td>Φ 250/230mm (10mm wall thickness)</td><td></td></tr><tr><td>2</td><td>China Electric Power Technology Equipment Co., Ltd</td><td>Pakistan Merah 500kV Switching Station Project</td><td>Φ 160/140mm (10mm wall thickness)</td><td></td></tr></table>	Serial Number	Ordering unit	project name	Specification and model	notes	1	China Electric Power Technology Equipment Co., Ltd	Pakistan builds 500kV Lahore North substation	Φ 250/230mm (10mm wall thickness)		2	China Electric Power Technology Equipment Co., Ltd	Pakistan Merah 500kV Switching Station Project	Φ 160/140mm (10mm wall thickness)		Question and reference are not clear.
Serial Number	Ordering unit	project name	Specification and model	notes														
1	China Electric Power Technology Equipment Co., Ltd	Pakistan builds 500kV Lahore North substation	Φ 250/230mm (10mm wall thickness)															
2	China Electric Power Technology Equipment Co., Ltd	Pakistan Merah 500kV Switching Station Project	Φ 160/140mm (10mm wall thickness)															

Item	Reference	Clarification	Responses								
57	According to the technical document 15.2.1 15.2. Technical Description 15.2.1. General All cables shall fulfil the following characteristics: • Halogen free according to IEC 60754-1 and EN 50267-2-1 • No emission of corrosive gases according to IEC 60754-2 and EN 50267-2-2 • Low smoke density according to IEC 61034-1/-2 • Flame retardant according to IEC 60332-1 • Minimal fire propagation according to IEC 60332-3-24 (type of test according to category C) <table border="1"> <tr> <td>1.11</td><td>Type and thickness of outer sheath material</td><td>mm</td><td>extruded P.V.C</td></tr> <tr> <td>1.8</td><td>Type and thickness of inner sheath material</td><td>mm</td><td>extruded P.V.C</td></tr> </table>	1.11	Type and thickness of outer sheath material	mm	extruded P.V.C	1.8	Type and thickness of inner sheath material	mm	extruded P.V.C	According to the technical document 15.2.1, the cable is required to be low smoke halogen-free flame retardant, but the inner and outer sheaths in the parameter table are required to be PVC. Please confirm the materials of the inner and outer sheaths?	Refer to item no 37 of this clarification
1.11	Type and thickness of outer sheath material	mm	extruded P.V.C								
1.8	Type and thickness of inner sheath material	mm	extruded P.V.C								
58	Section III – Evaluation and Qualification Criteria-1.2 Contractor’s Representative and other Key Personne Under Qualification, Contractor’s Representative and other Key Personnel (No. P1 to P18) “At least three (3) completed similar projects in similar position in the last ten (10) years”	does a professional with 220kv substation and transmission line qualify for these positions (No. P1 to P18) or does similar project only refers to 400kv substation and transmission line projects? Kindly clarify.	Refer to clarification no 1 item no 112								
59	Part 1, Section I - Instructions to Bidders-ITB19.2 In exceptional circumstances, prior to the date of expiration of the Bid validity, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 20, the Bidder granting the request shall also extend	If a Bid Security is specified pursuant to ITB 20.1, the Bid security shall be a demand guarantee in any of the following forms at the Bidder’s option: (a)an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding or surety company); (b)an irrevocable letter of credit; (c)a cashier’s or certified check; or (d)another security indicated in the BDS,	Refer to clarification no 1 item no 148.								

Item	Reference	Clarification	Responses
	the Bid Security for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in ITB 19.3.	from a reputable source from an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Employer's Country the issuing non-bank financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable unless the Employer has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original date of expiry of the Bid validity, or beyond any extended date if requested under ITB 19.2.	
	Part 1, Section II ITB 20.1 A Bid Security shall be required. The amount and currency of the Bid Security shall be Sixty-Six Million and Three Hundred Thousand Kenya Shillings (KES 66,300,000) or equivalent in a freely convertible currency.		
	Part 1, Section II ITB 20.3 (d) Other types of acceptable securities: None	As bidder outside the employer's country, the compliance of bid security has been one of our major concerns. We are intended to directly issue our bid security in the form of bank guarantee using the Bid Security Form included in Section IV form our bank based in our country as guarantor, and the bid security-bank guarantee thereafter shall be advised to the beneficiary(the employer) by an advising party in the employer's country . Could you please kindly clarify to us whether we can provide bid security in this way or we need to reissue our bid security through a correspondent bank in the employer's country?	

Item	Reference	Clarification	Responses
60	Part 1 Section IV – Bidding Forms-Sub-Factor 2.4 Litigation History Sub-Factor 2.4 Litigation History-No consistent history of court/arbitral award decisions against the Bidder[The Bidder shall provide accurate information on the related Letter of Bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Bidder or any member of a joint venture may result in failure of the Bid.]since 1st January 2009.	In item 2.4 Litigation History, it reads like this: No consistent history of court/arbitral award decisions against the Bidder since 1st January 2009. Please kindly clarify to us that the starting year of Litigation History since 1st January 2009 should be the starting year since 1st January 2019.	Confirmed. This should be 1st January 2019. Refer to item no 7 of Addendum 4.
61	Section_IV-Price_Schedues_16-5-24 Section-VII-2A-Scope & General Requirements Item 15.31	The BOQ specifies a 1km access road, Please provide the Path plan about the access road.	Refer to item no 30 of Addendum 4 for details.
62		The bid security will expire on a date that is two weeks more than the tender requirements , please ask whether this is feasible. If it is no problem, we will issue it.	Refer to Section I, Instruction to Bidders (ITB) Clause 20.3.

Item	Reference	Clarification	Responses
63	Section - VII-2B-Specification Insulator	Request to please confirm on below points; 1. Please provide us strength details of Post Insulators. If possible please share more technical details of post insulator. i.e. Ground height, Anti-corrosion level, Dry arc distance, Electrical parameter, Mechanical parameter, Interface information etc.	The Design shall be done by contractor 1. for post insulator: A) The strength class of post insulator shall be determined after presentation and acceptance of tubular mechanical calculation according to IEC60865 and mentioned standard in tender document for both 220 and 400 kV switchyard. The typical value of the Dry arc distance and height and etc of post insulator are mentioned in related standard (IEC 60273) and bidder shall choose post insulator that satisfies electrical clearance of the substation according to IEC 60060, 60071, Electrical 19 and other standards for both 220 and 400 kV switchyard.
64	Part 1 BDS, ITB- Submission of Bid	The deadline for Submission of Bid is 10th June 2025. Please consider our request for extend the bid submission deadline up to 2 weeks for banking and vendor communication.	Refer to Addendum No. 2 for the revised bid submission deadline.
65	Section-VII-2A-Scope & General Requirements Soil Resistivity	Request you to please provide us Soil resistivity details for existing substation or kimuka location.	Refer to clarification no 1 item 2
66	Section - VII-2B-Specification 400kV and 220kV Disconnectors	In datasheet, the requirement is horizontal type. Can we offer vertical type disconnectors ? Please confirm	Refer to clarification no 1 item 175
67	Section - VII-2B-Specification Transformer and Circuit breaker online condition monitoring system	Please confirm, the online monitoring system require for 220kV ration circuit breaker? Which in BOQ the circuit breaker quantity are 06 numbers.	Confirmed. This is applicable for 220 kV circuit breakers as well. Refer to item no 8 and no 34 of Addendum 4
68	Section - VII-2B-Specification Transformer and Circuit breaker online condition monitoring system	It is assumed that the monitoring systems for transformers and circuit breakers will be integrated with the substation gateway. Please confirm.	Confirmed. They shall be integrated with SCADA and gateway.
69	Section - VII-2B-Specification Transformer and Circuit breaker online condition monitoring system	It is assumed that the substation gateway will be connected to the ECC of Ketraco for transferring monitoring signals to the EAM (Enterprise Asset Management). Please confirm.	Correct, this will be required. Refer to item no 8 and 9 of Addendum 4.

Item	Reference	Clarification	Responses
70	Section - VII-2B-Specification Transformer and Circuite breaker online condition monitoring system	It is assumed that no condition monitoring software is required at the substation level for data storage and visualization. Please confirm.	Not correct. This is required. Refer to item no 8 of Addendum 4
71	Section - VII-2B-Specification Transformer and Circuit breaker online condition monitoring system	It is assumed that telecommunication infrastructure between the Kimuka substation and ECC of Ketraco will be configured to allow communication between tablet used for equipment inspection and ECC (EAM) over HTTPS. Please confirm.	Correct, configuration is required and this is included in the bidder's scope. Refer to Section VII. Employer's Requirements- B – Specifications Clause 9
72	Section-VII-2A-Scope & General Requirements 400kV and 220kV Insulators	There is mentioned in scope document the substation string insulator material shall be porcelain made or glass, but in Datasheet it require only glaze porcelain. Please confirm.	Refer to clarification no 1 item 31 Refer to item no 10 of Addendum 4
73	Technical specification - 24. Low voltage power and control cables Low voltage power and control cables	In Technical specification - 24. Low voltage power and control cables , Clause no.-24.2.1, General, All cables shall fulfil the following characteristic, a. Halogen free according to IEC 60754-1 and EN 50267-2-1, b. No emission of corrosive gases according to IEC 60754-2 and EN 50267-2-2, c. Low smoke density according to IEC 61034-1/-2, d. Flame retardant according to IEC 60332-1. Outer sheath of the cables shall be widely resistant to oil, greases, acids and bases. But in datasheet; a) LOW VOLTAGE CABLES DATA SHEET, - Sr.no.-1.5, Material of conductor - CU, - Sr.no.-1.8, Material of inner sheath - PVC, - Sr.no.-1.11, Material of Outer sheath - PVC. Please conifrm which we need to consider LSZH or PVC ?	Refer to item no 37 of this clarification.

Item	Reference	Clarification	Responses
74	Technical specification - 24. Low voltage power and control cables Low voltage power and control cables	24.2.2. Power Cables, Power cables shall have copper conductor, XLPE insulation, inner covering and a flame retardant sheath. All Power cables shall have one separate conductor (TN-S system) of adequate size for protective earth. At the equipment to be supplied the protective earth is connected to the PE terminal. so Please clarify, for (TN-S system) one separate conductor we have to consider?	Confirmed
75	a) 11kV XLPE INSULATED CABLE SYSTEM (with solid bonding)	Please clarify the conductor size 2*95 mm ² is not clear. or we can consider suitable size?	This means the cable should have 2 conductors each with 95mm ² . Follow the requirements as indicated.
76	Technical specification - 19. XLPE Insulated 11kV Cable, a) 11kV XLPE INSULATED CABLE SYSTEM (with solid bonding)	Please refer the Specification Clause no.-19.2.1, General, 19.2.7, Clause no.- 19.2.10, and Datsheet a) 11 KV XLPE insulated cable system, Sr.no.-1.5, Conductor size 2*95 Sr.no.-1.5, metal sheath type - AL. Sr.no.-4.7, Material of metallic screen - Copper wire, Sr.no.-4.9, Material of metallic sheath - Aluminium, Sr.no.-4.10, Protective anti-corrosion external sheath covering - Bitumen undercoat layer & material of outer sheath - MDPE. So, please confirm 1) Material of metallic shield not clear, kindly confirm material of metallic screen 1st - only Copper wire screen followed by open helix copper tape or 2nd - Copper wire screen followed by open helix copper	1-3 Refer to item no 53 of this clarification Follow the requirement as indicated in the bid document.

Item	Reference	Clarification	Responses
		tape with metallic sheath Both side Co-Polymer coated Aluminium tape applied longitudinally or 3rd - Corrugated Al Sheath with Bitumen Compound or 4th - lead sheath. 2) Kindly confirm material of inner & outer jacket - MDPE or LSZH or PVC. If sheathing material required PVC or MDPE, then below properties not applicable. For your information fire resistance properties -IEC 60332-1 (Fire), IEC 60332-3A (Fire), IEC 61034 (Smoke), IEC 60754 (Minimal Halogen). 3) Specification is applicable for unarmoured cable and data sheet and BOQ Called Armoured cable, hence please confirm armour required or not. 4) Mentioned cable size 2*95 mm² is wrong, it should be 1C x 95 Sq.mm or 3C x 95 Sq.mm. or we can consider suitable size?	
77	Technical specification - 19.3.2. Transformer Terminations 11kV cable end termination	Please confirm heat shrink type outdoor/indoor cable end termination accepted ? If not, then please suggest.	Follow the requirements and specifications provided in Employer's Requirements- B – Specifications clause 19.3.2. If it complies and meets the requirements, then it is acceptable
78	Technical specification - 19. XLPE Insulated 11kV Cable, a) 11kV XLPE INSULATED CABLE SYSTEM (with solid bonding)	As per tech spec & data sheet, cable required with Lead sheathed, hence please confirm its short circuit rating with duration as required in tech spec clause 19.2.7.d.	Refer to item no 53 of this clarification. Short circuit rating and duration is as per Section VII - Employer's Requirements- E – Schedules of Technical Information clause g '11kV XLPE INSULATED CABLE SYSTEM' item 3.5

Item	Reference	Clarification	Responses
79	ITB 4.8 & 5.1 Section V - Eligible Countries/country of origin/Sourcing of Equipments	Equipments can be sourced from any eligible country(as per ITB 4.8 & 5.1) complying with the OEM's qualification requirement criteria .There will be no embargo supplying of any equipments from any country if equipments qualification is met as per tender document,subject to country being in World bank approved list of Company.	Refer to item no 2 of Addendum 4.
80	Technical Specification_3.2.5.1 Emergency Trip Device.	The offered breaker can be tripped by pushubg the mechanical plunger inside the operating mechanism, hence emergency trip device is not envisaged.	Follow the requirements as indicated for emergency trip device.
81	Section-VII-2A-Scope & General Requirements 1.2.1. Works at New Kimuka 400/220 kV Substation	Bidder understanding is fire hydrant system shall be provided for 400/220kV switchyard of Kimuka Substation. Please confirm.	Confirmed
82	Substation firefighting systems include portable fire extinguishers for buildings, fire hydrant for yard and Trolley mounted fire Extinguisher, firewall, and Nitrogen injection fire protection system for Transformers.	Hydrant system, complete piping and accessories etc. outside the Pump House for Fire Protection is required for substation Control room building & Switchyard only. Please confirm.	Refer to Employer's Requirements- B – Specifications clause 18.3 and 18.8
83		For fire protection system, please provide the detailed specification and standard to be followed.	Refer to Employer's Requirements- B – Specifications clause 18.25
84		Please provide Material of Construction of Pipe, Valve, Pump etc. used for fire protection.	Refer to Employer's Requirements- B – Specifications clause 18.25
85		For fire protection system of Switchyard, piping & Hydrant valve to be provided on the surrounding of the 400/220kV Switchyard.	Refer to Employer's Requirements- B – Specifications clause 18.25

Item	Reference	Clarification	Responses
86	/	Relevant chapters: Section-VII-2E-Schedules of Technical Information-b).6.1 Section-VII-2E-Schedules of Technical Information-c).6.1 Please confirm whether the rated current of 400kV wire responds according to 4000A and whether the rated current of 220kV wire responds according to 2500A. Is it necessary for the wire carrying capacity of the outlet interval to be so large? Can you give the specific transmission capacity and the wire carrying capacity according to the actual situation? Can the transformer spacing be calculated according to the transformer capacity to require the wire carrying capacity?	Refer to Clarification no 1 item 200
87	/	Design scheme and loop name and number of access to new station: In the scope of work described in Section-VII-2A-Scope & General Requirements, a 220kV circuit of the existing Suswa 400/220 kV substation will be removed and relocated to the 400kV side, but the specific circuit number and name are not specified. It is also not clear whether all required materials, including conductors, fittings, connectors, clamps, etc., need to be re-supplied. Do you need to resupply?	Refer to Clarification no 1 item 201

Item	Reference	Clarification	Responses
88	/	Existing Isinya 400/220 kV substations: (1) The existing SUSWA-1 line designed for 400kV but operating at 220kV must be restored to 400kV operation; (2) The existing 220kV line connection at the parse-2 interval on the 220kV side shall be removed and the low-voltage side of the IBT-1 transformer shall be connected to the vacated 220kV interval; (3) Remove the interval originally used for Suswa-Isinya 220kV line, and use the interval to connect the IBT-1 transformer (the original IBT-1 has been put into operation on the 400kV side, but there is no available interval on the 220kV side). It is difficult to confirm and locate the specific circuit in the drawing, do the related equipment and materials need to be supplied again?	Refer to Clarification no 1 item 202
89	Section-VII-2B-Specification page 406 Section-VII-2B-Specification page 413	1.The requirement minimum creepage distance of composite insulator in specification is 16000mm. But according to the area of this project, the creepage distance for system is 32mm/kV(Level IV pollution). 400kV Transmission Line maximum voltage is 420kV. So the minimum creepage distance is 13440mm. 2.The arcing distance with corona rings is 4070mm. But in the drawings, the arcing distance of insulator is only 3745mm. Please clarify if any requirement of arcing distance.	1. Creepage should be 31mm/kV and minimum creepage distance should be 13020. Refer to item no 17 of Addendum 4 2. Minimum 3745 mm is required. Refer to item no 17 of Addendum 4.
90	/	According to the tender drawings, the circuit breaker failure protection for each string should be considered to be implemented within the busbar differential protection and the protection devices of related lines or main transformer intervals. However, based on engineering experience, circuit breaker failure protection is generally configured for 3/2 connections. Please ask the owner to confirm whether	Follow the requirements as indicated in Employer's Requirements- B – Specifications clause 8.2.1.2 item i and relevant protection single line diagrams.

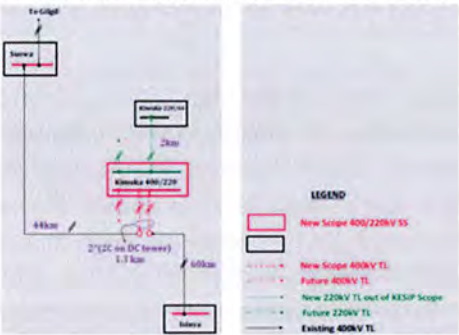
Item	Reference	Clarification	Responses
		it is necessary to provide a circuit breaker failure protection device and related screen cabinets.	
91	/	According to the tender drawings, the short lead protection function will be realized in the line protection. Please ask the owner to confirm whether an independent short lead protection device and screen cabinet need to be configured.	We do not understand what short lead protection is. We have not referenced such a function in our bid documents.
92	BoQ Schedule 1A-SS 7.1	The BOQ shows that the 220kV line protection is for two optical difference protections, but the drawing shows it as distance + optical difference. Please have the owner confirm the configuration plan.	Refer to Clarification no 1 item 137
93	BoQ Schedule 1A-SS 6.1.1.1	Whether all the "Mandatory Spare" related to protection in BOQ only provides devices or screen cabinets.	The price schedule line item clearly indicates what the spare requirement is.
94	BoQ Schedule 1A-SS 8.11	For the content of the listed items, do all devices require two sets, or do the listed devices have two screens? Please have the owner confirm the configuration plan.	Each listed device is required to be 2 in number.
95	Section-VII-2B-Specification 11.3.3.1	Please clarify that "The 110 V battery system shall contain 2 x 1000% rated duty Nickel-Cadmium (Ni-Cd) type battery units and 2 x. The requirement of "100% rated duty float/boost charger units." Is 1000% mandatory?	Refer to Clarification no 1 item 127
96	/	Neither the tender document nor the BOQ requires RTU. Please confirm whether it is provided by the owner?	Requirement is for substation control system. Refer to Employer's Requirements- B – Specifications clause 10 and price schedule line item 8

Item	Reference	Clarification	Responses																				
97	Insulator Set Section-VII-2B-Specification page 406 The withstand voltages below indicated are effective for <1000m altitude. Accordingly, correction for altitude at site need to be applied: <table><tr><td>a) Power frequency withstand voltage:</td><td>850 kV</td></tr><tr><td>b) Lightning impulse withstand voltage:</td><td>1425 kV</td></tr><tr><td>c) Switching impulse withstand voltage phase-to-earth:</td><td>1050 kV</td></tr><tr><td>d) Minimum mechanical and electro-mechanical failing load</td><td></td></tr><tr><td> Suspension string:</td><td>5210 kN</td></tr><tr><td> Suspension clamp:</td><td>19130 kN</td></tr><tr><td> Extension string:</td><td>5210 kN</td></tr><tr><td> Inverted tension string:</td><td>5210 kN</td></tr><tr><td> Tangent support string:</td><td>50 kN</td></tr><tr><td>e) Min. arcing distance with corona rings:</td><td>4070 mm</td></tr></table>	a) Power frequency withstand voltage:	850 kV	b) Lightning impulse withstand voltage:	1425 kV	c) Switching impulse withstand voltage phase-to-earth:	1050 kV	d) Minimum mechanical and electro-mechanical failing load		Suspension string:	5210 kN	Suspension clamp:	19130 kN	Extension string:	5210 kN	Inverted tension string:	5210 kN	Tangent support string:	50 kN	e) Min. arcing distance with corona rings:	4070 mm	An insulator level (IV) of 80 breakdown distance shall be considered for substation design purposes. 80) Maximum Solar Radiation For design purposes, average annual solar radiation value of 320 kWh/m² shall be considered. 85) Earthquake loading For design purposes, an earthquake loading of 0.2g shall be assumed. 90) Wind load For design purposes, a maximum wind velocity of 40m/s (gust wind) shall be assumed. 95) Altitude The height above sea level shall be considered as 100m. The maximum level of external insulation shall be determined in accordance with IEC 62271-1, Clause 2.3.5. Important Note: All main and spare equipment shall be provided for proper operation in four altitude categories (the optimum main equipment spare parts and where interchangeability at various levels, including 1000, 1500, 2000 and 2500 meter above sea level. In case of other range may have been mentioned in the schedules of technical information (Part 2-6) the higher altitude category shall be considered). 10) Pollution External insulation shall be designed to Pollution Level IV (Very Heavy) in accordance with IEC 60071-2, Table 1. 1.The requirement minimum creepage distance of composite insulator in specification is 16000mm. But according to the area of this project, the creepage distance for system is 32mm/kV (Level IV pollution). 400kV Transmission Line maximum voltage is 420kV. So the minimum creepage distance is 13440mm. 2.The arcing distance with corona rings is 4070mm. But in the drawings, the arcing distance of insulator is only 3745mm. Please clarify if any requirement of arcing distance.	Refer to item no 89 of this clarification.
a) Power frequency withstand voltage:	850 kV																						
b) Lightning impulse withstand voltage:	1425 kV																						
c) Switching impulse withstand voltage phase-to-earth:	1050 kV																						
d) Minimum mechanical and electro-mechanical failing load																							
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Inverted tension string:	5210 kN																						
Tangent support string:	50 kN																						
e) Min. arcing distance with corona rings:	4070 mm																						

Item	Reference	Clarification	Responses
98	Scope of Work 1.3.4. 400 kV Suswa Line works Includes the primary scope of works on the transmission line in Suswa 400 kV to facilitate termination of the one circuit from 220 kV to 400 kV Suswa. Include also primary works of disconnecting the line from 220 kV Suswa gantries. Include also the scope of recovering and handover to the Employer any towers, conductors and accessories that will be unused after the OHL is terminated into 400 kV yard. This circuit will need to be connected to an existing under bus arrangement system in order to access the 400 kV switchyard. Section VII. Employer's Requirements- A - Scope of Supply 2.3 All required material and implementation works in order to connect both circuits to the 400 kV bus bar, is included in the contractor scope and shall be deemed considered in the Contractor's price. 1.3.5. 400 kV Isinya Line works Includes the primary scope of works on the transmission line in Isinya 400 kV to facilitate termination of the one circuit from 220 kV to 400 kV Isinya as well as termination works of OHTL into the fired up bay. Includes also the scope of recovering and handover to the Employer any towers, conductors and accessories that will be unused after the OHL is terminated into 400 kV yard. All required material and implementation works, in order to connect both circuits to the 400 kV bus bar, is included in the contractor scope and shall be deemed considered in the Contractor's price. 1.2.3. Works at Existing Suswa 400/220 kV Substation Relocation of the one circuit currently operated at 220 kV, connected to the 220 kV yard of Suswa to the 400 kV yard of Suswa, and associated required secondary modification and remote end works (including related Protection, SAS and Telecommunication systems re-setting, re-testing and re-commissioning). This circuit will need to be connected to an existing under bus arrangement system in order to access the 400 kV switchyard. 1.2.4. Works at Existing Isinya 400/220 kV Substation Connecting the existing 400kV SUSWA-1 OHL to 400kV switchyard, which includes completion of the connection between feeder's equipment (LA-CVT-CVT-CT) and connection of the LA to the 400kV SUSWA-1 OHL (note that the existing Suswa-1 line is used as 220kV line but designed for 400kV) and associated required secondary modifications and remote end works (including related Protection, SAS and Telecommunication systems re-setting, re-testing and re-commissioning). In addition, removal of the connection of the existing 220kV OHL from the 220kV switchyard which is connected to diameter no 2 in place of OHTL and then completion of the connections of the OHTL LV(220 kV side) to 220kV Switchyard which includes the removal of the existing LA from 220 kV bay side and installation of new LA on the transformer 220 kV side and installation of PT where the LA originally were installed, and completing the connection of feeder's equipment such as CSE to PT and LA to 220kV busbings. The existing LA's that will be recovered will be handed over to KETRACO as spares. In Isinya 220 kV, diameter 2, one feeder bay is currently being used to connect the Suswa- Isinya line on 220 kV.	In Section-VII-2A-Scope & General Requirements 1.3.4 and 1.3.5, some primary works are mentioned. In Price Schedules of TL, these items are not included. Please clarify if any scope of work for transmission line or primary electric and the specification of them. Such as: 1.In 400kV Isinya SS, any existing tower need to be recovered? How does overhead line enter the 400kV bay from the existing terminal tower? Any gantry between terminal tower and 400kV bay? What's the distance between structures? What's end of OHTL? 2.In 400kV Isinya Line works, it is also necessary to clarify the connection methods between overhead lines and substation equipment.Please refer to the question in the item No.1 for clarification. Detailed clarification helps us estimate the quantity of work and provide a detailed price.	These items are not in the TL price schedules. These are in the substation price schedules, schedule 1A and 4A. For no 1 and 2, Refer to Clause 1.2.4 and 1.3.5 of Section VII, Employers Requirement A. Bidders are encouraged to visit Site to gain more clarity on the scope of work. The procedure for undertaking a site visit is outlined in clarification no 1 item no. 2

Item	Reference	Clarification	Responses																																																												
99	Section-VII-2E-Schedules of Technical Information-b).6.1 Section-VII-2E-Schedules of Technical Information-c).6.1 The rated current of the 400kV and 220kV conductors In the Section-VII-2E-Schedules of Technical Information. Please confirm whether the rated current of the 400kV conductor shall respond with 4000A, and whether the rated current of the 220kV conductor shall respond with 2500A.	Is it necessary for the conductor current-carrying capacity of the outgoing bay to be so large? Could you provide the specific transmission capacity and specify the conductor current-carrying capacity according to actual conditions? For the transformer bay, can the current-carrying capacity be calculated based on the transformer capacity to determine the requirement for the conductor current-carrying capacity? <table><tr><td>6.</td><td>400kV Conductors</td><td></td><td></td><td></td></tr><tr><td></td><td>General</td><td></td><td></td><td></td></tr><tr><td>6.1</td><td>Rated current</td><td>A</td><td></td><td></td></tr><tr><td>6.1.1</td><td>Line feeders</td><td></td><td>4000</td><td></td></tr><tr><td>6.1.2</td><td>Trans feeders</td><td></td><td>4000</td><td></td></tr><tr><td>6.1.3</td><td>Busbars</td><td></td><td>4000</td><td></td></tr></table> <table><tr><td>6.</td><td>220KV Conductors</td><td></td><td></td><td></td></tr><tr><td></td><td>General</td><td></td><td></td><td></td></tr><tr><td>6.1</td><td>Rated current</td><td>A</td><td></td><td></td></tr><tr><td>6.1.1</td><td>Line feeders</td><td></td><td>2500</td><td></td></tr><tr><td>6.1.2</td><td>Trans feeders</td><td></td><td>2500</td><td></td></tr><tr><td>6.1.3</td><td>Busbars</td><td></td><td>3150</td><td></td></tr></table>	6.	400kV Conductors					General				6.1	Rated current	A			6.1.1	Line feeders		4000		6.1.2	Trans feeders		4000		6.1.3	Busbars		4000		6.	220KV Conductors					General				6.1	Rated current	A			6.1.1	Line feeders		2500		6.1.2	Trans feeders		2500		6.1.3	Busbars		3150		Refer to Clarification no 1 item 200
6.	400kV Conductors																																																														
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6.1.3	Busbars		3150																																																												
100	Section-VII-2A-Scope & General Requirements Technical Staff Housing Security Staff Housing	According to theSection-VII-2A-Scope & General Requirements, these two types of buildings (4 units in total) are within the scope of work, but they are not included in the Section_IV-Price_Schedues. Please confirm whether these buildings are indeed within the scope of work.	These are in the price schedule, schedule 4A_SS, item no 20.3.1 and 20.3.2																																																												

Item	Reference	Clarification	Responses
101		The major equipment for materials includes reactor, but there is no relevant technical specification, technical data sheet, price schedules. Kindly share the reactor's technical specification, technical data sheet and other necessary documents.	Reactors are not part of the scope of works. Refer to item no 11 of Addendum 4
102		The tender documents indicate that Special Experience (a) and Special Experience (b) must pertain to projects with a voltage level above 380kV. However, the highest voltage level currently in use in West Africa is 330kV. We have successfully executed 330kV substation projects in Nigeria. Notably, both 330kV substations in West Africa and 380kV substations in East Africa operate at the same frequency of 50 Hz—a standard shared by both the West African Power Pool (WAPP) and the Eastern Africa Power Pool (EAPP). Kindly whether completed 330kV projects is acceptable in lieu of the 380kV requirement to satisfy the qualification criteria.	Not acceptable.
103		Kindly give us one-month's extension from the current deadline 10th June, 2025 to 10th July, 2025 to allow us have enough time to prepare a fully perfect bidding document	Refer to Addendum No. 2 for the revised bid submission deadline.
104		Kindly provide the Price Adjustment Format since it is mentioned in the tender documents	Price adjustment shall not be applicable. Refer to BDS 17.7 and item no. 1 of Addendum 4.

Item	Reference	Clarification	Responses
105	Scope of Tender Inquiry	Is the 220 kV double-circuit transmission line from the 400/220 kV Kimuka Station to the existing 220/66 kV Kimuka Station included in the scope of the current tender? As it is shown by green part in the following figure. 	Refer to Clarification no 1 item 193
106	Equipment Details for Existing Kimuka 220/66 kV Station, Suswa 400/220 kV Station, Isinya 400/220 kV Station	A. SAS Brand: Specify the brand of the Substation Automation System (SAS) currently installed. B. Communication Equipment Brands: List the brands of communication devices C. Equipment List & Parameters, and Modification Requirements for SAS and Communication Equipment	Refer to Clarification no 1 item 190, 191 and 192
107	Bid Security	Is it acceptable that the Bid Security is direct bank guarantee issued by mail from the Bank in an eligible country.	Bid Security shall be submitted in original form in accordance with ITB 20.1 in either of the formats provided in Section IV – Bidding Forms (Form of Bid Security – Bank Guarantee) or Addendum 4 (Form of Bid Security- Bid Bond).
108	Soil Condition	Is it possible for the Employer to provide Soil investigation report for the site of new 400/220 KV KIMUKA substation? It would be critical for the bidder to understand the soil condition of site for exact quotation for civil work.	Refer to Clarification no 1 item 2

Item	Reference	Clarification	Responses
109	Price Schedule item	400kV & 220kV Instrument transformer (CT&CVT) core details missing in both GTP and technical specification. Please provide core details like ratio, class and burden for both CT & CVT.	Refer to 400 kV and 220 kV SLD and PSLD drawings that indicate the ratio and class required. For the burden, refer to the notes in those drawings.
110	ITB 11.5. In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include in the Technical Part a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.	Please provide joint venture agreement format or bidder use their own format for the JV agreement.	There is no format. Bidder to use their own format
111	Transformer losses guaranteed by the Bidder	Kindly provide the Highest LL Value & Highest NLL value.	These are to be provided by the bidder.
112	ITB 20.1.The amount and currency of the Bid Security shall be Sixty-Six Million and Three Hundred Thousand Kenya Shillings (KES 66,300,000) or equivalent in a freely convertible currency	Kindly clarify, the bidder can submit bid security in the form of bank guarantee or a guarantee issued by a financial institution from Kenya will be acceptable.	Both are acceptable subject to the provisions under ITB 20.3.
113	Service Condition_3.h Altitude consideration	We understand that the altitude to be considered for the subject project is 1850m. Kindly confirm.	Yes, the altitude is 1850 m for the project. However, refer to Section VII. Employer's Requirements- A - Scope of Supply clause 3.h , Important Note. This note should be followed on selection of altitude for main and spare equipment. This response supersedes that given in clarification no 1 item 156 and 177

Item	Reference	Clarification	Responses
114		Kindly confirm the application of the 400kV & 220kV breakers. In case 400kV breakers are to be used for line application, kindly confirm the line length.	On the application refer to Section VII. Employer's Requirements- A - Scope of Supply clause 1.2.1 and the 400 kV and 220 kV SLD drawings. For the line length to Suswa and Isinya refer to Section VII. Employer's Requirements- A - Scope of Supply clause 1.1 For the line length to existing 220/66 kV Kimuka refer to Section VII. Employer's Requirements- A - Scope of Supply clause 1.1
115		Kindly confirm the no. of Point on wave switching relays that needs to be considered.	Refer to Clarification no 1 item 178
116	Technical Specification_3.2.5.1 Emergency Trip Device.	Kindly Confirm, The offered breaker can be tripped by pushing the mechanical plunger inside the operating mechanism, hence emergency trip device is not envisaged.	Refer to item 80 of this clarification.
117	GTR_1.15.1 The gland plates shall be equipped with suitable cable glands, made of non-corrosive material (e.g. nickel-plated brass or stainless steel) and shall be of metric size. They shall provide protection class of at least IP 67 at 5 bar.	The offered breaker shall be offered with ungrilled gland plate with protection class of IP55. Kindly confirm	Refer to Clarification no 1 item 182
118	Technical Specifications (CVT) VA Burden & Capacitance	Kindly specify the VA burden & the capacitance of CVT that needs to be considered.	Refer to Clarification no 1 item 185
119	Technical Specifications_5.4. (CVT) Special Tools & Equipment	Kindly confirm, Any specific tools & equipment is not required, hence not envisaged.	Refer to Clarification no 1 item 186
120	Technical Specification Isolators Electrical Endurance Class	Kindly confirm whether Electrical Endurance class is " E0 " type is acceptable or not?	Refer to item 13 of this clarification.

Item	Reference	Clarification	Responses
121	1. Qualification 1.2 Contractor's Representative and other Key Personnel Educational Degree as minimum Valid license to practice engineering as a professional engineer in country of origin or residence	We would like to inform you that we hereby confirm that we shall take valid licenses of all engineers from the concerned authority in Kenya after the award of the contract. In this connection, we would kindly request that the requirement for a license be exempted during the bidding stage.	Practising license in Kenya may be taken after contract award, however Bidder must demonstrate that their engineers have valid licenses (or equivalent) to practise in their country of origin/residence at the bidding stage.
122		Reference to Clause 20.3 of the ITB & Item 20.1 of the BDS of the tender documents on the project's bid security, it is understood that an unconditional bank guarantee issued by an international reputable bank or financial institution in an eligible country outside Kenya is acceptable to be submitted and there is no need that the bid guarantee to be issued by a local bank in Kenya. Please clarify and advise.	Refer to Clarification no 1 item 148
123		Please inform us if there is minimum credit rating requirement that must be met by the bid security issuing bank, based on the ratings published by reputable credit rating agencies such as S&P Global?	No minimum credit rating for Bid Security. For advance payment security and performance security, refer to PCC 13 and Clarification no 1 item 198
124	Section VII. Employers requirements-A-Scope of Supply Clause: 1.2.2. Works at existing Kimuka 220/66kV Substation	Please provide below listed drawings for 220/66kV Existing Kimuka Substation. - Existing Plan Layout with Equipments - Existing Erection Key Diagram. - Existing Panel arrangement layout of SPR/Control Room building - Existing SAS Architecture diagram - Existing SS SAS Make - Existing Relay Make and Model. - Existing Teleprotection & Telecommunication Make.	Refer to Clarification no 1 item 96,97,99,100. Other drawings will be submitted to the winning bidder.

Item	Reference	Clarification	Responses
125	Section VII. Employers requirements-A-Scope of Supply Clause:1.2.3. Works at existing Suswa 400/220kV Substation	Please provide below listed drawings for 400/220kV Existing Suswa Substation. - Existing Section Layout with Equipments. - Existing Erection Key Diagram. - Existing Panel arrangement layout of SPR/Control Room building - Existing SAS Architecture diagram - Existing SS SAS Make - Existing Relay Make and Model. - Existing Teleprotection & Telecommunication Make.	Refer to Clarification no 1 item 62,63,65,66. Other drawings will be submitted to the winning bidder.
126	Section VII. Employers requirements-A-Scope of Supply Clause:1.2.4. Works at existing Isinya 400/220kV Substation	Please provide below listed drawings for 400/220kV Existing Isinya Substation. - Existing Plan Layout with Equipments & busbar connection - Existing Section Layout. - Existing Erection Key Diagram. - Existing Earthmat Layout. - Existing Structure Plan & Section Layout - Existing Cable Trench Layout - Existing DSLP Layout - Existing Panel arrangement layout of SPR/Control Room building - Existing SAS Architecture diagram - Existing Existing CRP drawing - Existing SS SAS Make - Existing Teleprotection & Telecommunication Make. - Existing SS Busbar protection scheme/Make	Refer to Clarification no 1 item 79,80,82,83. Other drawings will be submitted to the winning bidder.
127	Required modification works at below listed existing ss. 1. Works at existing Kimuka 220/66kV Substation. 2. Works at existing Suswa 400/220kV	Shutdown whenever required at extension substation for carrying out present scope of work shall be provided by Client. Please confirm.	Refer to Clarification no 1 item 17

Item	Reference	Clarification	Responses
	Substation. 3. Works at existing Isinya 400/220kV Substation.		
128	Section VII. Employers requirements-B- Specification Clause:18.23.9_Drainage	We assume that the discharge/outfall point for the substation drain will be nearby to substation plot boundary. Please provide the topography of the existing area where the discharge / outfall of the water will be carried out. Also please clarify whether Drainage system to be provided on both sides of road.	It is the responsibility of the Contractor to undertake a topographic survey of the substitution to inform such aspects as drainage design amongst others. The drainage system shall ensure adequate drainage of the substation. The access road should have drainage system provided on both sides
129	General	Please provide Hight Flood Level Report for the substation site.	This is not presently available, and it shall be Contractor's responsibility to establish it during detailed design stage
130	General	Please provide external and internal plastering thickness for all the substation buildings.	The thickness shall be suitable to achieve a durable, weather resistant external finish and a smooth internal surface
131	General	Please specify the type of manholes to be adopted in scope of works, i.e, RCC, pre-cast, brick etc.	Refer to Section VII. Employer's Requirements- B – Specifications- clause 18.23.9.2.
132	General	Please specify the material type of buried pipes.	This shall be dependent on the ground conditions. Contractor shall propose during detailed design for Employer's / Employer Representative's approval.
133	General	Please provide the drawings provided in PDF format in AUTOCAD format.	Only PDF versions are available. It is the Contractor responsibility to provide AutoCAD drawings during detailed design.
134	Section VII. Employers requirements-B- Specification Clause:1.2.1_Drainage	Please inform the number of occupancy to be considered for designing Septic Tank.	Refer to item no 21 of Addendum 4.
135	Section VII. Employers requirements-B- Specification Clause:18.11 & 18.22.3.4 & 18.23.7.1	Code for Structural design is mentioned as BS CODE (BRITISH STANDARD) AND BS EN CODE (EUROPEAN CODE) . Both are different codes. Request you to clarify which code to be used for the Structural Design	Refer to item no. 43 of addendum 4.

Item	Reference	Clarification	Responses
136	General	Please provide Seismic Parameters to be used in analysis like Site specific data/spectrum . Please confirm the Code to be used for seismic analysis i.e. BS CODE (BRITISH STANDARD) Or BS EN CODE (EUROPEAN CODE)	Refer to Section VII. Employer's Requirements- B – Specifications- clause 2.1.4 -Environmental (site conditions)
137	Section VII. Employers requirements-A-Scope of Supply Clause:1.2.2. Works at existing Kimuka 220/66kV Substation	Please provide below listed drawings for 220/66kV Existing Kimuka Substation. - Existing Architectural, Foundation Structural Layout, - Existing Road Layout. - Existing Drainage System Layout	Will not be provided. There is no scope of works relating to the requested drawings in 220 /66 kV Kimuka.
138	Sec-VIII GCC Cl. 11, Pg. 211 Sec-IX, Contract Forms Appendix 1, Pg. 319 and Price Schedules	The Bidder understand that this is a unit rate/price contract wherein Contractor will be paid based on measured quantities in accordance with the Price Breakdown given in the section on Price Schedules. Kindly confirm.	This is correct except for lot items which shall be compensated as per the lump sum unit price indicated in the BOQ, without prorating.
139	Sec-III, GCC Cl. 22.2.1, Pg. 225	The Bidder understand that there is no restriction or limits or mandatory provisions for the local content and local labor engagement for this Contract. However, the Bidder is encouraged to use the local labor that has the necessary skill. Please confirm the Bidder's understanding.	The governing law for this contract shall be that of the Republic of Kenya. Bidders are required to familiarize themselves with the legal and regulatory frameworks on local content, including but not limited to the Energy Act (Cap 314) and the National Construction Authority Act (Cap 118), as part of their due diligence obligations.

Item	Reference	Clarification	Responses
140	Sec-II BDS, ITB 20.1, Pg. 44. Sec-I ITB 20.3(a), Pg. 22	In accordance with Sec-I ITB 20.3(a), the Bidder can submit "an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding or surety company)". However, in accordance with Bidding Forms - Bid Security is in form of Bank Guarantee. Therefore, Bidder understand that the Bidder will be allowed to submit the Bid Security as Insurance Bond. Please confirm.	Refer to Addendum 4 for the format for Form of Bid Security- Bid Bond.
141	Sec-I, ITB 46.2, Pg. 37	As per ITB 46.2, the Bidder shall sign, date and return the Contract Agreement to the Employer within 28 days of its Receipt. However, signing of Contract by Employer and timeline to return to contractor is not given. Hence, the Bidder request Employer to provide the timeline for signing of Contract by Employer after receipt it from Contractor.	No delays are foreseen on the part of the Employer in finalizing the Contract signature.
142	Sec-X, Article 3.1 of CA Sec-IX, PCC Cl. 8.1	As per Article 3.1 of Contract Agreement (CA), Contract effective is upon fulfillment of the condition precedent in sub clause (a), (b), (c), (d) & (e). As per PCC 8.1, commencement of work on the Facilities are within two (2) weeks from the Effective Date. Hence, the Bidder infers that 100% access and ROW shall be provided to Contractor before the date of commencement. Please confirm.	It is the obligation of the Employer to ensure the acquisition of the ROW for the works.
143	Sec-IX, PCC Cl. 8.1	PCC 8.1 Commencement of work on the Facilities within two (2) weeks from the Effective Date The Bidder understand that there is no separate notice will be issued by Employer / Project Manager for Commencement of works. Please confirm.	Confirmed. No separate notice shall be required however bidders to note that compliance to provided requirements precedent to commencement of works at site will be mandatory.

Item	Reference	Clarification	Responses
144	Sec-VIII, GCC 27.2 & 13.3.3, Sec-IX, PCC Cl. 27.10.	As per GCC Clause 27.2, the Defect Liability Period (DLP) shall be 540 days from the date of Completion of the Facilities or one year from the date of Operational Acceptance, whichever occurs first. Further, in accordance with GCC Clause 13.3.3, the Performance Security shall remain valid throughout the DLP and shall be returned to the Contractor upon completion of the DLP for the entire Facility. However, as per PCC Clause 27.10, the Performance Security to be reduced to 10% of the value of the critical components covered under the extended DLP, specifically for critical components such as Power Transformers, and shall remain valid until completion of the extended DLP period applicable to those components. Based on the above, the Bidder understands that: Final Acceptance of the entire Facility is deemed to occur upon completion of the DLP, and the Employer shall not issue a separate Final Acceptance Certificate (FAC). Please Confirm. Further, Bidder understand that Performance Security will be reduced to 10% value of the Critical component covered under extended DLP and shall remain in force until the completion of the extended DLP. Please confirm our understanding.	There is no provision for Final Acceptance in the Contract. However, Operational Acceptance shall occur in accordance with the provisions of GCC 25 and other relevant clauses mentioned in the contract. Confirmed subject to provision in GCC Clause 13.3.3.

Item	Reference	Clarification	Responses
145	Sec-I, ITB 46.2 & 47	As per ITB 46.2, contract signing and return by Contractor is within 28 days from LOA. As per ITB 47.1, submission of performance security by 28 days from LOA. Upon failure to submit Performance Security within the due days contract may cancelled (ITB Cl.47.2). Further, as per Section X, Contract form, to execute the performance security Contract reference no is required. Hence, contract signing by both the parties must be done before issuance of Performance Security. However, as per ITB 46.2 and ITB 47.1, both are to be complied by 28 days from LOA. Therefore, the issuance of the Performance security by Contractor within 28 days from LOA is not feasible. Therefore, the bidder request the Employer to grant 28 days duration for submission of performance security after signing of the Contract.	The Bidder will receive both the LOA and Contract at the same time, thus obtaining the Contract reference number. The obligation to furnish the Performance Security is triggered by the LOA alone and does not depend on the Contract being signed.

Item	Reference	Clarification	Responses
146	Sec - VIII, GCC Cl. 13.2.1 & Sec-X Contracts Forms	As per GCC 13.2.1, submission of advance payment securities is within 28 days from the LOA as per form herein Section -X, Contract Forms and as per ITB 46.2, signing of Contract is within 28 days from the LOA. According to the form in Section-X, contract reference number is also required for issuance of Advance Payment Security. Hence, it is not feasible for Contractor to submit the Advance Payment Security within 28 days from LOA. Therefore, the bidder requests the Employer to grant 28 days duration for submission of Advance Payment Security after signing of the Contract.	The Bidder will receive both the LOA and Contract at the same time, thus obtaining the Contract reference number. The obligation to furnish the Advance Payment Security is triggered by the LOA alone and does not depend on the Contract being signed.
147	Article 3.1 of the CA	The Advance Payment is 10% of the total contract price. The bidder assume that the recovery of the total payment shall be at a rate of 10% of the invoice value and no recovery to be made from the installment of advance payments. Please confirm. Further, Bidder request Employer to specify the recovery period of the Advance payment.	The repayment amortization rate of advance payment shall be 15% of the amount invoiced. No recovery is to be effected on the Advance Payment invoice but recovery will be on subsequent progress invoices. Recovery shall progress until when all the advanced amounts are fully recovered.

Item	Reference	Clarification	Responses
148	Sec- VII, GCC 13.2.2 Sec-IX, PCC 13.3.2	As per PCC 13.2.2 The Advance Payment Security shall be in the form of the demand guarantee attached hereto in Section X, Contract Forms and shall be issued by a bank licensed and categorized as a 'large bank' by the Central Bank of Kenya. And, As per PCC 13.3.2 The Performance Security shall be in the form of the bank guarantee attached hereto in Section X, Contract Forms and shall be issued by a bank licensed and categorized as a 'large bank' by the Central Bank of Kenya. In accordance with the above Clauses, it is clear that the Bidder shall have to submit the Bank Guarantees for said Securities. However, as per recent practices allowed by the various Employer's/Client the securities are acceptance in the form for Insurance Bond. Therefore, the Bidder request to allow the submission of said Securities in the form of Insurance Bonds.	Not acceptable.
149	Sec-IX, PCC Cl.26.2	As per PCC Cl. 26.2, applicable LD is 0.5% of the Contract Price for per week of delay in completion of work (according to Clause PCC 8.2), which is applicable for overall completion. However, as per PCC Cl. 25.1.1., applicable deduction from retention for delay in comissioning is 0.5% of contract price for per week of delay and maximum up to 5%. Therefore, Bidder understand that overall LD limit is 10% of the Contract price only, which is inclusive of the deduction for the delay in commissioning, please confirm.	No definition for overall LD limit is provided in the bid document. Consider the maximum LD as stated in the respective clauses of the bid document for each PCC as below: 26.2: Completion time guarantee Applicable rate for liquidated damages: <u>Five tenths percent (0.5%) of the Contract Price per week.</u> Maximum deduction for liquidated damages: Ten percent (10%) of the Contract Price

Item	Reference	Clarification	Responses
			<u>25.1.1 : Commissioning and operational acceptance</u> If the Contractor fails to commission the facilities within the stipulated time due to reasons not attributable to the Employer, the Employer shall deduct 0.5% of the contract price per week from the retention up to a maximum of 5%.
150	Sec-IX PCC Cl. 39.1.2	Employer shall pay the 50% of the reduction value to the Contractor for value engineering. However, the timeline for this payment is not given. Please specify the timeline for this payment to the Contractor by the Employer.	The Employer and the Contractor shall jointly agree on the timeline, which shall depend on the budgetary provisions available during the corresponding financial year.
151	Sec-IX, PCC Cl. 46	The Seat, Place, and Governing Law of Arbitration have not been specified in the Contract documents. The Bidder requests the Employer kindly to clarify and provide this information to ensure alignment with the applicable dispute resolution framework.	This shall be a neutral location to be agreed upon with the winning Bidder prior to contract signature.

Item	Reference	Clarification	Responses
152	Sec-IX PCC Cl.46.1 & Article 3 of the CA Cl. 3.1 & 3.2	In accordance with PCC Cl. 46.1, the Dispute Board (DB) shall be appointed within 60 days after signature by both parties of the Contract Agreement. However, Article 3 (Clauses 3.1 and 3.2) of the Contract Agreement (CA) stipulates that one of the preconditions for the Effective Date of the Contract is the constitution of the DB, which is to be completed within two (2) months from the date of the Contract Notification (i.e., Letter of Acceptance). In view of the above, it is understood that constitution of DB must be done within 02 months from LOA in order to effect the Contract. Therefore, Bidder propose that constitution of DB should not be considered as a precondition for the Contract's Effective Date. Rather constitution of DB is to be done independently within 60 days from the date of Contract signature in accordance with PCC Clause 46.1. Bidder request for confirmation.	This is not acceptable.
153	Sec- VII, GCC Cl. 31.1	In accordance with GCC Clause 31.1, ownership of the imported Plant, including spare parts, shall be transferred to the Employer upon loading onto the mode of transport. Accordingly, the Bidder requests the Employer to clarify the consignee details for all shipments.	The consignee can be the Contractor or the Employer.

Item	Reference	Clarification	Responses
154	Sec-IX, PCC Cl. 30.1 (b)	As per PCC Clause 30.1(b), the limitation of liability is specified as 125% of the Contract Price. In this regard, the Bidder requests the Employer to reduce the limitation of Limit only upto 100% of the Contract Price. Kindly confirm.	This is not acceptable.
155	Sec-IX, PCC Cl. 27.10	As per PCC Cl. 27.10, the Bidder understand that the extended defect liability period for the specified components start from the Completion date of Facilities. Please confirm the Bidders understanding.	This is not correct. Refer to GCC Clause 27.2 and 27.10.
156	FGL	Provide Finished Ground Level (FGL) for Sub-station plot area.	Refer to item no. 18 of this Clarification.
157	Land Development	We understand that the area (357x232 m2) need to be considered for land development, kindly confirm.	Refer to item no. 35 of this Clarification.
158	Approach Road	we understand that the temporary access road will be developed by KETRACO to access substation before commencement of work. Please confirm.	Not correct. This is the scope of works to be undertaken by the Contractor
159	Approach Road	As per scope 1 KM of access road is to be constructed, kindly provide the route marked on kmz file.	Refer to item no 30 of Addendum 4 for coordinates of the access road
160	Approach Road	we understand that there is no requirement of land development for access road i.e. access road would be flat and approachable from main road to substation. Kindly confirm.	This is not correct. Refer to the external access road drawing that formed part of the bid documents.
161	Section-VII-2D-Drawings-->34.Kimuka-400-220kV-SS-LILOs-All Drawing	Request you to provide coordinates of all LILO lines under this projects.	Refer to item no 32 of addendum 4
162	Section-VII-2D-Drawings-->34.Kimuka-400-220kV-SS-LILOs-All Drawing	Request you to provide KMZ file of all Overhead transmission lines under this project.	The coordinates for the angle points have been provided. Refer to item no 32 of addendum 4

Item	Reference	Clarification	Responses
163	Clause 17 - Testing and Inspection of Section VII - Employer's requirement - A - Scope of Supply	We refer to subclause "type test" of referred clause. It is mentioned that "Type tests should be conducted in a reputable international third party (and/or witnessed by third party) laboratory certified in line with ISO / IEC Guide 25 / 17025" We would like to inform you that we are the manufacturer of Latticed steel tower and have testing station which is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL). Request you to advise that towers to be type tested under this scope of work can be tested in our own testing station.	Generally, if conducted in manufacturer's own laboratory, then should be witnessed by third party. Tower Tests specifically shall be conducted under the witness of Employer/Employer's representative, irrespective of the test location,
164	Clause 17 - Testing and Inspection of Section VII - Employer's requirement - A - Scope of Supply	We refer to subclause "type test" of referred clause. It is mentioned that "The costs associated to carrying out the above FATs shall be borne by the Contractor and the Contractor should consider this cost in Section IV- Price Schedule. This shall include but not limited to I. Return flight ticket on economy class for employer and consultant. II. Visa application and processing fee and Local transport expense at the manufacture's country. III. Full board accommodation in a minimum 4-star hotel including laundry services, local and domestic transportation, per diem allowances, all internet and international calls expenses, FAT documentation and daily allowance of USD 200 to cater for incidental expenses per KETRACO Engineer per day. We request you to advise number of employer's and consultant personnel attending Factory Acceptance Test.	2 representatives from the Employer and one from the consultant will witness. Refer to item no 12 of Addendum 4.

Item	Reference	Clarification	Responses
165	Clause 17 - Testing and Inspection of Section VII - Employer's requirement - A - Scope of Supply	We refer to subclause "type test" of referred clause. It is mentioned that "The Employer has the right to witness any or all of those type tests. All costs related to the witnessing of type tests shall be borne by the Contractor" Please advise number of employer's personnel shall come to witness type test.	Refer to response on item no of 164 of this clarification
166	Clause 17 - Testing and Inspection of Section VII - Employer's requirement - A - Scope of Supply	We refer to subclause "type test" of referred clause. It is mentioned that "The Employer has the right to witness any or all of those type tests. All costs related to the witnessing of type tests shall be born by the Contractor" Please advise below: 1. Class of Air Travel - Economy / Business Class. 2. Daily allowance 3. Catagorty of Hotel Accomodation	Refer to item no164 of this clarification.
167	Clause 22.1.4 - Table : Characteristics of ACSR "Condor" of Section VII Employer's Requirement - B - Specification and Sr. No. 4.4 of item (bb) 400kV Overhead Line Conductor of VII Employer's Requirement - E- Schedule of Technical Information (Ultimate Rated Strength of Conductor)	As per Clause 22.1.4 - Table : Characteristics of ACSR "Condor" of Section VII Employer's Requirement - B - Specification, required Ultimate tensile strength of ACSR Condor Conductor is mentioned as 125.44kN. Where as in Schedule of Technical Information the required "Ultimate Rated Strength of Conductor" is mentioned as 127,800Newton. Please advise correct Ultimate Rated Strength of ACSR Condor Conductor	Use value in the Schedule of Technical Information.

Item	Reference	Clarification	Responses
168	Clause 22.1.5 - Table : Characteristics of "ACS 58.6mm ² " of Section VII Employer's Requirement - B - Specification and Sr. No. 1.10 of item (aa) 400kV Overhead Line Earth Conductor of VII Employer's Requirement - E- Schedule of Technical Information (Modulus of Elasticity)	Clause 22.1.5 - Table : Characteristics of "ACS58.6mm²" of Section VII Employer's Requirement - B - Specification, required Modulus of Elasticity of ACS 58.6mm² is mentioned as 160kN/mm². Where as in Schedule of Technical Information the required "Assumed equivalent modulus of Elasticity of Earth Conductor" is mentioned as 162,000N/mm². Please advise correct Modulus of Elasticity of ACS 58.6mm² Earth Conductor	Use value in the Schedule of Technical information.
169	Clause 22.4.1 of Section VII. Employer's Requirements- B – Specifications and as built drawings attached to the tender documents	The new towers shall be of the self-supporting type in Danube configuration to match the existing towers. Since the transmission line of the project is LILO of the existing lines, the contractor is advised to use the same towers data in order to create harmony with the existing line, however this is contractor's responsibility to check the existing towers data (based on the as built drawings attached to the tender documents) and re-design (if necessary). We only find "Outline And Electrical Clearance Diagram" of tower type "400 T10", "400T30", "400T90". Request you to furnish Outline And Electrical Clearance Diagram for Towers Type 400S (0-2°), Towers Type 400T60 (30-60°) and Towers Type 400T90/TRM (60-90°/ 0-45°)	Electrical clearance diagrams for Towers 400T10, 400T30 / T60 & 400T90/TRM have already been provided. For the electrical clearance diagram for 400S tower type refer to item no. 35 of addendum 4. Bidders to note that the provided drawings are for reference purposes only. The Bidder shall design new towers in accordance with the design parameters provided in the bidding documents. For clarity note that previous designs combine T30/T60 tower as detailed in the title block.

Item	Reference	Clarification	Responses
170	Clause 22.4.1 of Section VII. Employer's Requirements- B – Specifications and as built drawings attached to the tender documents	The new towers shall be of the self-supporting type in Danube configuration to match the existing towers. Since the transmission line of the project is LILO of the existing lines, the contractor is advised to use the same towers data in order to create harmony with the existing line, however this is contractor's responsibility to check the existing towers data (based on the as built drawings attached to the tender documents) and re-design (if necessary). We only find "Outline And Electrical Clearance Diagram" of tower type "400T10", "400T30", "400T90". Request you to furnish design and shop erection drawings of following towers: 1. Towers Type 400S (0-2°) 2. Towers Type 400T10 (0-10°) 3. Towers Type 400T30 (10-30°) 4. Towers Type 400T60 (30-60°) 5. Towers Type 400T90/TRM (60-90°/ 0-45°)	Refer to item 169 of this Clarification. As built drawings shall be provided to the winning bidder as may be applicable.
171	Clause 22.4.1 of Section VII. Employer's Requirements- B – Specifications and Clause 17 - Testing and Inspection of Section VII - Employer's requirement - A - Scope of Supply	Please confirm that type test of towers will be required in case contractor re-designs the tower.	Refer to item 170 of this Clarification. All tower types shall be type tested.

Item	Reference	Clarification	Responses
172	Clause 22.8 of Section VII. Employer's Requirements- B – Specifications	It is mentioned that Supply of complete set of conductors (Phase, ACS earthwire and OPGW) with all requisite accessories and fittings inclusive of joints etc. to realize work completion related to the scope. Please confirm that bidder shall quote for the items and their respective quantities as mentioned in the price schedule. Any additional quantity of conductor, OPGW, Earthwire and its accessories if required for temporary bypass and emergency restoration system (ERS) shall be paid at extra.	Quote for the items and their quantities as indicated in the price schedules. The emergency restoration system has also been included in the price schedules and the associated costs are to be quoted separately as provided for. Refer to item no. 34 of addendum 4
173	Price Basis	As per ITB 19.3 (a) of Section II – Bid Data Sheet (BDS), The Bid price shall not be adjusted. We understand that if there is change in quantities at the execution stage from the quantity as given in the Price Schedule, then the Contract Price shall be revised to accommodate the revised quantity by multiplication of the Unit Price quoted in the Tender with the Final Quantity as per the approved Final Tower profile.	Refer to item no. 138 of this Clarification.
174	Clause 1.4. Temporary Bypass works of Section VII. Employer's Requirements- A - Scope of Supply and clause 22.8. Temporary Bypass and Emergency Restoration System (ERS) of Section VII. Employer's Requirements- B – Specifications	We have noted the requirement of Temporary Bypass and Emergency Restoration System (ERS) under referred clause. As per feedback received from one of the ERS manufacturer, the specification provided under clause 22.8. Temporary Bypass and Emergency Restoration System (ERS) of "Section VII. Employer's Requirements- B – Specifications" are very generic and do not provide with any technical specifications for the design of ERS including insulators. Please provide detailed technical specification giving the	Contractor to carry out the design based on the specifications provided in clause 22.8. Temporary Bypass and Emergency Restoration System (ERS) of Section VII. Employer's Requirements- B – Specifications.

Item	Reference	Clarification	Responses
		required design parameters for ERS design & Insulator Design.	
175	Drawing No. 12K1277/A and clause 22.3.3.6 of Section VII. Employer's Requirements- B – Specifications (Minimum Arching distance)	As per clause 22.3.3.6 of technical specifications, the minimum arcing distance with corona rings has been mentioned as "4070mm", whereas as per approved drawings of LAPP (Drawing No. 12K1277/A) received with bid documents, the dry arc distance mentioned is "3580mm". Please clarify/confirm the correct dry arc distance required to be offered i.e. "4070mm" or "3580mm"	Refer to item no. 89 of this Clarification
176	Clause 22.3.3.6 of Section VII. Employer's Requirements- B – Specifications (Minimum Arching distance)	As per clause 22.3.3.6 of technical specifications, the minimum arcing distance with corona rings has been mentioned as "4070mm. Further, as per approved drawings of LAPP (Drawing No. 12K1277/A) received with bid documents, the dry arc distance mentioned is "3580mm". As per approved drawings of LAPP (Drawing No. 12K1277/A), with dry arc distance of 3580mm, the length of the suspension string comes to 4020mm. However, if we consider minimum arcing distance of 4070mm, nominal length of insulators will become around 4500mm as confirmed by insulator Manufacturer. Since we will be considering designed towers, please confirm if insulators of nominal length 4020mm or 4500mm to be considered.	Refer to item no. 89 of this Clarification
177	Clause 22.3.3.6 of Section VII. Employer's Requirements- B – Specifications clause 3 – 'Service Conditions' of Section VII. Employer's Requirements- A - Scope of Supply & Drawing No. 12K1276/A	We refer to Clause 22.3.3.6 of Section VII. Employer's Requirements- B – Specifications. Accordingly, The withstand voltages below indicated are effective for <1000m altitude. Accordingly, correction for altitude at site need to be applied. - Power frequency withstand voltage: 850 kV	The withstand voltages provided are for less than 1000 m and these will need to be adopted in accordance to the altitude selection done by the bidder. For the altitude selection, refer to item no 113 of this Clarification.

Item	Reference	Clarification	Responses																																																
		- Lightning impulse withstand voltage: 1425 kV - Switching impulse withstand voltage phase-earth: 1050 kV As per clause 3 – ‘Service Conditions’ of Section VII. Employer’s Requirements- A - Scope of Supply , The height above sea level shall be considered as 1850m. Below table includes the electrical parameters specified (for altitude less than 1000m) and the corrected parameters required after application of the Altitude correction factor for Altitude of 1850m as per IEC standard. Electrical Parameters for 400kV Composite Long Rod Insulators with Altitude Correction Factor (400kV & 220 kV Kimuka Substation and associated TL in Kenya) <table><tr><th>S. No.</th><th>Item</th><th>Specified Value for Altitude up to 1000m</th><th>Altitude Correction Factor as per IEC for Altitude of 1850m</th><th>Value after Application of Altitude Correction Factor (for 1850m altitude)</th><th>Rounded off value (for 1850m altitude)</th></tr><tr><td>1</td><td>For 400kV Insulators</td><td></td><td></td><td></td><td></td></tr><tr><td>1.1</td><td>PF Withstand Voltage (Dry) - 1 minute - kV (rms)</td><td>850</td><td>1.11</td><td>943.50</td><td>950</td></tr><tr><td>1.2</td><td>PF Withstand Voltage (Wet) - 1 minute - kV (rms)</td><td></td><td>1.11</td><td></td><td>850</td></tr><tr><td>1.3</td><td>Lighting Impulse Withstand Voltage (Dry) – kVp</td><td>1425</td><td>1.11</td><td>1581.75</td><td>1600</td></tr><tr><td>1.4</td><td>Switching Impulse Withstand Voltage (wet) – kVp</td><td>1050</td><td>1.11</td><td>1165.50</td><td>1200</td></tr><tr><td>1.5</td><td>Min. Arcing Distance with Grading Rings (mm)</td><td>4070</td><td>-</td><td>-</td><td>Value suitable for above parameters or suitable for minimum arcing distance of 4070mm</td></tr><tr><td>1.6</td><td>Min. Creepage Distance (mm)</td><td>16000</td><td>-</td><td>-</td><td></td></tr></table> Also, as per approved insulator drawings of LAPP, below values are mentioned: - Power Frequency withstand voltage: 850kV corresponding to dry arc distance of 3580mm - Lightning Impulse withstand voltage: 1900kV corresponding to dry arc distance of 3580mm - Switching Impulse withstand voltage phase to earth: 1050kV corresponding to dry arc distance of 3580mm. Please confirm if the electrical parameters are required to be offered as per the above table (including Altitude Correction factor) or these are required to be offered as per the approved reference drawings of LAPP furnished in the tender documents.	S. No.	Item	Specified Value for Altitude up to 1000m	Altitude Correction Factor as per IEC for Altitude of 1850m	Value after Application of Altitude Correction Factor (for 1850m altitude)	Rounded off value (for 1850m altitude)	1	For 400kV Insulators					1.1	PF Withstand Voltage (Dry) - 1 minute - kV (rms)	850	1.11	943.50	950	1.2	PF Withstand Voltage (Wet) - 1 minute - kV (rms)		1.11		850	1.3	Lighting Impulse Withstand Voltage (Dry) – kVp	1425	1.11	1581.75	1600	1.4	Switching Impulse Withstand Voltage (wet) – kVp	1050	1.11	1165.50	1200	1.5	Min. Arcing Distance with Grading Rings (mm)	4070	-	-	Value suitable for above parameters or suitable for minimum arcing distance of 4070mm	1.6	Min. Creepage Distance (mm)	16000	-	-		
S. No.	Item	Specified Value for Altitude up to 1000m	Altitude Correction Factor as per IEC for Altitude of 1850m	Value after Application of Altitude Correction Factor (for 1850m altitude)	Rounded off value (for 1850m altitude)																																														
1	For 400kV Insulators																																																		
1.1	PF Withstand Voltage (Dry) - 1 minute - kV (rms)	850	1.11	943.50	950																																														
1.2	PF Withstand Voltage (Wet) - 1 minute - kV (rms)		1.11		850																																														
1.3	Lighting Impulse Withstand Voltage (Dry) – kVp	1425	1.11	1581.75	1600																																														
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1.5	Min. Arcing Distance with Grading Rings (mm)	4070	-	-	Value suitable for above parameters or suitable for minimum arcing distance of 4070mm																																														
1.6	Min. Creepage Distance (mm)	16000	-	-																																															

Item	Reference	Clarification	Responses
178	Item No. 2.01 to 2.06 of Schedule 1B of Price Schedule	As Per Item No. 2.01 and 2.02, Total Number of Basic Tower Type 400S (0-2°) is 3 Nos. However, As per Item Number 2.03 to 2.06, Total Number of Body Extension of same Tower Type is 4 Nos. We understand that Total Number of Body Extension should be 3 Nos. Request you to kindly correct the Number of Body Extension and Provide the Revised Price Schedule.	This is not acceptable. Bidders to quote for the quantities as provided for in the price schedules and the actual per design shall be supplied and paid for.
179	Item No. 2.12 to 2.17 of Schedule 1B of Price Schedule	As Per Item No. 2.12 and 2.13, Total Number of Basic Tower Type 400T10 (0-10°) is 2 Nos. However, As per Item Number 2.14 to 2.17, Total Number of Body Extension of same Tower Type is 4 Nos. We understand that Total Number of Body Extension should be 2 Nos. Request you to kindly correct the Number of Body Extension and Provide the Revised Price Schedule.	Refer to response of item 178 of this clarification
180	Item No. 2.23 to 2.28 of Schedule 1B of Price Schedule	As Per Item No. 2.23 and 2.24, Total Number of Basic Tower Type 400T30 (10-30°) is 2 Nos. However, As per Item Number 2.25 to 2.28, Total Number of Body Extension of same Tower Type is 4 Nos. We understand that Total Number of Body Extension should be 2 Nos. Request you to kindly correct the Number of Body Extension and Provide the Revised Price Schedule.	Refer to response of item 178 of this clarification

Item	Reference	Clarification	Responses
181	Item No. 2.34 to 2.39 of Schedule 1B of Price Schedule	As Per Item No. 2.34 and 2.35, Total Number of Basic Tower Type 400T60 (30-60") is 3 Nos. However, As per Item Number 2.36 to 2.39, Total Number of Body Extension of same Tower Type is 4 Nos. We understand that Total Number of Body Extension should be 3 Nos. Request you to kindly correct the Number of Body Extension and Provide the Revised Price Schedule.	Refer to response of item 178 of this clarification
182	Item No. 4.02 to 4.03 of Schedule 1B of Price Schedule	As per Item No. 2, total No. of Tension Tower As per item No. 2.12, 2.13, 2.23, 2.24, 2.34, 2.35, 2.45 and 2.46 is 11 Nos. However Total no. of Tension Assembly for OPGW as per item No. 4.02 and 4.03 is 7 Nos. We understand that Total Number of Tension Assembly for OPGW should be 11Nos. Please confirm.	Bidder to quote as per the quantities in the price schedule. The actuals per final approved design shall be supplied and paid for.
183	Item No. 3.06 to 3.10, 4.07 and 5.03 to 5.04 of Schedule 1B of Price Schedule	We feel that unit of the Item No. 3.06 to 3.10, 4.07 and 5.03 to 5.04 should be "each" instead of "set". Please confirm.	The applicable unit is "set" as indicated for the complete set of materials/items as per description in the price schedule

Item	Reference	Clarification	Responses
184	Item No. 4.07 of Schedule 1B of Price Schedule	We note the quantity of vibration dampers for OPGW mentioned under Item No. 4.07 as 14 Sets. Since the total number of towers as per Item No. 2 is 14 Nos. Please confirm that unit for Item No. 4.07 shall be "per tower".	The unit for item no. 4.07 is "set" for a complete set of the vibration dampers as per price schedule description
185	Item No. 5.03 of Schedule 1B of Price Schedule	We note the quantity of vibration dampers for for ACS Shield wire mentioned under Item No. 5.03 as 14 Sets. Since the total number of towers as per Item No. 2 is 14 Nos. Please confirm that unit for Item No. 5.03 shall be "per tower".	The unit for item no. 5.03 is "set" for a complete set of the vibration dampers as per price schedule description
186	Item No. 5.02 of Schedule 1B of Price Schedule	As per Item No. 2, total No. of Tension Tower As per item No. 2.12, 2.13, 2.23, 2.24, 2.34, 2.35, 2.45 and 2.46 is 11 Nos. However Total no. of Tension Assembly ACS Shield wire as per item No. 5.02 is 7 Nos. We understand that Total Number of Tension Assembly Assembly ACS Shield wire should be 11Nos. Please confirm.	Bidder to quote as per the quantities in the price schedule.

Item	Reference	Clarification	Responses
187	Clause No. 22.4.13 Notice Plates of Section VII. Employer's Requirements- B – Specifications	As per referred Clause No. 22.4.13 Notice Plates of Section VII. Employer's Requirements- B – Specifications, we understand that each tower will be installed with 1 No. of danger Plates, 1 No. of Tower number plates, 1 No. of line code identification plate, 3 Nos. of Phase sequence plates (red, yellow and blue) and 3 Nos. of Circuit number Plates. Please Confirm.	All required notice plates are specified in Section VII. Employer's Requirements- B – Specifications- clause 22.4.13 shall be installed.
188	Clause No. 22.4.13 Notice Plates of Section VII. Employer's Requirements- B – Specifications	As per referred Clause No. 22.4.13 Notice Plates of Section VII. Employer's Requirements- B – Specifications, We understand that only 1 no. of aerial Number plate to be installed on every 10th tower and all angle towers. Please confirm.	Confirmed.

Item	Reference	Clarification	Responses
189	Item No. 1.5 of Schedule 1B of Price Schedule	As per Item No. 1.5 of Schedule 1B of Price Schedule, Bidder shall quote for 5 sets of Fence Earthing. Further as per clause No. 23.4.2 "All metallic fences both new and existing, which cross under, or which are located near and parallel to the transmission line shall be earthed as follows: • One earthing rod shall be used to ground each 100 m of fence that is parallel to and within 50 m of the centre line of the transmission line. One earthing rod shall be used on each side of the right of way to earth fences crossing under the line. • Earthing rods, to which the fence wires shall be bonded, shall be driven to a depth of not less than 1.5 m. All metallic fence gates within the right of way shall be electrically bonded to the fences." Reuested to Kindly advise the 1. length of Fence per set. 2. Number of Fence Gate per set to be considered.	This is subject to the Contractor's final approved design.
190	Section VII. Employer's Requirements- E – Schedules of Technical Information - 400KV ISOLATOR & 220KV ISOLATOR	The type of disconnector specified in GTP format is Double Break / Centre Break . Kindly confirm which type is required.	The bidder is free to select any among the options indicated as long as the technical requirements are met
191	Section VII. Employer's Requirements- B – Specifications; 1. General Technical Requirements; 1.15. Cubicles - 1.15.1. Basic Design and Construction of Cubicles	Specification refers that the gland plates shall be equipped with suitable cable glands, made of non-corrosive material (e.g. nickel-plated brass or stainless steel) and shall be of metric size. They shall provide protection class of at least IP 67 at 5 bar. Please confirm if IP55 class gland plates as per the Type Tested design will be accepted.	Refer to Clarification no 1 item 182

Item	Reference	Clarification	Responses
192	Section VII. Employer's Requirements- B – Specifications; Technical Specification_3.2.5.1 - General	The specification refers that circuit breaker shall be offered with Emergency Trip Device. However, as per the Type Tested design of Circuit Breaker, the circuit breaker can be tripped by pushing the mechanical plunger inside the operating mechanism, hence emergency trip device is not envisaged. Request you to accept the same.	Refer to item 80 of this Clarification.
193	Section VII. Employer's Requirements- B – Specifications; 5. Capacitive Voltage transformers	Kindly specify the capacitance of capacitive voltage transformer, the same is neither mentioned in technical specification nor in schedules of technical information.	Refer to Clarification no 1 item 185.
194	Schedules of Technical Information - 400kV & 220kV Circuit Breaker; 1.138 Electrical endurance class	The Electrical endurance class is mentioned as E2 in the Schedules of Technical Information for 400kV & 220kV Circuit Breaker However, as per IEC 62271-100 clause number 4.111 above 52kV circuit breaker, electrical endurance class E2 is not applicable. Therefore, please confirm that whether bidder can offer the circuit breaker with E1 endurance class in line with IEC Standards.	Not acceptable. The IEC does not indicate that endurance class is not applicable. It allows for E2 endurance class for circuit breakers above 52 kV Follow the requirements in the Bidding document.
195	Schedules of Technical Information - 400kV & 220kV Disconnectors; 1.138 Electrical endurance class	The Electrical endurance class is mentioned as E2 in the Schedules of Technical Information for 400kV & 220kV Disconnectors However, as per IEC 62271-102 clause number 4.111 above 52kV disconnectors, electrical endurance class E2 is not applicable. Therefore, please confirm that whether bidder can offer the disconnectors with E1 endurance class in line with IEC 62271-102 Standards.	Not acceptable. Follow the requirements in the Bidding document.

Item	Reference	Clarification	Responses
196	Schedules of Technical Information - 400KV & 220KV ISOLATOR	The type of Isolator is mentioned as Horizontal Double Break/Centre break in the Schedules of Technical Information. Please clarify the exact type of Isolator to be considered.	Refer to item 190 of this Clarification.
197	Section VII. Employer's Requirements- B – Specifications; 11.3.3.2. 110 V Battery Units	Please confirm the backup time for Ni-Cd Battery.	Refer to Employer's Requirements- B – Specifications clause 11.3.3.2 that indicates the hours requirement
198	Land Development	We understand that, there measurable difference in level inside the substation plot (approx. 18 mtr) on site. In order to optimize cut and fill quantity of soil for the Land development, please confirm that bidder is free to construct the switchyard at multiple platforms on different levels. Kindly confirm.	This shall be subject to detailed design and shall be subject to the review and approval of the Employer / Employer's representative.
199	Access Road	Considering the level difference inside the substation plot, please clarify if bidder can consider two different access roads from nearest main roads separately for 400 kV and 220 kV area. Kindly confirm.	Not acceptable. A fixed alignment of access to the substation land is available.

Item	Reference	Clarification	Responses
200	Clause 22.4.10 - Construction of tower steelwork and 22.7 - Galvanizing of Section VII. Employer's Requirements- B – Specifications	As per clause 22.4.10, "All steel members and bolts and nuts shall be hot dip galvanized. Galvanize shall be 600g/m² (85µm) average and 500g/m² (70µm) minimum for members and 376g/m² (53µm) average and 305g/m² (43µm) minimum for bolts and nuts." However as per clause 22.7, "thickness of zinc coating of not less than 610 gm. of zinc per square metre of surface on steel bars, plates, sections and fittings. Threaded work shall have a coating weight of 305 gm. of zinc per square metre." Request you to advise Galvanizing thickness for steel members is 600g/m² (85µm) or 610 gm. of zinc per square metre.	Refer to item no 25 of Addendum 4.
201	22.4.14. Aircraft warning markers, obstruction lights and tower painting - Section VII. Employer's Requirements- B – Specifications	As per clause 22.4.14 (b), "The system offered shall be comprehensive and complete in every respect. If a system fed by cables is proposed, it shall be designed to withstand the induced high voltage that can occur during earth fault conditions. It shall consist of a constant current regulator, high voltage cable, dimmer switch, protection equipment, insulating transformers, lightning arresters, etc" Request you to provide detailed specification of constant current regulator, high voltage cable, dimmer switch, protection equipment, insulating transformers, lightning arresters required for tower obstruction lights.	This shall be as per the bidder's design as long as it meets the technical requirements and specifications subject to approval by the Employer

Item	Reference	Clarification	Responses
202	17. Testing and Inspection - Type Tests- Section VII. Employer's Requirements- B – Specifications	As per referred clause, "KETRACO reserves the right to witness any and all the type tests required." Further it is also mentioned that "All costs related to the witnessing of type tests shall be borne by the Contractor" In regards to the above, we understand that bidder shall include cost of type test along with below cost for witnessing type test: I. Return flight ticket on economy class for employer and consultant. II. Visa application and processing fee and Local transport expense at the manufacture's country III. Full board accommodation in a minimum 4-star hotel including laundry services, local and domestic transportation, per diem allowances, all internet and international calls expenses, type test documentation and daily allowance of USD 200 to cater for incidental expenses per Employer's representative per day. Please confirm.	Refer to item 165 of this Clarification.
203	17. Testing and Inspection - Type Tests- Section VII. Employer's Requirements- B – Specifications	As per referred clause, "KETRACO reserves the right to witness any and all the type tests required." Further it is also mentioned that "All costs related to the witnessing of type tests shall be born by the Contractor" In view of above request you to number of KETRACO representative will attend type test of' each equipment.	Refer to item 165 of this clarification

Item	Reference	Clarification	Responses
204	22.8.2. Technical Specification for ERS - Insulators of Section VII. Employer's Requirements- B – Specifications	As per referred clause, "The ERS shall be equipped with all necessary insulators, fittings & accessories for conductors. Every insulator body shall have a durable and legible trademark and year of manufacture as well as the rated combined mechanical strength in kN. The insulators shall be of the modular design so as to be able to use for all required voltages using the same size insulator in series. (1 piece for 220kV / 132kV and 2 pieces connected together for 400kV). " Request you to provide detailed technical specification for Insulators to be used for each type of ERS structure.	Refer to item no 174 of this Clarification.
205	Section_IV-Price_Schedules_16-5-24; Schedule 1A_SS; Sr. No. 1.18	The description for the price schedule item is "material required for Suswa 1 to switchyard connection", the quantity is mentioned as 10 Nos. We understand that the quantity should be 1 lot. Please confirm.	Refer to Clarification no 1 item 49
206	Section III – Evaluation and Qualification Criteria; 1.2 - Contractor's Representative and other Key Personnel	The Educational Certificate issued by the relevant University / Educational Institute is considered as an Authority and Valid License to practice engineering as a professional engineer. Hence, we understand that bidder shall submit the Degree Certificate against the clause "Valid license to practice engineering as a professional engineer in country of origin or residence". Please confirm.	Bidder to comply with requirements. Additionally, the required license—or its equivalent—serves as official authorization for the personnel to engage in professional engineering practice. Also refer to item 121 of this Clarification.

207	14-6. Kimuka-400-220kV-GENERAL LAYOUT (OVERALL) Underground Fire Water Tank	As per layout and BPS Underground Tank is envisaged but We propose above ground tank as Positive Suction pumping System is recommended for fire application. Please Confirm.	Not acceptable.
208	Section VII. Employer's Requirements- B – Specifications, clause no. 18.25 firefighting room with fire pumps and associated <u>piping and valves</u> , all pertaining equipment, external pipelines, hydrants and fire hose cabinets to cover entire site.	In the absence of technical specification for Piping and Fitting, We are considering ASTM A53 Grade B Pipe for Fire Hydrant and Pumping System. Please confirm.	The final selection of piping and fitting materials shall be subject to approval by the Employer/Employer's Representative during the detailed design stage

209	Section VII. Employer's Requirements- A – Scope of Supply , Clause no. 1.2.1- i & Section VII. Employer's Requirements- B – Specifications, Clause no. 18.25.1, Table Substation firefighting systems include portable fire extinguishers for buildings, fire hydrant for yard and Trolley mounted fire Extinguisher firewall and Nitrogen injection fire protection system for Transformers. & The fire detection and protection systems for each fire zone are recommended as following table:	We have considered following Fire Fighting Systems only As per Scope Document t 1. NIFPS system for 2 nos of Transformer 2. Fire Alarm and Detection System for substation Control Room, Bay Control Room, Warehouse, Security Hosing Room, Technical Housing Room, DG Room, Pump House, Transformer, Guard House and Telecommunication Room only 3. Fire Extinguisher for substation Control Room, Bay Control Room, Warehouse, Security Hosing Room, Technical Housing Room, DG Room, Pump House, Transformer, Guard House and Telecommunication Room, Switchyard area only. 4. Fire Pumping system with following Pump House Equipments along with Piping, Fitting Valves & Other accessories: a. 1 no. 500 GPM main motor driven pump b. 1 no. 500 GPM Diesel Engine driven pump c. 2 nos. 50 GPM Jockey pumps d. Air Vessel e. Pump Panel 5. Hydrant System Any other type of Fire Detection & Protection System is not considered under present scope. Please Confirm.	Kindly refer to Employer's Requirements- B – Specifications clause 11.3.3.2 and Employer's Requirements- A – Scope of Supply clause 1.2.1 for the required fire protection
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210	Section VII. Employer's Requirements- B – Specifications, Clause no. 18.25.1, Table The fire detection and protection systems for each fire zone are recommended as following table:	As per Table given in referred clause, We understand that Following Fire Protection System is not under Present scope. Please confirm. 1. Sprinkler system 2. Clean agent gas extinguishing systems 3. Standpipes & hose systems as there is not multi-story Building 4. Fixed water spray systems for Transformer as Nitrogen Injection Fire Protection System has been considered for Transformers. 5. Linear heat detection system as there is no Cable spreading room, Cable basements, Cable tunnels and Cable shafts envisaged for this tender.	Follow the requirement as indicated in the table as well as other relevant clauses of the tender documents along with associated Addenda and clarifications.
211	Schedule iV- Price Schedule 4A_SS, Clause no. 15.16, 15.17, 15.32, 15.33, 20.3.1 & 20.3.2 Quantity of Fire Extinguishers	We understand that, We have to supply Fire Extinguisher quantity as per Price schedule for Control Room, Bay Control Room, Security Housing Room, Technical Housing Room, Guard House and Telecommunication Room. Any variation in quantity shall be paid extra.	The list indicated in the clarification is not exhaustive. Refer to the price schedules that indicate all areas that the fire extinguishers will be required.

212	14-6.Kimuka-400-220kV-GENERAL LAYOUT (OVERALL) & Schedule iV- Price Schedule 4A_SS, Clause no. 15.32 & 15.33 400 kV Bay Control Rooms (BCRs) (including Excavation, concrete works, backfilling, and etc.) together with building services (e.g. Lighting, Small Power System including Lighting Panels, Conduits, Lighting Fixtures and etc., AC and DC panel, HVAC, Fire Detection, hand held fire extinguishers and etc.) & 220 kV Bay Control Rooms (BCRs) (including Excavation, concrete works, backfilling, and etc.) together with building services (e.g. Lighting, Small Power System including Lighting Panels, Conduits, Lighting Fixtures and etc., AC and DC panel, HVAC, Fire Detection, hand held fire extinguishers and etc.)	There is discrepancy in Layout & referred clause of Price Schedule, As per layout there is no Bay Control Room shown in Layout for 400KV & 220KV Switchyard, however as per Price schedule HVAC, Fire Detection System & Fire Extinguisher has to be provided for the same. Please clarify the requirement.	The bay control rooms are in the scope of works. Refer to Employer's Requirements- A – Scope of Supply clause 1.2.1 and Employer's Requirements- B – Specifications clause 2.4 and clause 18.7 and Bid Drawing No 25. Kimuka-400-220kV-SS-Bay-Control-Room-Architectural The bay control room is not in the layout drawing as the location will be selected by the bidder subject to approval by the Employer
213	Section VII. Employer's Requirements- B – Specifications, 18.24.2.5, Table, Page, no. 338 & Schedule iV- Price Schedule 4A_SS, Clause no. 15.16, 15.17, 15.32, 15.33, 20.3.1 & 20.3.2 Central air conditioning systems with 2 x 100% air handling units and standby mechanical cooling.	There is discrepancy in referred clauses of Price Schedule & Technical Speciation, As per Price Schedule High Wall split AC shall be provided for Control Room, Bay Control Room, Security Housing Room, Technical Housing Room, Guard House and Telecommunication Room, However as per Technical Specification Central Air conditioning system is required. We understand that, we have to follow Price schedule only.	Split Unit Air conditioners are required. Refer to item no 13 of Addendum 4

214	Schedule iV- Price Schedule 4A_SS, Clause no. 15.16, 15.17, 15.32, 15.33, 20.3.1 & 20.3.2 Quantity of Split AC Units & Exhaust Fan	We understand that, We have to supply Split AC Units & Exhaust Fan quantity as per Price schedule for Control Room, Bay Control Room, Security Housing Room, Technical Housing Room, Guard House and Telecommunication Room. Any variation in quantity shall be paid extra.	The list indicated in the clarification is not exhaustive. Refer to the price schedules that indicate all areas that the split AC units and exhaust fans will be required.
215	PCC 13.2.2: The Advance Payment Security shall be in the form of the demand guarantee attached hereto in Section X, Contract Forms and shall be issued by a bank licensed and categorised as a 'large bank' by the Central Bank of Kenya. PCC 13.3.2 The Performance Security shall be in the form of the bank guarantee attached hereto in Section X, Contract Forms and shall be issued by a bank licensed and categorised as a 'large bank' by the Central Bank of Kenya.	We kindly seek clarification on what constitutes a 'large bank' as per the Central Bank of Kenya, and whether an official classification or list of such banks is available.	Refer to Clarification no 1 item 198

216	PCC 46.1 List of potential DB members: Proposed by Employer [Attach CVs to the bidding document and the Contract] 1. _____ 2. _____ 3. _____ Proposed by Contractor [Attach CVs to the Contract] 1. _____ 2. _____ 3. _____ Clause 46.5 – GCC and PCC: Rules of arbitration: GCC Sub-Clause 46.5(a) shall apply. Rules of arbitration: UNCITRAL Arbitration Rules Place of arbitration: Neutral location Seat of arbitration: _____ Ruling language: English	We seek clarification on Place of arbitration and Seat of arbitration.	Refer to item 151 of this Clarification.
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217		Having reviewed the bidding document, we would like to kindly request your clarification regarding the following requirement: "Number of contracts involving design of overhead transmission lines /(LILO)of voltage level 400 kV and above,using technologies similar to those of this Bid, that have been successfully completed by the Bidder." As we are reviewing our eligibility and preparing our bid, we would be grateful if you could confirm whether the absence of such a specific 400 kV transmission line project would result in: 1. A reduction in the technical evaluation score as part of a point-based assessment, or 2. A failure to meet a mandatory qualification requirement, leading to direct disqualification.	It would lead to a reduction in the technical score. However, Bidder must still ensure compliance with the mandatory qualification requirements in Section III – Evaluation and Qualification Criteria, 2. Qualification, 4.1 and 4.2 (a), (b) and (c).
218		We are participating in the above-mentioned tender. For our internal tender project records, our company requires the owner's tax registration number. Therefore, we kindly request the registered KRA PIN number of the owner, Kenya Electricity Transmission Company Ltd.	This will not be provided at this stage.
219		Is it acceptable for a group of companies to submit a joint bid under a "Consortium" arrangement (with clearly defined scopes and separate liabilities), or does the Employer require the bidders to form a "Joint Venture" with joint and several liability as described under ITB 4.1 and ITB 21.4?	Requirements in ITB Clause 4.1 and other related bid clauses inclusive of ITB 21.4 shall prevail.

220	Reference is made to the Bidding Documents, Section IV - Bidding Forms, 4.2(a) Specific Experience, in which mentioned: (a) Participation as contractor, joint venture member, management contractor, or subcontractor, in at least two (2) contracts within the last ten (10) years, each with a value of at least Twenty Million United States Dollars (20 MUSD), that have been successfully completed and that are similar to the proposed Plant and Installation Services.	We would like to request you to amend the above mentioned as below: (a) Participation as contractor, joint venture member, management contractor, or subcontractor, in at least two (2) contracts within the last ten (10) years, each with a value of at least Twenty Million United States Dollars (20 MUSD) or at least one (1) contract within the last ten (10) years, with a value of at least Forty Million United States Dollars (40 MUS), that have been successfully/substantially completed and that are similar to the proposed Plant and Installation Services.	Not acceptable.
221	General Information	Kindly provide the MLFB or ordering number for the existing Line Differential protection L90 for existing Line Isinya Protection Panel in 220kV Kimuka substation so that we inquire from the manufacturer,	Refer to Clarification no 1 item 97
222	General Information	Kindly provide the MLFB or ordering number for the existing Line Differential protection 7SD52 existing Line Suswa 2 Protection Panel in 220kV Kimuka substation so that we inquire from the manufacturer,	Refer to Clarification no 1 item 97
223	General Information	Kindly provide the MLFB or ordering number for the existing Line Differential protection 7SD52 in 400kV Suswa substation so that we inquire from the manufacturer,	Refer to Clarification no 1 item 63
224	General Information	Kindly provide the type and version information of the existing SAS in 220kV Kimuka substation so that we inquire from the manufacturer,	Refer to Clarification no 1 item 96
225	Price Schedule	It mentioned the DIgSILENT software is required in the 18.6.6 price schedule, kindly clarify if the basic version, extended version or advanced version is required	The Digsilent Modules Required are included in item no 16 of Addendum 4.

226	Section-VII-2E-Schedules of Technical Information	Page 300 of Section-VII-2E-Schedules of Technical Information, it mentioned 19 Inverter System, 20 AC Main Power Transient Protector and 21 Inverter Distribution is part of the SAS, while it does not mention in the price schedule, kindly clarify if the 19 Inverter System, 20 AC Main Power Transient Protector and 21 Inverter Distribution is in the scope of supply	These are included as part of the uninterruptable power supply line item in the price schedules.
227	Section-VII-2E-Schedules of Technical Information	Kindly confirm if It is acceptable to share the same DAUs between FMS and PMU	It is not acceptable.
228		Kindly note that referring to the coordinates given in the tender documents, the relevant substation area is approximately more than 50% bigger than the area shown on the layout received in the tender book. Kindly re-confirm the coordinates of the substation.	Refer to item 33 of Addendum 4, the coordinates provided in Employer's Requirements- A- Scope of Supply" section 1.1 are correct.
229		Kindly send the soil report	Refer to clarification no 1 item 2
230		Kindly send the site survey of the substation	Refer to clarification no 1 item 2
231		With reference to the above-mentioned tender, we kindly ask you to provide us with the AutoCAD version of the drawings, to assist us in our design implementation of the substation.	Refer to item 133 of this clarification.
232		Regarding the price adjustment, referring to ITB 17.7 and ITB 19.3 (a), the Bid price shall not be adjusted; whereas according to ITB 11.3(d), price adjustment should be considered. Please confirm that we should follow ITB 17.7 and ITB 19.3 (a) "the Bid price shall not be adjusted", and therefore ITB 11.3(d) is no applicable for this bid	Refer to item no. 104 of this Clarification.
233		Regarding new Kimuka 400/220KV substation coordinates, kindly note that the coordinates indicated in "Employer's Requirements- A- Scope of Supply" section 1.1, are different from the coordinates indicated on the	Refer to item no 33 of Addendum 4, the coordinates provided in Employer's Requirements- A- Scope of Supply" section 1.1 are correct.

		layout drawing "14-5.Kimuka-400-220kV-Layout-SITE". Kindly advise which coordinates to follow.	
234		2) Regarding the protection degree of the battery charger, referring to the specification and data sheet, IP 51 protection degree is required; kindly note that since the battery charger will be installed indoor inside the building, IP51 will lead to overheating inside the cabinet. According to all battery charger suppliers, they recommend IP4- for the battery charger installed in the substation building. Please confirm that IP4- protection degree for the battery charger to be considered	Follow the requirement as indicated.
235	Section-VII Specification-12.7 Energy Meter:	Section-VII Specification-12.7 Energy Meter: Energy meters shall be numerical and of the 3-phase 4-wire measuring principle and conform to IEC62053-22 accuracy class 0.2s for active meters and IEC62053-23 accuracy class 2.0 for reactive meters. However, it requires accuracy 0.2 for energy meter. Please clarify which one is prior.	Accuracy of 0.2s is required. Refer to item no 14 of Addendum 4 and item 42 of Addendum 4
236	Section-VII Specification 12.4	There are specification for Smart Meter mentioned in 12.4 but not in BOQ. Please confirm Smart Meters is not needed for the project.	The meters indicated in the price schedules are smart tariff meters in line with the technical specifications

237	Section-VII Specification-11.1	Section-VII Specification-11.1 The 110V DC supply system shall comprise 2 x 50% rated duty, Nickel-Cadmium (Ni-Cd) type battery units Section-VII Specification-11.3.3.1 The 110 V battery system shall comprise 2 x 1000% rated duty Nickel-Cadmium (Ni-Cd) type battery units. Please confirm 2 x 50% rated duty battery units instead of 2 x 1000% rated duty battery units to be provided considering the future bays.	Refer to clarification no 1 item 127
238	Section-VII-2E-Schedules of Technical Information	In the TDS of Protection Control and Metering, there are TDS of Under & Over Voltage Relay, Breaker Failure Protection (with Short zone) , STUB Protection, Directional Earth Fault Relay, Over Flux Relay,etc, which are not listed in the BOQ. Please confirm these relays function can be included in the main protection relay instead providing separate relay and BOQ is prior.	Refer to clarification no 1 item 128
239	Section-VII-2E-Schedules of Technical Information	In the TDS of k) PROTECTION CONTROL AND METERING, there are Energy Meters and Fault Recorder, which are repetitive with the separate TDS o) FAULT MONITORING SYSTEM and z) TARIFF METERING SYSTEM. Please confirm these parts only need to be filled in the o) FAULT MONITORING SYSTEM and z) TARIFF METERING SYSTEM.	Refer to clarification no 1 item 129
240	Section_IV-Price_Schedues_16-5-24	Please clarify the purpose of BOQ item 10.3.4 Outdoor Cabin	Refer to clarification no 1 item 130
241	Section_IV-Price_Schedues_16-5-24	Please clarify the purpose of BOQ item below. We think they are repetitive and only 1 lot of ODF including 3 panels to connect 3 substations need to be provided. 10.11.1 Optical Distribution panel (Main & Collocation Communication room) , 10.11.2, Optical Distribution Unit (OCDF) for 48 cores fiber (Main Communication romm) 10.11.3 Digital Distribution Unit (ODF) for 48 cores fiber	Refer to clarification no 1 item 131

242	Section_IV-Price_Schedules_16-5-24 Item 10.12.5	For the BOQ item 10.12.5 Power supply with backup battery, there are no related technical specification and TDS. Please clarify.	Refer to clarification no 1 item 132
243	Section-VII Specification	Please confirm MCB is accepted for outgoing feeder of AC sub-distribution panel.	Refer to clarification no 1 item 133
244	Section-VII Specification 15.1.1& 15.2.1	Please confirm the draw-out type cubicle is only need for BOQ 15.1.1 AC Main and distribution panels not for 15.2.1 110Vdc Main and distribution panels.	Refer to clarification no 1 item 134
245	Section_IV-Price_Schedules_16-5-24 15.3.1	As required in the BOQ of the quantity of 15.3.1 48Vdc distribution panel is 3, we think the quantity should be 2. Please confirm.	Refer to clarification no 1 item 135
246	Section-VII-2E-Schedules of Technical Information	In the TDS of t) CCTV SURVEILLANCE AND ACCESS CONTROL, 5KVA BATTERY BACKUP SUPPLY are required. Please provide the required capacity for the batteries or clarify the required discharge time for batteries' capacity calculation.	Refer to clarification no 1 item 136
247	Section-VII-2D-Drawings-5.Kimuka-400-220kV-SS-220kV-PSLD Section_IV-Price_Schedules_16-5-24	It requires Main I distance protection (21) and MainII differential protection(87L) for 220kV line in the drawings, which is conflicted with the BOQ Main I 87L and MainII 87L. Please clarify which one is prior.	Refer to clarification no 1 item 137
248		Please clarify the manufacture of existing SCADA system and NMS system at NCC.	Refer to clarification no 1 item 138
249		Please clarify the manufacture of existing SCADA system at the existing 220kV Kimuka Substation and 400kV Suswa Substation.	Refer to clarification no 1 item 139
250		Please clarify the existing line relay type of 220kV Kimuka Substation and 400kV Suswa Substation.	Refer to clarification no 1 item 140
251		Please clarify the existing telecommunication equipment manufacture and type of 220kV Kimuka Substation and 400kV Suswa Substation.	Refer to clarification no 1 item 141

252	Section_IV-Price_Schedules_16-5-24	Please clarify the teleprotection signalling equipment need to be provided or not for the below item in the BOQ. 10.5.2 Required equipment for modification works at existing Teleprotection Signalling Equipment in existing Suswa 400/220 KV substation 10.6.2 Required equipment for modification works at existing Teleprotection Signalling Equipment in existing existing Isinya 400 KV substation	Refer to clarification no 1 item 142
253	Section-VII Specification Section-VII-2E-Schedules of Technical Information	It requires Halogen free for LV Cables in the technical specification, which is conflicted with the PVC material requirement in the Schedules of Technical Information. Please clarify which one is prior.	Refer to item 37 of this Clarification.
254	Section-VII-2B-Specification 18.3 Control Building	The tender documents require the modified of the battery room windows within the existing substation. Whether this work within the scope, and if yes, please provide the specific renovation requirements.	Refer to clarification no 1 item 144
255	Section_IV-Price_Schedules_16-5-24 Section-VII-2A-Scope & General Requirements Section-VII-2B-Specification Item 15.10.5 1.Scope of work 18.17. Water, Electricity and Other Services	Discrepancy exists between the quantity of elevated water tanks (4) specified in the BOQ, the scope of work (5), and technical requirements (3x5000, 6x1500). Please clarify which one to follow.	Refer to clarification no 1 item 145
256	Section-VII-2D-Drawings Section_IV-Price_Schedules_16-5-24 Item 20.3 Drawing 14-7.Kimuka-400-220kV	The General Layout (Scope of Work) drawing 14-7.Kimuka-400-220kV does not include Technical staff and Security staff House , while BOQ-Schedule 3A/4A contains related design and quantities.The bidder understands that the relevant house shall be included of the scope work. Please confirm.	Refer to clarification no 1 item 146
257	Section_IV-Price_Schedules_16-5-24 Section-VII-2E-Schedules of Technical Information	BOQ lists 15 exhaust fans, while the Schedules of Technical Information requires 25. Please clarify which one to follow	Refer to clarification no 1 item 147

	w)HEATING VENTIATION AND AIR CONDITIONING (HVAC)		
258	Section_IV-Price_Schedues_16-5-24 Section-VII-2A-Scope & General Requirements Item 15.31	The BOQ specifies a 1km access road, Please provide the Path plan about the access road.	Refer to response of item no. 61 of this clarification
259	Section_IV-Price_Schedues_16-5-24 BOQ Schdeule 4A item15.7	Please clarify whether the crushed stone area is fully laid within the substation fence area, include the future bay.	Site surfacing shall be spread on the entire switchyard including future bay areas and covers effectively the area per item no. 35 of this clarification
260	Section_IV-Price_Schedues_16-5-24 BOQ Schdeule 4A item15.3	Kindly clarify whether the substation coordinates provided in Section S1.1 – Site Location refer to the total land acquisition area or only to the switchyard area. Additionally, please confirm whether slope protection works may be carried out beyond this defined area.	Refer to item no. 228 and 233 of this Clarification. Slope protection will be carried out within the substation land in relation to works protection as well as within the ROW (wayleave) corridor.
261	Section-VII-2D-Drawings Drawing-Guard-House-and-Telecom- Collocation-Room-Architectural	Please clarify whether the Main Equipment Room and Customer equipment Room of the guard room adopt Raised floors or epoxy paint floors.	Refer to drawings provided. Floor finish is as indicated on the Interior finishing schedule
262	Section-VII-2D-Drawings Section-VII-2D-DrawingsBay-Control-Room- ArchitecturaSection-VII-2B-Specification18.7 1	In the Drawing, there are cable trench in BCRwhile required raised floor in the Sepcification18.7 1. Please clarify whether the Bay Control Room adopt Raised floors or epoxy paint floors.	Raised false floor shall be installed. Refer to attachment 9 of Addendum 4.
263	Section-VII-2D-Drawings Drawing-Technical-Staff-Housing- Architectural/Security-Staff-Housing- Architectural	According to the note of the Techninical and security staff house drawing, please clarify whether fireproof doors are adopted or Normal wooden doors will be used for internal door.	Fireproof doors will not be required. Refer to attachment 8 & 10 of Addendum 4.
264	Section_IV-Price_Schedues_16-5-24 BOQ Schdeule 4A item15.33.6 BOQ Schdeule 4B item3.01	Stone masonry retaining wall in cement:sand (1:3) mortar, which is required to quote by square meter, Please specify the height of the retaining wall.	This shall be designed by the Contractor.

265	Section-VII-2A-Scope & General Requirements item 30.1	In the bidding document, it is said "The Contractor shall provide office accommodation of permanent construction which can be used by KETRACO after project commissioning. " Please clarify if the office accommodation is the site office which describes below this item. And please provide the area and details requirement of office accommodation. Office accommodation: The Contractor shall provide office accommodation of permanent construction which can be used by KETRACO after project commissioning. The Contractor shall also provide at his own cost, two furnished rooms in his site office to accommodate 8 representatives of the Engineer and KETRACO. The site office shall be kept clean and habitable at all times. The Contractor shall be responsible for timely payment of any monthly utility bills and expenditure for the site office that may occur for the entire project duration. Each site office provided by the Contractor shall be fully furnished using a good standard of office furniture to be approved by the Employer/ Employer's Representative and fully equipped with:	Confirmed the office accommodation is the site office. Details of the site office are provided in Section-VII-2A-Scope & General Requirements item 30.1. The area shall be as per bidder's design subject to the Employer's approval.
266	Section VII: Employers Requirements B – Specifications Clause 22.4.3, Page 411	Wind Speed is specified as 40m/s (3-second gust), but return period is not indicated. Please clarify.	Refer to item no. 44 of addendum 4
267	Section VII: Employers Requirements B – Specifications Clause 22.4.3, Page 411	Confirm the Terrain category to be used for wind pressure calculations.	This shall be determined by the topography of the site
268	Section VII: Employers Requirements B – Specifications Clause 22.4.4, Page 411	Clarify if limiting conditions at EDT Nil wind for deriving conductor tensions are under 'Initial' or 'Creep' condition.	It shall be considered under both initial and creep conditions and the most onerous considered in design
269	Section VII: Employers Requirements B – Specifications Clause 22.4.8, Page 413	Clarify weather conditions defining Still Air and Full Swing Wind Conditions.	Clarification sought not clear.
270	Section VII: Employers Requirements B – Specifications Clause 22.4.9.2, Page 417	Confirm the number of broken wires per phase to consider for both suspension and tension towers.	Clause 22.4.9.2 of the specifications is explicit that breakage of phase conductor shall mean breakage of all conductors in one phase and simultaneous breakage of two points of any combination among phase conductors and overhead grounding wires on the same side of the tower shall be considered. This shall apply for both tension and suspension towers.
271	Section VII: Employers Requirements B – Specifications Clause 22.4.9.5, Page 418	Confirm if strength factors per IEC 60826:2017 are to be applied in addition to load factors mentioned for lattice towers.	Confirmed

272	Section VII: Employers Requirements B – Specifications Clause 22.5.1, Page 424	BS 8110 has been superseded by Eurocode 2 (BSEN 1992-1-1:2004). Confirm if the latter shall govern concrete foundation design.	Confirmed
273	Section VII: Employers Requirements B – Specifications Clause 22.5.3, Page 425	Distance between concrete level and ground level (muffing height in chimney) not specified—please confirm.	This is specified in - Section VII. Employer's Requirements- B – Specifications-clause 22.5.3 foundation design. Value should be at least 300mm above ground.
274	Section VII: Employers Requirements B – Specifications Clause 22.5.3, Page 425	Confirm if foundation reactions based on tower factor of safety should be increased with additional partial safety factors for site uncertainties.	The safety factor applicable for foundation is specified in the bidding document and the same shall apply
275	Section VII: Employers Requirements B – Specifications, Section VII–2D–Drawings	Drawing references show BE combinations; request a schematic with Body (+3m, +6m, +9m, +12m) and Leg Extension (+1m to +4m) combinations as per tender requirement.	Refer to Clarification no. 1 item no. 53
276	Section VII: Employers Requirements B – Specifications Clause 22.4.3, Page 411	Clarify the altitude to be considered for determination of wind pressure.	Refer to Section VII. Employer's Requirements- E – Schedules of Technical Information- clause 2.14 - while ignoring the effects of air density correction.
277	Section VII, Employer's requirement B- Specs, page 41 Clause 3.2.1 400kV circuit breaker	We understand that we have to supply 400kV circuit breaker with Point on Wave Switch (POW) & online monitoring (OLM) system. Please confirm. Also Please confirm that PoW and OLM is not required for 220 kV CB.	For point on wave, this will be applicable for 400 kV CB only. For online monitoring, this is applicable for both 220 kV and 400 kV CB. Refer to item 67 of this Clarification and item no 8 of Addendum 4.
278	Section VII, Employer's requirement B- Specs, page 43 Clause 3.2.3	Please confirm that one gas handling equipment common for 400 kV & 220 kV CB is to be provided and separate gas handling cart for 220kV is not to be provided.	Confirmed as long as it can be used for gas handling for both 400 kV and 220 kV breaker types. If it cannot be used for both types, separate gas handling for each type is required.
279	Section VII, Employer's requirement B- Specs,	Please confirm that bus transfer duty is not required for 400kV & 220 kV disconnectors	Confirmed

280	Section VII, Employer's requirement B- Specs, Clause 4.5	We understand that type tests mentioned for CTs are not required to be conducted. Only type test reports are required to be submitted. Please confirm.	Refer to section VII. Employers' requirement, A, Scope of supply Clause 17, subclause Type Test
281	Section VII, Employer's requirement B- Specs, Clause 5.6	We understand that type tests mentioned for CVTs are not required to be conducted. Only type test reports are required to be submitted. Please confirm.	Refer to item 280 in this clarification
282	Section VII, Employer's requirement B- Specs, Clause 7.3.1 & 7.3.3	We understand that type tests & acceptance mentioned for LA are not required to be conducted. Only type test reports are required to be submitted. Please confirm.	Refer to item 280 in this clarification
283	Section III & Section VII- 2E Item 3 3.Evaluation of Financial Part & Schedules of Technical Information- d) 400/220KV AUTO TRANSFORMERS (AIS-AIS)- item no.18	Please clarify if L_n and L_L mentioned in the formula (No load loss and Load Loss) are values subject to IEC tolerance or are they Maximum values?. We note that In Technical datasheets of Power Transformer Item 18, values are asked in kW and not mentioned as Maximum. Hence, we consider it is subject to IEC tolerance. Please confirm.	L_n and L_L are the loss values indicated in the schedules of technical information by the bidder. In the case where a Bidder has proposed several manufacturers who have qualified, the highest losses among the manufacturers will be used. Refer to item no 15 of Addendum 4
284	Section VII, Employer's requirement B- Specs, Clause 15.20.4 and 15.20.5 page 260 & 261	We understand Type test (15.20.4) and Special tests (15.20.5) mentioned for Auto Transformer are to be carried out on one transformer only and not on all transformers. Only routine tests mentioned in 15.20.3 are to be carried out on all transformers. Please confirm.	For Type test this will be done for one transformer. For special tests this is to be agreed as indicated in IEC and the same is to be finalised during detailed design.

285	Section VII, Employer's requirement B- Specs, 3.2.1 Circuit Breakers	1.Pre-insertion resistors to be provided if found necessary as result of the insulation coordination studies that are to be provided. 2.The 400kV circuit breakers shall equipped with Point on Wave Switch (POW) to open or close breakers at a pre-determined point on the voltage waveform Kindly confirm the requirement of 400kV SF6 Circuit breaker with Pre-insertion resistor(PIR) with Control switching device(CSD)	400 kV Circuit breakers are to have point of wave devices. However, if pre insertion resistors are found necessary, as result of the insulation coordination studies, these are to be provided as part of the scope of works and within the quoted contract price.
286	Section VII- 2E Schedules of Technical Information- Circuit Breaker	Rated current at maximum site temperature - Rated current for 225kV GCB mentioned in GTP 2500 A However in SLD rated current 3150A also STC in GTP is 40kA/1Sec and in SLD 40kA/3sec. Please clarify and confirm the same.	The SLD and the schedules of technical information do not contradict each other. The 3150A and 40kA/3Sec are for the busbar not the circuit breaker in the SLD.

287	Section-VII-2A-Scope & General Requirements & Section VII, Employer's requirement B- Specs, 3. Service Condition- (h) Altitude	Mentioned there- The height above sea level shall be considered as 1850m The insulation levels of external insulation shall be determined in accordance with IEC 62271-1, Clause 2.2.1. Important Note: All main and spare equipment shall be provided for proper operation in four altitude categories (to optimize main equipment/ spare parts and achieve interchangeability at country level), including 1000, 1500, 2000 and 2500 meter above sea level. In case of other range may has been mentioned in the schedules of technical information (Part 2-E), the higher altitude category shall be considered. However in Section VII, Employer's requirement B- Specs, Clause 2.1.4. Environmental - In the given table- <table><tr><th colspan="2">A) SITE CONDITIONS</th><th rowspan="2">UNIT</th><th colspan="2">DATA</th></tr><tr><th colspan="2"></th><th>Required</th><th>Offered</th></tr><tr><td colspan="2">General Requirement</td><td></td><td></td><td></td></tr><tr><td>1</td><td>Climate</td><td></td><td>Arid</td><td></td></tr><tr><td>2</td><td>Pollution</td><td></td><td>Very Heavy</td><td></td></tr><tr><td>2.1</td><td>Coverage distance (based on Um)</td><td>mmkV</td><td>31</td><td></td></tr><tr><td>3</td><td>Insulation Level</td><td>Insulation distance</td><td>80</td><td></td></tr><tr><td>4</td><td>Altitude of Area</td><td>m</td><td>1850</td><td></td></tr><tr><td>5</td><td>Seismic Acceleration</td><td>g</td><td>0.25</td><td></td></tr></table> Please confirm do we have to consider 2000 m.	A) SITE CONDITIONS		UNIT	DATA				Required	Offered	General Requirement					1	Climate		Arid		2	Pollution		Very Heavy		2.1	Coverage distance (based on Um)	mmkV	31		3	Insulation Level	Insulation distance	80		4	Altitude of Area	m	1850		5	Seismic Acceleration	g	0.25		Refer to item 113 in this Clarification.
A) SITE CONDITIONS		UNIT	DATA																																												
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288	Substation Coordinates	We understand that the plot coordinates have been provided; however, the substation coordinates have not been specified. We request you to please provide the coordinates for all four corners of the substation.	Refer to item no. 228 and 233 in this Clarification. Only the coordinates of the land have been provided. Exact location details for the switchyard along with other scope related facilities within the acquired land shall be determined during the design																																												

			phase by the Contractor and subject to approval of the Employer / Employer's representative.
289	Staff Houses Coordinates	Kindly provide the coordinates for all corners of the dwelling houses' location.	This will be based on the Contractor's final design subject to Employer's approval.
290	Technical Requirements - Civil Works , Codes and Standards	We understand that the BS EN Code can be used for the design of concrete and steel. Kindly confirm.	Confirmed
291	Scope of Supply - Plot Development	We understand that the scope of work involves only site clearing within the specified corner coordinates of the plot. No land development activities are required across the entire plot area. Kindly confirm.	Refer to item 35 of this Clarification.
292	Scope of Supply - Plot Development	We understand that the development, including terracing, levelling, and compaction, will be carried out within the Substation and Staff House areas. The remaining portion of the plot will retain its existing natural ground profile. Kindly confirm if our understanding is correct..	Refer to item 35 of this Clarification.
293	Scope of Supply - Plot Development for substation	Kindly confirm if the substation area can be relocated as per requirements during the detailed engineering phase of the project, considering the significant level difference in the plot.	Yes, confirmed. The Contractor shall optimize the design during detailed design stage and this will be subject to the Employer's approval. Refer to item 288 of this clarification as well.
294	Scope of Supply - Plot Development for Staff House	Kindly confirm if the Staff Houses can be relocated as per requirements during the detailed engineering phase of the project, considering the significant level difference in the plot.	Yes, confirmed. The Contractor shall optimize the design during detailed design stage and this will be subject to the Employer's approval.
295	Technical Requirements - Civil Works Roads, paving and surfacing-	We understand that all internal roads are Asphalt roads. Kindly confirm.	Confirmed
296	Technical Requirements - Civil Works Roads, paving and surfacing-	We understand that all external access roads will be Asphalt roads. Kindly confirm.	Confirmed

297	Technical Requirements - Civil Works Roads, paving and surfacing-	As per overall layout, Parking Space is for 10 car. Please confirm.	Refer to section VII. Employers requirement, A, Scope of supply Clause 1.2.1 that indicates number of required parking
298	Technical Requirements - Civil Works Roads, paving and surfacing-	We understand that car parking shall be provided without a shed. Kindly confirm.	Not correct. Refer to section VII. Employer's requirement, A, Scope of supply Clause 1.2.1 and provided details under section VII. Employer's requirement, B, Specification Clause 18.3
299	Technical Requirements - Civil Works Water drainage system	We kindly request you to provide the typical layout and cross-section drawings of the drainage system for the substation area.	This shall be the responsibility of the winning bidder / contractor as part of the design
300	Technical Requirements - Civil Works Water drainage system	We understand that the discharge point of the drainage is at the adjoining plot boundary. Kindly confirm.	This final drainage discharge point shall be determined during detailed design.
301	Technical Requirements - Civil Works Property/Boundary Fence and Gate	We understand that a Chain Link Fence with Steel posts Columns (Chain Link fence and entrance gate - As per Tender Drawing) will be provided around the plot boundary. Kindly confirm.	Not correct. Refer to section VII. Employer's requirement, B, Specifications, clause 18.23.13 and Addendum 3.
302	Technical Requirements - Civil Works Substation Fence and Gates	As per the layout, it appears that the overall plot fence and the substation fence are the same. Please confirm whether we need to provide only one common fence or two separate fences for the overall plot and substation.	Separate fences are required. Refer to section VII. Employer's requirement, B, Specifications, clause 18.23.13 and Addendum 3.
303	Multi-level Platform	Please confirm whether we can proceed with a multi-level substation platform, considering the significant level difference in the plot.	The Contractor shall optimize the design during detailed design stage and this will be subject to the Employer's approval.
304	FGL	We kindly request you to provide the FGL for the Substation.	Refer to item no. 18 of this Clarification.
305	Technical Requirements - Civil Works Fence around Staff House	We have not found any information regarding the fence for the staff house. We understand that a Chain Link Fence with steel posts shall be provided around the staff house area. Kindly confirm.	Refer to section VII. Employer's requirement, B, Specifications, clause 18.23.13 and Addendum 3.

306	Cable trench & Cable duct	We kindly request that you provide the layout and typical section drawings for the cable trench and cable duct.	No typical drawings are available. This shall be designed by the Contractor.
307	Type of Foundation for equipment, Gantry tower, Building, Transformer. Etc.	We understand that all foundations in the substation are isolated pad foundations, and there is no requirement for piling. Kindly confirm	The types of foundations to be installed shall be determined during detailed design taking into consideration the findings of the geotechnical investigation.
308	Support Structure Type	We understand that all support structures of Equipment and Gantry in the substation are of the lattice type. Kindly confirm.	Confirmed
309	Gantry - Beam Structure Type	We understand that all gantry beams in the substation are of the lattice type. Kindly confirm.	Confirmed
310	Requirement of Basement in Buildings	Kindly confirm whether a basement is required in the Control building	A basement is not required, however false floor shall be installed where applicable.
311	Technical Requirements - Civil Works Control buildings-	We understand that the Control Building is a single-story structure. Kindly confirm.	Confirmed.
312		We understand that the roof of the building will be a reinforced concrete Roof with Roof sandwich panels. Please confirm.	Not confirmed. It shall have a false roof over the reinforced concrete roof slab utilising IT5 galvanised sheets supported on steel trusses. Refer to item no. 36 and 40 of addendum 4
313		We kindly request that you provide clear conceptual and architectural drawings (plan, elevation, section, etc.) with dimensions for the Control Building	The drawing has been provided as a guideline. Refer to the revised drawing in attachment 11 of addendum 4. The final to be adopted, as shall be the case with all other facilities, shall be developed by the Contractor for review and approval during detailed design phase.
314	Technical Requirements - Civil Works Bay Control buildings-	We understand that the Bay Control Building is a single-story structure. Kindly confirm.	Confirmed
315		We understand that the roof of the building will be a reinforced concrete Roof with Roof sandwich panels. Please confirm.	Not confirmed. It shall have a false roof over the reinforced concrete roof slab utilising IT5 galvanised sheets supported on steel trusses. Refer to attachment 9 of addendum 4

316		We kindly request that you provide clear conceptual and architectural drawings (plan, elevation, section, etc.) with dimensions for the Bay Control Building	The drawing has been provided as a guideline. Refer to attachment 9 of addendum 4. The final to be adopted shall be developed by the Contractor for review and approval during detailed design phase.
317	Diesel Generator House Drawing	We understand that diesel generator building is required for the substation and it will be a single-storey building. Kindly confirm.	Confirmed.
318	Diesel Generator House Drawing	We understand that the roof of the Diesel Generator building will be an RCC roof. Please confirm.	Confirmed.
319	Guard House and telecom collection room for Substation	We understand that the Guard House and telecom collection room for Substation is a Single storey building. Kindly confirm.	Confirmed.
320	Guard House for Substation	We understand that the roof of the building will be a reinforced concrete Roof with Roof sandwich panels. Please confirm.	Not confirmed. It shall have a false roof over the reinforced concrete roof slab utilising IT5 galvanised sheets supported on steel trusses. Refer to attachment 12 of addendum 4
321	Fire Fighting Pump house	We understand that there is requirement of fire fighting pump house along with complete fire protection system. Please confirm.	Refer to section VII. Employers requirement, A, Scope of supply Clause 1.
322	Fire Fighting Pump house	1) Please confirm that the Pump House is a single-story Building. 2) Please confirm the roof of the building will be RCC roof. Please Confirm	1. Confirmed 2. Confirmed
323	Technical Requirements - Civil Works Technical Staff House	According to the tender drawings and technical specifications provided, the number of staff houses is two duplexes. Kindly confirm.	Confirmed.
324	Technical Requirements - Civil Works Technical Staff House	We understand that the all staff houses i.e. two duplexes is a single-storey building. Kindly confirm.	Confirmed.
325	Technical Requirements - Civil Works Technical Staff House	We understand that the roof of the building will be a reinforced concrete Roof with Roof sandwich panels. Please confirm.	Not confirmed. The roof shall utilise versatile roofing sheets supported on an appropriately designed roof structure, incorporating thermal insulation. Refer to attachment 10 of addendum 4

326	Technical Requirements - Civil Works Security Staff House	We understand that the roof of the building will be a reinforced concrete Roof with Roof sandwich panels. Please confirm.	Not confirmed. The roof shall utilise versatile roofing sheets supported on an appropriately designed roof structure, incorporating thermal insulation. Refer to attachment 8 of addendum 4
327	Tender Document - General Layout Drawing	As per the general layout drawing, the size of the control building is indicated. However, we assume that the building's size and the arrangement of rooms can be modified to meet the actual design requirements. Kindly confirm.	The outer dimensions of the control building provided in the bidding documents are the minimum. The Contractor shall optimize the design during detailed design stage based on actual design requirements and this will be subject to the Employer's approval.
328	Gravel filling	As per Specification, 150 mm gravel thickness is to be provide. Please confirm	This is the minimum thickness which will be guided by the grounding study
329	Topography Survey report	We request you to please provide the topographic survey report for the complete plot area, along with contour drawings for the ground elevation levels.	Refer to Clarification 1 item no 2
330	Technical Requirements - Civil Works Roads, paving and surfacing-	We request you to please provide access road length from main road to substation entry.	Refer to item no. 61 of this clarification
331	DRAWINGS - Building	We understand that all building sizes provided are for reference; however, we can modify building sizes as per the actual design requirements. Kindly confirm.	The square area in the bidding documents are the minimum. The Contractor shall optimize the design during detailed design stage based on actual design requirements and this will be subject to the Employer's approval.
332	Technical Requirements - Civil Works Roads, paving and surfacing-	We request you to please confirm the width of the access road from main road to substation gate.	Refer to item no 30 of addendum no. 4
333	Capacity of Septic Tank	We kindly request that you provide the capacity & users of the septic tank and soak pit.	Refer to item no 21 of addendum 4
334	Septic Tank	As per layout, 2 numbers of septic tank is provided. Please confirm	Refer to item no 21 of addendum 4
335	Drawing of Septic Tank	We kindly request you that provide the typical drawings of the septic tank and soak pit.	No typical drawings are available. This shall be designed and detailed accordingly by the Contractor.

336	Slope Filling for protection of Substation embankment edges	1) We assume that slope filling can be done outside the plot boundary line 200 X 120m for protection of the substation embankment edges please confirm. 2)If slope filling is not permitted outside the plot boundary ,Please Confirm if slope filling can be done inside the boundary line of substaion Please Confirm 3)If slope protection not allowed inside and outside then Please confirm if retaining wall to be provided in the boundary line.	This shall be determined during the detailed design phase
337	Oil seperator tank	We request you to provide the location of the Oil seperator tank if it need to be constructed	The location of the oil pit will be based on the bidder's design subject to approval of the Employer.
338	Anti weed treatment	We request you to please confirm the scope for antiweed treatment.	Refer to section VII. Employer's requirement, B, Specifications, clause 18.23.6.11
339	Technical Requirement - Concrete mixes	We understand that, C25 reinforced concrete (above ground) for general is use. Please confirm.	For clarity, structural concrete shall utilise C25/30 concrete grade per BS EN 206 notation whether above or below ground.
340	Technical Requirements - Civil Works Roads, paving and surfacing-	We request you to please confirm the route of the access road from main road to Substation gate entry.	Refer to item no 61 of this Clarification.
341	Technical Requirements - Civil Works Transformer foundations	As per the technical specifications, it is mentioned that the transformer oil collecting pit shall be designed to retain 1.50 times the volume of the transformer oil. However, we understand that a separate oil interceptor will be provided with the capacity to retain the entire volume of transformer oil. The oil collection chamber beneath the transformer primarily functions as a rapid drainage system to direct oil and firefighting water in case of leakage or spillage, ensuring that the mixture flows to the main oil interceptor tank. Hence, we believe that the transformer oil collection chamber itself does not require a capacity of 1.5 times	Not confirmed. Follow the requirements as indicated in the bid documents.

		the transformer oil volume. Kindly confirm.	
342	Technical Requirements - Civil Works Reinforcing steel	We request you to kindly confirm the grade of steel to be used.	Refer to item no. 23 of addendum 4
343	Light pole for Access Road	We request you to kindly confirm the requirement of Street light pole for access road.	This shall not be included for the external access road. Refer to item no. 27 of addendum 4
344	Underground Fire water tank	As per layout, there is requirement of underground fire water tank, please confirm the quantity and capacity.	Refer to item 207 of this clarification. Quantity is 1 and capacity is 230 m ³ as per the price schedule
345	Drawing of Underground Fire water tank	We kindly request you that provide the typical drawings of the underground fire water tank.	No typical drawings are available. This shall be designed by the Contractor.
346	Elevated Water tank	As per layout, there is requirement of 5 numbers of elevated water tank but as per specification 3 numbers of elevated water tank of 5000L is mentioned. Please confirm the scope.	Refer to Clarification 1 item 145
347	Drawing of Elevated Water tank	We kindly request you that provide the typical drawings of the Elevated water tank.	No typical drawings are available. This shall be designed by the Contractor.
348	Underground water tank	As per layout, there is requirement of underground water tank, please confirm the quantity and capacity.	Refer to Clarification 1 item 4
349	Drawing of Underground water tank	We kindly request you that provide the typical drawings of the underground water tank.	No typical drawings are available. This shall be designed by the Contractor.
350	STAAD Software	We understand that for design analysis and calculation, there is requirements of Software. Please confirm the time period and users for the STAAD Software	Six user licences for a period of six years as specified in Section VII. Employer's Requirements- A - Scope of Supply- Clause 20 V- Software
351	Civil Work - Scope for Kimuka Extension Substation	We understand that there is no civil work for Kimuka Extension, Please confirm the scope for Kimuka Extension.	Confirmed
352	Civil Work - Scope for Suswa Substation	We understand that there is no civil work for Suswa Substation, Please confirm the scope for Suswa Substation.	Refer to section VII. Employer's requirement, A, Scope of supply Clause 1.2.3 and 1.3.4

353	Civil Work - Scope for Isinya Substation	We understand that there is no civil work for Isinya Substation, Please confirm the scope for Isinya Substation.	Refer to section VII. Employer's requirement, A, Scope of supply Clause 1.2.4 and 1.3.5
354	Civil Works -Road Diversion Scope	As per Given Coordinates from the Google Earth plan it is observed that, one road is passing through the plot area. We understand that the scope of road diversion is not under present scope of work. Please confirm	There is no existing road passing through the plot area. The coordinates of the proposed access road to be developed are provided in item no. 30 of addendum 4
355	Kimuka Part_1_and_3 Clause 10.8 Employer's Responsibilities	We request you to modify the clause as under: In the event that the Employer shall be in breach of any of his obligations under this Clause, the additional cost incurred by the Contractor plus reasonable profit in consequence thereof shall be determined by the Project Manager and added to the Contract Price.	Not acceptable
356	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 29 Patent Indemnity	We request you to modify the clause as under: The Contractor shall, subject to the Employer's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions or administrative proceedings, direct claims, demands, losses, damages, costs, and reasonable expenses of whatsoever nature, including attorney's fees and expenses, which the Employer may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Facilities by the Contractor or the use of the Facilities in the country where the Site is located; and (b) the sale of the products produced by the Facilities in any country	Not acceptable

357	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 37 Force Majeure	We request you to modify the clause as under: “Force Majeure” shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the Party affected, and shall include, without limitation, the following: (a) war, hostilities or warlike operations whether a state of war be declared or not, invasion, act of foreign enemy and civil war (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts (c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, pandemic, quarantine and plague (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster (f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure. Suggest that the Bank Guarantee should not be	Not acceptable
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		invoked/enforced by the Employer during the subsistence/continuance of the Force Majeure event.	
358	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 40.4 Extension of Time for Completion	We request you to modify the clause as under: In all cases where the Contractor has given a notice of a claim for an extension of time under GCC 40.2, the Contractor shall consult with the Project Manager in order to determine the steps (if any) which can be taken to overcome or minimize the actual or anticipated delay. The Contractor shall thereafter comply with all reasonable instructions which the Project Manager shall give in order to minimize such delay. If compliance with such instructions shall cause the Contractor to incur extra costs and the Contractor is entitled to an extension of time under GCC. 40.1, the amount of such extra costs plus reasonable profit shall be added to the Contract Price.	Not acceptable
359	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 41 Suspension	We request to insert the following new sub clause Suspension as Clause 41.5: If the suspension has continued for more than 20 (twenty) days, the Contractor may request the Employer's permission to proceed. If the Employer does not give permission within 10 days after being requested to do so, the Contractor may, by giving notice to the Employer, treat the suspension as an omission of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 42.3 [Termination by the Contractor].	Not acceptable

360	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 41.3	We request you to modify the clause as under: If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this GCC Clause 41, then the Time for Completion shall be extended in accordance with GCC Sub-Clause 40.1, and any and all additional costs or expenses plus reasonable profit incurred by the Contractor as a result of such suspension or reduction shall be paid by the Employer to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of progress by reason of the Contractor's default or breach of the Contract.	Not acceptable
361	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 42.1 Termination for Employer's Convenience	We request you to modify the clause as under: The Employer may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this GCC Sub-Clause 42.1. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Facilities either on its own, or by engaging other third-party contractors.	Not acceptable
362	Kimuka Part_1_and_3 Section VIII – General Conditions of Contract Clause 42.3.4 Termination by Contractor	We request you to modify the clause as under: 42.3.4 If the Contract is terminated under GCC Sub-Clauses 42.3.1 or 42.3.2, the Employer shall pay to the Contractor all payments specified in GCC Sub-Clause 42.1.3, and reasonable compensation for all loss, except including loss of profit, or damage sustained by the	Not acceptable

		Contractor arising out of, in connection with or in consequence of such termination.	
363		We suggest insertion of the new clause relating to currency fluctuation, so that in case there is a significant (% may be appropriately be inserted by the Business Team) depreciation/reduction in the currency in which the Contractor is to be paid the Contract Price, then the Client should compensate the Contractor for such loss to the Contractor and appropriately revise the Contract price. Suggest insertion of the following Clause: (c) In the event of any decrease in the exchange value of the agreed currency, the Employer shall be liable to make the payment of the difference amount to the Contractor as per the agreed payment schedule.	Not acceptable
364	Kimuka Part_1_and_3 Section IX – Particular Conditions of Contract PCC46. Disputes and Arbitration	Please confirm the place of arbitration.	Refer to item 151 of the Clarification.

365	Section VIII – General Conditions of Contract Clause 31	As per clause 31 of GCC,' Ownership of the Plant (including spare parts) to be imported into the country where the Site is located shall be transferred to the Employer upon loading on to the mode of transport to be used to convey the Plant from the country of origin to that country.' Thus we understand that the employer is the importer of plants supplied from abroad specified in Schedule 1 in Kenya. Please confirm whether our understanding is correct.	Refer to item 153 of the Clarification.
366	Section IX – Particular Conditions of Contract & Section VIII – General Conditions of Contract PCC clause 14- Taxes and Duties and Clause 14 of GCC	As per clause 14 of GCC,' Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside of the country where the Site is located.' We understand that prices specified in Schedule 4 INSTALLATION AND OTHER SERVICES are to be quoted inclusive of VAT. Please confirm our understanding.	Refer to PCC 14.

367	Section IX – Particular Conditions of Contract PCC clause 14	As per PCC Clause 14- All income received by contractors/consultants/experts or other third party engaged by the borrower in connection with the Contract, from the proceeds of the loan under this agreement, shall be subject to income tax in accordance with applicable laws in Kenya. Please confirm the withholding rates applicable for Plants supplied from abroad as specified in Schedule 1 and designing services as specified in Schedule 3 provided by non resident companies in Kenya.	Bidder to conduct due diligence.
368	Section IX – Particular Conditions of Contract Price Schedule & PCC clause 14	As per PCC Clause 14- All income received by contractors/consultants/experts or other third party engaged by the borrower in connection with the Contract, from the proceeds of the loan under this agreement, shall be subject to income tax in accordance with applicable laws in Kenya. Please confirm the withholding rates applicable for Plants supplied from within Kenya as specified in Schedule 2 and installation services as specified in Schedule 4 provided by companies resident in Kenya	Bidder to conduct due diligence.
369	Section VII. Employer's Requirements- B – Specifications; Technical Specification_3.2.5.1 - General	The specification refers that circuit breaker shall be offered with Emergency Trip Device. However, as per the Type Tested design of Circuit Breaker, the circuit breaker can be tripped by pushing the mechanical plunger inside the operating mechanism, hence emergency trip device is not envisaged. Request you to accept the same.	Refer to item 80 of this Clarification.

370	Section VII. Employer's Requirements- B – Specifications; 5. Capacitive Voltage transformers	Kindly specify the capacitance of capacitive voltage transformer, the same is neither mentioned in technical specification nor in schedules of technical information.	Refer to Clarification no 1 item 185
371	Schedules of Technical Information - 400kV & 220kV Circuit Breaker; 1.138 Electrical endurance class	The Electrical endurance class is mentioned as E2 in the Schedules of Technical Information for 400kV & 220kV Circuit Breaker However, as per IEC 62271-100 clause number 4.111 above 52kV circuit breaker, electrical endurance class E2 is not applicable. Therefore, please confirm that whether bidder can offer the circuit breaker with E1 endurance class in line with IEC Standards.	Refer to Clarification no 1 item 185
372	Schedules of Technical Information - 400kV & 220kV Disconnecter; 1.138 Electrical endurance class	The Electrical endurance class is mentioned as E2 in the Schedules of Technical Information for 400kV & 220kV Disconnectors However, as per IEC 62271-102 clause number 4.111 above 52kV disconnectors, electrical endurance class E2 is not applicable. Therefore, please confirm that whether bidder can offer the disconnectors with E1 endurance class in line with IEC 62271-102 Standards.	Refer to item 195 of this clarification
373	Schedules of Technical Information - 400KV & 220kV ISOLATOR	The type of Isolator is mentioned as Horizontal Double Break/Centre break in the Schedules of Technical Information. Please clarify the exact type of Isolator to be considered.	Refer to item 190 of this clarification
374	Section VII. Employer's Requirements- B – Specifications; 11.3.3.2. 110 V Battery Units	Please confirm the backup time for Ni-Cd Battery.	Refer to item 197 of this clarification

375	Land Development	We understand that, there measurable difference in level inside the substation plot (approx. 18 mtr) on site. In order to optimize cut and fill quantity of soil for the Land development, please confirm that bidder is free to construct the switchyard at multiple platforms on different levels. Kindly confirm.	Refer to item 198 of this clarification.
376	Access Road	Considering the level difference inside the substation plot, please clarify if bidder can consider two different access roads from nearest main roads separately for 400 kV and 220 kV area. Kindly confirm.	Refer to item 199 of this Clarification
377	Section VII. Employer's Requirements–B – Specifications Section-VII–2D–Drawings, Kimuka-400-220kV-SS-LILOs-All Drawing	Existing drawings show body extensions being replaced by leg extension schemes to achieve tower height. Please confirm whether this substitution is acceptable.	The clarification sought is not clear. However, the given tower outlines provided offer adequate guidance regarding the body extensions as well as leg extensions. Refer to item no. 169 of this clarification.
378	14-6.Kimuka-400-220kV-GENERAL LAYOUT (OVERALL) Underground Fire Water Tank	As per layout and BPS Underground Tank is envisaged but We propose above ground tank as Positive Suction pumping System is recommended for fire application. Please Confirm.	Refer to item 207 of this clarification
379	Section VII. Employer's Requirements- B – Specifications, clause no. 18.25 firefighting room with fire pumps and associated <u>piping and valves</u> , all pertaining equipment, external pipelines, hydrants and fire hose cabinets to cover entire site.	In the absence of technical specification for Piping and Fitting, We are considering ASTM A53 Grade B Pipe for Fire Hydrant and Pumping System. Please confirm.	Refer to item 208 of this clarification
380	Section VII. Employer's RequirementsB – Specifications Section-VII-2D-Drawings, Kimuka400-220kV-SS-LILOs-All Drawing Drawing No: OLD-1, OLD-2, OLD-3 & OLD-4	Please share the bill of materials for the towers and foundation of the existing line for the reference drawings indicated in Section-VII-2D-Drawings, Drawing Nos: OLD-1, OLD-2, OLD-3 & OLD-4.	These shall be provided to the winning bidder

381		1- there isn't any banking transaction between our country's bank (IRAN) with yours 2- one of our Co. (SORELTEK) is an European Co. holds 25% of FULMEN' stack can we send the tender bid security by our European subsidiary Co (SORELTEK Co.) from one European bank? Many thanks for your kindly consideration?	Bidder to comply with ITB 20.3 and Clarification no. 1, item 148.
382		We need more information about: - tax - insurance fee - custom fee	Bidder to conduct due diligence.
383		There are some alternatives for the tender equipment, for example 2-3 famous brand in RELAY (such as GE, ABB, NARI,..), all of which cover technical requirement (based on the tender documents), but their prices are different, is it allowed (and possible) to send alternative(s) suggestion(s)?	Refer to Section II, BDS ITB 13.1 and 13.4 alternative bids
384		Could you please provide the geotechnical report for the site, if available?	Refer to Clarification no 1 item 2
385		Could you please share the topographic survey of the substation site, if available?	Refer to Clarification no 1 item 2
386		Could you please provide the specifications and quantities related to the access road to the substation, if feasible?	This shall be the responsibility of the Contractor. The typical length and width of the access road have been provided in item no 30 of Addendum 4
387		Could you please indicate the distance to approved quarries for construction materials and waste disposal sites, if available?	Bidder to conduct due diligence.

388		Could you please provide additional details regarding the fire suppression system for the site and around the transformers, if available	Refer to Employer's Requirements- B – Specifications clause 18.25
389	30.5. Transport for Employer & Employer's Representative The Contractor shall provide, for the use of the Employer/Employer's Representative, on a 24-hour basis, the vehicles specified later on. The Contractor shall provide the services of one driver mechanic per vehicle whose remuneration shall be not less than net Ksh 60,000 after all deductions. Drivers allowances shall be paid by Contractor when are out of office at not less Ksh 6,300 per night. The Contractor shall maintain each vehicle in efficient working condition, repair, replace defective parts and tyres and provide fuel and oil and other consumables. The Contractor shall provide all documentation in accordance with Kenya Law, including full comprehensive insurance cover at all times for all vehicles and all drivers for unlimited Third-Party claims, at the rates stated in contract forms. On completion of the Contract, the vehicles and all equipment shall remain the property of the Employer and the Contractor shall transfer the ownership to the Employer. Brand new Type 3 vehicles shall be delivered to the Employer after completion but before commissioning of the project.	According to the relevant provisions, this project is a tax-free project, so is it necessary for the contractor to supplement taxes when transferring vehicle ownership to the employer after the completion of the contract	The Employer shall bear the tax obligations arising from the transfer of ownership in its favour.

390	Section VII. Employer's Requirements- B – Specifications 22.4. Steel Tower Design, New Conductor and Existing Steel Towers 22.4.1. General The new towers shall be of the self-supporting type in Danube configuration to match the existing towers. Since the transmission line of the project is LILO of the existing lines, the contractor is advised to use the same towers data in order to create harmony with the existing line, however this is contractor's responsibility to check the existing towers data (based on the as built drawings attached to the tender documents) and re-design (if necessary). It should be noted that in case of re-design / new design, new towers should have more strength than existing ones.	Kindly provide the built drawings of the existing tower mentioned in the tender documents.	Refer to item no. 169 of this clarification. The As-built drawings shall be provided to the winning bidder.
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391	Section VII. Employer’s Requirements- B – Specifications 22.6. Steel work detailing and manufacture 22.6.2. Material All rolled steel sections, flats, plates and bolt and nut bars used shall consist of steel manufactured by an approved process and shall be to the requirements of BS EN 10025 for grades S235JR and S355J0 steel or equivalent from other approved standards, the provisions of which in respect of tests and analyses shall be extended to include steel less than 6 mm thick. The steel shall be free from blisters, scales, laminations or other defects. Steel sections shall preferably be ISO Standard sections chosen with a view to avoiding delays in obtaining material.	Kindly confirm whether the Chinese steel Q235B and Q355B can be used. The following is the comparison of Chinese GB structural steel with the EN 10025 steels. Main Property of Structural Steels of EN and Chinese GB standards- <table><tr><th rowspan="2">Standard</th><th rowspan="2">Grade</th><th colspan="2">Yield strength (Mpa)</th><th rowspan="2">Tensile strength (Mpa)</th><th colspan="5">Main chemical composition</th><th rowspan="2">Min elongation (%)</th></tr><tr><th>ts<16mm</th><th>16mm<t≤40mm</th><th>C (%) (max)</th><th>Si (%) (max)</th><th>Mn (%) (max)</th><th>P(%) (max)</th><th>S (%) (max)</th></tr><tr><td>EN10025</td><td>S235JR</td><td>235</td><td>225</td><td>360-510</td><td>0.19</td><td>0.35</td><td>1.40</td><td>0.045</td><td>0.045</td><td>26</td></tr><tr><td>GB/T 700</td><td>Q235B</td><td>235</td><td>225</td><td>370-500</td><td>0.20</td><td>0.35</td><td>1.40</td><td>0.045</td><td>0.045</td><td>26</td></tr></table> <table><tr><th rowspan="2">Standard</th><th rowspan="2">Grade</th><th colspan="2">Yield strength (Mpa)</th><th rowspan="2">Tensile strength (Mpa)</th><th colspan="5">Main chemical composition</th><th rowspan="2">Min elongation (%)</th></tr><tr><th>ts<16mm</th><th>16mm<t≤40mm</th><th>C (%) (max)</th><th>Si (%) (max)</th><th>Mn (%) (max)</th><th>P(%) (max)</th><th>S (%) (max)</th></tr><tr><td>EN10025</td><td>S355J0</td><td>355</td><td>345</td><td>470-630</td><td>0.20</td><td>0.55</td><td>1.6</td><td>0.040</td><td>0.040</td><td>22</td></tr><tr><td>GB/T 1591</td><td>Q355B</td><td>355</td><td>345</td><td>470-630</td><td>0.24</td><td>0.55</td><td>1.6</td><td>0.035</td><td>0.035</td><td>22</td></tr></table>	Standard	Grade	Yield strength (Mpa)		Tensile strength (Mpa)	Main chemical composition					Min elongation (%)	ts<16mm	16mm<t≤40mm	C (%) (max)	Si (%) (max)	Mn (%) (max)	P(%) (max)	S (%) (max)	EN10025	S235JR	235	225	360-510	0.19	0.35	1.40	0.045	0.045	26	GB/T 700	Q235B	235	225	370-500	0.20	0.35	1.40	0.045	0.045	26	Standard	Grade	Yield strength (Mpa)		Tensile strength (Mpa)	Main chemical composition					Min elongation (%)	ts<16mm	16mm<t≤40mm	C (%) (max)	Si (%) (max)	Mn (%) (max)	P(%) (max)	S (%) (max)	EN10025	S355J0	355	345	470-630	0.20	0.55	1.6	0.040	0.040	22	GB/T 1591	Q355B	355	345	470-630	0.24	0.55	1.6	0.035	0.035	22	The Contractor shall submit an analysis during contract execution to confirm adequacy of the proposed steel grade and the same shall be subject to review for compliance prior to approval
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392	Section VII. Employer’s Requirements- B – Specifications 22.4. Steel Tower Design, New Conductor and Existing Steel Towers 22.4.5. Tower types Towers shall be provided with body extensions of +3m, +6m, +9m and +12m and each type designation will carry the construction type (ie.400S+3m etc.). Leg extensions of +1m, +2m, +3m, +4m shall be provided where necessary. Section_IV-Price_Schedues Schedule 1B_TL	Kindly confirm whether "complete basic tower - 3m" need to be designed. <table><tr><th colspan="2">Towers Type 400S (0-2")</th></tr><tr><td>2.01</td><td>Type S tower, basic tower (includes ±0m LE)</td></tr><tr><td>2.02</td><td>Type S tower, complete basic tower - 3m</td></tr><tr><td>2.03</td><td>Type S tower , 3m Body extension</td></tr><tr><td>2.04</td><td>Type S tower , 6m Body extension</td></tr><tr><td>2.05</td><td>Type S tower , 9m Body extension</td></tr><tr><td>2.06</td><td>Type S tower , 12m Body extension</td></tr><tr><td>2.07</td><td>Type S tower , 1m Leg extension</td></tr><tr><td>2.08</td><td>Type S tower , 2m Leg extension</td></tr><tr><td>2.09</td><td>Type S tower , 3m Leg extension</td></tr><tr><td>2.10</td><td>Type S tower , 4m Leg extension</td></tr><tr><td>2.11</td><td>Stubs complete with stub extensions, cleats, nut and bolts</td></tr></table>	Towers Type 400S (0-2")		2.01	Type S tower, basic tower (includes ±0m LE)	2.02	Type S tower, complete basic tower - 3m	2.03	Type S tower , 3m Body extension	2.04	Type S tower , 6m Body extension	2.05	Type S tower , 9m Body extension	2.06	Type S tower , 12m Body extension	2.07	Type S tower , 1m Leg extension	2.08	Type S tower , 2m Leg extension	2.09	Type S tower , 3m Leg extension	2.10	Type S tower , 4m Leg extension	2.11	Stubs complete with stub extensions, cleats, nut and bolts	Confirmed. Refer to item no. 26 of Addendum 4.																																																								
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393	Section VII. Employer's Requirements- B – Specifications 22.4.9. Assumed working load 22.4.9.4. Cascading Condition Apart from abovementioned cases, cascading loading case should be considered as well.	Kindly confirm which tower type needs to take into account the Cascading Condition (Suspension or Tension Towers).	Both tension and suspension towers shall be designed for cascading condition.																																																												
394	Section_IV-Price_Schedules Schedule 1B_TL	The quantity of steel towers and the quantity of foundations do not match. Such as the 400S tower type, there are 3 complete towers and 7 foundations. Kindly confirm the quantity. <table border="1"><tr><td>2.0</td><td>STEEL TOWERS with stub</td><td></td><td></td></tr><tr><td></td><td>SELF-SUPPORTING STEEL TOWERS, COMPLETE WITH ALL PLATES, SAFETY DEVICES, FITTINGS, BOLTS, NUTS AND ACCESSORIES</td><td></td><td></td></tr><tr><td></td><td>Notes: 1. Quoted prices for items 2.03 to 2.06, 2.14 to 2.17, 2.25 to 2.28, 2.36 to 2.39 and 2.47 to 2.50 shall relate only the applicable 3m-, 6m-, 9m- and 12m-body extensions for the respective towers as given in the outline drawing and not including complete basic tower with extensions. 2. Quoted prices - 2.07 to 2.10, 2.18 to 2.21, 2.29 to 2.32, 2.40 to 2.43, and 2.51 to 2.54 shall relate only the respective 1m-, 2m-, 3m- and 4m-leg extensions for the subject towers as given in the outline drawing.</td><td></td><td></td></tr><tr><td></td><td>Towers Type 400S (0-2")</td><td></td><td></td></tr><tr><td>2.01</td><td>Type S tower, basic tower (includes n/m LE)</td><td>Tower</td><td>2</td></tr><tr><td>2.02</td><td>Type S tower, complete basic tower - 3m</td><td>Tower</td><td>1</td></tr><tr><td>2.03</td><td>Type S tower , 3m Body extension</td><td>Tower</td><td>1</td></tr><tr><td>2.04</td><td>Type S tower, 6m Body extension</td><td>Tower</td><td>1</td></tr><tr><td>2.05</td><td>Type S tower, 9m Body extension</td><td>Tower</td><td>1</td></tr><tr><td>2.06</td><td>Type S tower, 12m Body extension</td><td>Tower</td><td>1</td></tr><tr><td>2.07</td><td>Type S tower , 1m Leg extension</td><td>each</td><td>1</td></tr><tr><td>2.08</td><td>Type S tower, 3m Leg extension</td><td>each</td><td>1</td></tr><tr><td>2.09</td><td>Type S tower, 3m Leg extension</td><td>each</td><td>1</td></tr><tr><td>2.10</td><td>Type S tower, 4m Leg extension</td><td>each</td><td>1</td></tr><tr><td>2.11</td><td>Stubs complete with stub extensions, cleats, nut and bolts</td><td>each</td><td>12</td></tr></table>	2.0	STEEL TOWERS with stub				SELF-SUPPORTING STEEL TOWERS, COMPLETE WITH ALL PLATES, SAFETY DEVICES, FITTINGS, BOLTS, NUTS AND ACCESSORIES				Notes: 1. Quoted prices for items 2.03 to 2.06, 2.14 to 2.17, 2.25 to 2.28, 2.36 to 2.39 and 2.47 to 2.50 shall relate only the applicable 3m-, 6m-, 9m- and 12m-body extensions for the respective towers as given in the outline drawing and not including complete basic tower with extensions. 2. Quoted prices - 2.07 to 2.10, 2.18 to 2.21, 2.29 to 2.32, 2.40 to 2.43, and 2.51 to 2.54 shall relate only the respective 1m-, 2m-, 3m- and 4m-leg extensions for the subject towers as given in the outline drawing.				Towers Type 400S (0-2")			2.01	Type S tower, basic tower (includes n/m LE)	Tower	2	2.02	Type S tower, complete basic tower - 3m	Tower	1	2.03	Type S tower , 3m Body extension	Tower	1	2.04	Type S tower, 6m Body extension	Tower	1	2.05	Type S tower, 9m Body extension	Tower	1	2.06	Type S tower, 12m Body extension	Tower	1	2.07	Type S tower , 1m Leg extension	each	1	2.08	Type S tower, 3m Leg extension	each	1	2.09	Type S tower, 3m Leg extension	each	1	2.10	Type S tower, 4m Leg extension	each	1	2.11	Stubs complete with stub extensions, cleats, nut and bolts	each	12	The quantity shall remain as provided in the price schedules. Bidder to quote accordingly.
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395		What is the brand of the CRP (Control and Relay Panel) for the Isinya 400 kV substation and the Kimuka 220 kV substation? Kindly clarify.	Refer to Clarification no. 1 item no 80 and item no. 97
396	Section IV, Bid Form	As per Grand Summary, there are two 'total prices'. First is 'TOTAL PRICES KIMUKA (SUBSTATION + TRANSMISSION LINE excluding provisional sum) [A+B]' and another is 'TOTAL PRICE KIMUKA (SUBSTATION + TRANSMISSION LINE including provisional sum) [C+D]' Please confirm whether bid form prices shall be 'with 'Provisional sum' or 'without Provisional sum'.	The Bid Price indicated in the Letter of Bid – Financial Part shall include provisional sum.
397	Instructions to Bidders; Clause 18	Currency of bid it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Employer's Country But as per price schedule, Only two columns 'FC1' and 'FC2' are mentioned in price schedule. Please confirm if three foreign currencies are acceptable and only two are acceptable. Further please confirm if the entire bid price can be quoted in foreign currency or bidder has to include local currency in bid price.	Pursuant to ITB 18, the Bid Price must include a component in local currency reflecting costs to be incurred within the Employer's Country. In addition to the local currency, bidders may quote in up to two foreign currencies, bringing the total number of allowable currencies to three.
398	Instructions to Bidders; Clause 20	Bid Security We understand that bid security in the form of insurance bond is acceptable. Please confirm. If acceptable, then please provide us the format for the same.	Refer to item no 4 of this Clarification.
399	Bid Data Sheets; Clause 22.1	Submission and Opening of Bids For submission of bid, we have noted that technical part shall include an editable word version of the filled-in Technical Data sheets / Technical Schedules / Guaranteed Technical Particulars. We request you to please accept the same in MS Excel version format. Please confirm.	This is acceptable.
400	Section VII - Employer's Requirements	Contractor's Representative and Key Personnel We have noted that "Valid license to practice engineering as a professional engineer in country of origin or residence" for the proposed personnel is asked. However, in India we	Refer to item no 121 of this Clarification. Additionally, the required license—or its equivalent—serves as official authorization for the

		do not have any such specific license issued to carry out EPC works. Request you to accept the academic qualification degree. Please confirm.	personnel to engage in professional engineering practice.
401	Section VIII – General Conditions of Contract; Clause 26.2	Liquidated Damages – Contradictory As per PCC 25. Commissioning and Operational Acceptance, If the Contractor fails to commission the facilities within the stipulated time due to reasons not attributable to the Employer, the Employer shall deduct 0.5% of the contract price per week from the retention up to a maximum of 5%. As per PCC 26. Completion Time Guarantee, Maximum deduction for liquidated damages: Ten percent (10%) of the Contract Price Please confirm applicable LD for Maximum deduction. Further, we understand that liquidated damages shall be applied to the price of the part of the facilities, for only that part for which the contractor fails to achieve completion within the particular time for completion. Please confirm our understanding is correct.	No, damages shall be applicable as a percentage of the entire contract price for failure to attain completion and commissioning as stipulated in PCC 26.2 and PCC 25.1.1 respectively.
402	Section X – Contract Forms; Appendix 1. Terms and procedure of Payment	Mode of Payment We understand that all the payments to the contractor shall be made by direct disbursement method i.e. directly to contractor's account from the World Bank. Please confirm our understanding is correct.	Direct disbursement method is the most preferred, however the method of disbursement remains at the discretion of the Employer, contingent upon the provisions of the Financing Agreement.
403	Section X – Contract Forms; Appendix 1. Terms and procedure of Payment	As per BDS, ITB 11.3(d) , The Bidder shall submit the following additional documents in the Financial Part of its Bid: Source of labor and materials indices, source of exchange rates and the base date indices, percentage of fixed element in Contract price (a = %), percentage of labor component in Contract price (b= %), and percentage of material and equipment component in Contract price (c= %) in line with Appendix 2 (Price Adjustment) of the Contract Agreement. As per BDS, ITB 17.7, The prices quoted by the Bidder shall not be subject to adjustment. As per BDS, ITB 19.3 (a), Bid price shall not	Refer to item 104 of this Clarification.

		be adjusted Please confirm whether price adjustment is applicable or not. If price adjustment is not applicable, then please confirm the purpose of submitting indices/components for labor and materials.	
404	Section IX – Particular Conditions of Contract; Clause PCC 13.2.2 & 13.3.2	Advance Payment Security & Performance Security The clauses states that the advance payment security & performance certificate shall be issued by a bank licensed and categorized as a 'large bank' by the Central Bank of Kenya. We request you to provide us the list of banks licensed and categorized as a 'large bank' by the Central Bank of Kenya. Alternatively, please confirm whether the Advance Payment Security & Performance Security in the form of insurance bond is acceptable.	Refer to Clarification no 1 item 198 as well as item 148 of this clarification
405	Section III – Evaluation and Qualification Criteria; Clause 1.4 Subcontractors /Manufacturers	Civil & Electromechanical works Subcontractor As per the clause, the civil & electromechanical subcontractor shall meet the minimum requirements and experience for registration with National Construction Authority (NCA) for at least class two (NCA 2) category under building engineering works and mechanical and electrical engineering works respectively. We presume that proof of NCA registration is not required (at bidding stage) for carrying out the erection & civil works if the bidder is going to execute the works on its own. Please confirm if our understanding is correct. However, if the NCA registration is required to be submitted along-with the bid, please confirm whether the bidder can submit an undertaking that the bidder shall obtain NCA registration before commencement date of project.	The proof of NCA registration is not required at bidding stage if the bidder is going to execute the civil and electromechanical works on its own.
406	Section IX – Particular Conditions of Contract; Clause PCC 14	Taxes & Duties Please confirm whether the contractor shall pay the customs duties, VAT and claim reimbursement from Employer or Employer shall provide exemption certificate at the time of import.	Refer to Clarification no. 1, item no. 114 and BDS ITB 17.5 (a) and (d) for the exemption applicable to the project.

407	Section IX – Particular Conditions of Contract; Clause PCC 14	Taxes & Duties Please confirm whether VAT and other local taxes are applicable on Installation/construction portion. If applicable, then please confirm our understanding that the contractor shall invoice to Employer the price as per price schedule plus VAT at the time of billing and Employer shall pay the same. If exempted, then please confirm that the Employer shall provide exemption certificate. Please confirm if VAT & other local Taxes are exempted for this project. Further please confirm whether the same exemption can be extended to the Subcontractor and local supplier also who will be working in association with Contractor. Please confirm whether any withholding tax is applicable on payments made by the Employer to contractor towards: Offshore portion i.e. imported supply, Onshore portion i.e. installation/ construction portion. We understand that Import License for Material imported into the Employer's Country shall be taken by the Employer. Further, we also understand that Employer shall be named as Consignee for clearing of import of goods. Please confirm.	1. As per applicable laws, tax exemptions specified in PCC 14 and BDS ITB 17.5 (a) and (d) will be applicable on all taxable goods and services imported or purchased locally for the exclusive and direct use in execution of project. Refer to Clarification no. 1, item no. 114 for the procedure for seeking tax exemptions. 2. As per applicable laws, tax exemptions specified in PCC 14 and BDS ITB 17.5 (a) and (d) may be extended to subcontractors and local suppliers specific to the execution of the project. 3. The Contractor, their local subcontractors and suppliers shall be liable for payment of withholding tax as per applicable laws. The Employer is obligated under applicable laws to withhold any taxes payable by the Contractor where payment is made by the Employer. Where payments are made directly to the Contractor from the World Bank, the Contractor shall make the necessary arrangements in consultation with the Employer to ensure that withholding tax is remitted to the Kenya Revenue Authority. Withholding tax is not an add-on tax but an advance tax of income tax. Bidders are encouraged to conduct their own due diligence and visit the KRA website https://www.kra.go.ke for more information. 4. The process of seeking exemption will involve coordinated effort between the Employer and the Contractor. The Contractor will initiate the request to enable the Employer to facilitate the request through Ministry of Energy, National Treasury, and Kenya Revenue Authority. However, the Contractor must engage a competent agent to follow up with
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			the relevant agencies such as Kenya Revenue Authority, Kenya Bureau of Standards, and Kenya Ports Authority. 5. Regarding the consignee, refer to item no. 185 of this Clarification. Bidders to familiarise themselves with the Bid Documents and conduct the necessary due diligence for preparation of bids.
408	Section IX – Particular Conditions of Contract; Clause PCC 14	Taxes & Duties Please confirm whether any contract registration fees/ Stamp Duty is applicable.	Bidders to familiarise themselves with the Bid Documents and conduct the necessary due diligence for preparation of bids. Refer to PCC 14 with regards to what is exempted under applicable laws.
409	Price Schedule: Sr. 1.1	400kV Circuit Breaker We understand that all 400kV Circuit Breakers shall be without Pre insertion Resistor (PIR). However, Control switching device is to be provided for all 400kV Circuit Breakers. Please confirm.	Refer to item 285 of this clarification
410	Price Schedule: Sr. 1.2, 1.3, 1.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 400kV Disconnectors As per technical data sheets, the bidder can offer either center break OR double break disconnectors. Please confirm.	Refer to item 190 of this clarification
411	Price Schedule: Sr. 1.2, 1.3, 1.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 400kV Disconnectors As per technical data sheets, Electrical endurance class of E2 is specified. We understand that E2 class is applicable only for main disconnectors. Earthing switches shall be with E0 class. Please confirm our understanding.	Follow specifications provided
412	Price Schedule: Sr. 1.2, 1.3, 1.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 400kV Disconnectors For Disconnectors with earthing switches, please confirm whether common operating box for main disconnectors and associated earthing switch can be offered OR	Separate operating mechanism for disconnectors and earth switch is required Refer to item no 18 of Addendum 4

		separate operating mechanism box is envisaged for main disconnector and associated earthing switch.	
413	Price Schedule: Sr. 2.2, 2.3, 2.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 220kV Disconnecter As per technical data sheets, the bidder can offer either center break OR double break disconnectors. Please confirm.	Refer to item 190 of this clarification
414	Price Schedule: Sr. 2.2, 2.3, 2.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 220kV Disconnecter As per technical data sheets, Electrical endurance class of E2 is specified. We understand that E2 class is applicable only for main disconnector. Earthing switches shall be with E0 class. Please confirm our understanding.	Refer to item 411 of this clarification
415	Price Schedule: Sr. 2.2, 2.3, 2.4	Section VII. Employer's Requirements- E – Schedules of Technical Information 220kV Disconnecter For Disconnecter with earthing switches, please confirm whether common operating box for main disconnector and associated earthing switch can be offered OR separate operating mechanism box is envisaged for main disconnector and associated earthing switch.	Refer to item 412 of this clarification
416	Price Schedule: Sr. 1.8	Single Line Diagram: MT-TLD-KETCO-5393-BD-02-PG-034 Rev.D Section VII. Employer's Requirements- E – Schedules of Technical Information 400kV Current Transformer As per Single Line diagram, there is no separate metering core provided for bay Current transformer for protection & measuring. One core is mentioned with 5P20(1) class. We understand that this is dual class core with 5P20 protection class and class 1 for measuring. Please confirm.	Confirmed

417	Price Schedule: Sr. 2.8	Single Line Diagram: MT-TLD-KETCO-5393-BD-02-PG-034 Rev.D Section VII. Employer's Requirements- E – Schedules of Technical Information 220kV Current Transformer As per Single Line diagram, there is no separate metering core provided for bay Current transformer for protection & measuring. One core is mentioned with 5P20(1) class. We understand that this is dual class core with 5P20 protection class and class 1 for measuring. Please confirm.	Confirmed
418	Price Schedule: Sr. 4.1	Section VII. Employer's Requirements- E – Schedules of Technical Information Earthing & Auxiliary transformer For earthing transformer, zero sequence impedance is mentioned as 18.1% with neutral rating of 1050A, impedance between HV & LV as 5% and losses of 4.5kW max. Please confirm that all four parameters are fixed or any variation is possible for losses and impedance values as to maintain specified zero sequence impedance and neutral current, HV-LV impedance and losses may increase. Please review and confirm.	Values indicated are maximum values. Bidder has to match or be lower than these values
419	Price Schedule: Sr. 10.5	Section VII. Employer's Requirements- A - Scope of Supply - 1.2.3. Works at Existing Suswa 400/220 kV Substation Integration works at Suswa Substation Please confirm the following existing details for Suswa and Isinya substation: Make of existing telecommunication system and architecture drawing. Make of existing Substation Automation system and architecture drawing. Make of existing Busbar protection relay and model number.	Refer to Clarification no 1 item 66, 63, 62 and 72

420	Price Schedule: Sr. 10.6	Section VII. Employer's Requirements- A - Scope of Supply - 1.2.4. Works at Existing Isinya 400/220 kV Substation Integration works at Isinya substation Please confirm the following existing details for Suswa and Isinya substation: Make of existing telecommunication system and architecture drawing. Make of existing Substation Automation system and architecture drawing. Make of existing Busbar protection relay and model number.	Refer to Clarification no 1 item 83, 80, 79 and 89
421	Price Schedule: Sr. 15.1.1, 15.1.2 and 15.1.3	AC auxiliary panels Quantity for AC main and distribution panels is mentioned as 6 nos. under Sr. 15.1.1 and further 6 nos. panel mentioned separately under 15.1.3 for 6 nos. Bay Control Rooms. Please clarify scope for 6 nos. panels mentioned under 15.1.1.	These are the panels that host the main AC power supply.
422	Price Schedule: Sr. 15.1.4	Section VII. Employer's Requirements- B – Specifications - 11.3.2. Solar PV Equipment Solar system for Indoor and outdoor Lighting Please confirm minimum kW capacity envisaged for Solar system. Further please confirm whether solar panels to be installed on control building/ warehouse roof top OR on ground. Location for Solar panels not specified in layout drawings. Please provide single line diagram for Solar system envisaged. Any SLD is not provided with bid document.	The kW is based on the bidder's design subject to the Employer's approval The location shall be based on the shade analysis to be conducted by the contractor based on E22Requirements- B – Specifications clause 11.3.2.1 SLD is for the bidder to provide during detailed design stage subject to approval by the Employer
423	Price Schedule: Sr. 15.5 and 15.6	DG set building Diagram: MT-TLD-KETCO-5393-DD-57-DR-263 Rev.D" Diesel Generator Set As per price schedule separate DG sets with rating 500kVA and 200kVA are indicated for Main substation and Technical/security staff quarters. As per scope only one Diesel generator building is in scope. DG building size is indicated as 8M x 5M in which only One DG set can be accommodated with sufficient clearances for maintenance works. Please confirm location of second DG set meant for staff quarters.	Location of the staff quarters will be based on the bidder's design subject to the Employer's approval. This generator will be under a shed as indicated in the price schedules.

424	Price Schedule: Sr. 18.2	CCTV We understand that CCTV cameras for outdoor switchyard can be installed on gantry structures as per design requirement. Please confirm.	To be finalised during detailed design stage
425	Price Schedule: Sr. 18.6.1	Gas Handling Trolley Gas Handling Trolley is mentioned 1 LOT. We understand that One Set of gas handling trolley shall be supplied. Please confirm.	Refer to item 278 of this Clarification.
426	Price Schedule: Sr. 18.6.6	Softwares and Licenses As per price schedule Software and licenses for AutoCAD for windows, STAAD Pro, DlgSILENT, DIALux, BIM software shall be provided. We understand one number standalone license for each software shall be supplied. Further please confirm software version of all softwares for which license is required.	Not confirmed. Refer to item no 16 of Addendum 4 which indicates that the latest versions are required and that the licences should be server based with 6 users
427	18.25.1. Fire Zones and Required Considerations	Fire protection system As per scope of works and specification, we understand that for Transformers only NIFPS system is to be provided as per table provided in specification clause 18.25.1. Please confirm.	Refer to technical bid documents that indicate all requirements
428	Schedule-4A SS; Sr. 15.29.3	Hydrant system Please confirm scope of works for Hydrant system i.e. please confirm switchyard areas need to be covered with fire fighting hydrants. Please provide line diagram for hydrant network to be considered in 400/220kV switchyard.	This shall cover the entire switchyard as per Employer's Requirements- B – Specifications clause 18.8. Hydrant network shall be based on bidder's design subject to the Employer's approval.
429	Price schedule 1.1.9, 1.1.11, 2.1.9 and 2.1.11	Gas filling devices and SF6 gas leakage detector Separate gas filling devices and gas leak detector has been mentioned for 400kV & 220kV Circuit Breaker. Please review this separate requirement as common filling device and detector can be used for both Circuit Breakers.	Refer to item 278 of this Clarification.
430	Section-VII-2D-Drawings	Contour Layout We request you to kindly provide the Contour map for substation Plot.	Refer to clarification no 1 item 2

431	Section-VII-2D-Drawings	Geotechnical Investigation We request you to kindly provide the Soil Investigation Report of Substations for foundation requirements 1) SPT values 2) Foundation recommendation 3) RQD values for Rock strata 4) Cohesion value for Clay soil 5) Internal angle of Friction of Soil 6) Whether existing soil top layer is in condition for Backfilling 7) Please confirm any water logging area of S/S	Refer to clarification no 1 item 2
432	Section-VII-2B-Specification	Land Development and layout Please confirm whether substation can be constructed on multiple levels.	Refer to item 303 of this Clarification.
433	Section_IV-Price_Schedules_16-5-24	item no. '15.33.6_MISCELLANEOUS PRICES FOR FOUNDATION WORKS Missing drawings referenced in the Price Schedule line items Kindly provide drawings for the miscellaneous prices related to foundation works, specifically for "special foundation works including pile caps, beams, and modifications to normal foundation to adapt specified foundation," as referenced in the price Schedule.	This shall be designed by the Contractor subject to the Employer's approval.
434	Section-VII-2A-Scope & General Requirements	Access Road Please confirm scope for approach road and type of access road i.e. Bituminous/Asphalt/Concrete.	Refer to item no 27 and 30 of Addendum 4.
435	22.4.3. Wind pressure and temperature	Maximum Wind Velocity of 40m/s for 3second wind is given technical specification. Please provide other technical parameters for wind pressure calculation (Terrain Category, Reliability etc. & Code for Wind Pressure Calculation).	Refer to item no. 266 of this Clarification.-Latest version of IEC 60826 standard shall apply.
436	22.4.9.5. Factor of safety of towers	In Technical Specification it states that all towers to be designed & Tested with applied forces equivalent to 2.0 times the working loads for all loading conditions Except broken wire & 1.5times the working loads for broken wire condition. Please confirm.	Confirmed

437	22.6.2. Material	There is a discrepancy in Steel grade & code mentioned in Technical Specification for Mild Steel & High Tensile steel ("BS EN 10025 for grades S235JR and S355J0" & "steel grade E 275 and E 355 of ISO 630".) Please confirm the grade & standard for steel material.	Refer to item no.23 of addendum 4,
438	22.4.8. Clearance	Nominal ground clearance in Technical specification is mentioned as 8.8m & In Tender drawing it is mentioned as 8.1m. Please confirm the Actual Ground clearance to be considered.	The drawings were provided for reference purposes. Minimum ground clearance should be taken as 8.8m as specified in Section VII. Employer's Requirements- B – Specifications-clause 22.4.8
439	Clause no. 22.5. Foundation	For Foundation design there are no partial safety factors / Over load factors given in technical specification. Please confirm.	Refer to item no. 29 of this Clarification.
440	22.4.9. Assumed working load	Please specify the Wind & Tension conditions for Normal, Broken, & Cascade conditions.	Refer to - Section VII. Employer's Requirements- B – Specifications- clause 22.4.9
441	Tender Drawings	Tower Type 400S drawing is missing in the document "34.Kimuka-400-220kV-SS-LILOs-All Drawing" Please Provide.	Refer to item no. 169 of this clarification.
442	22.4.9.4. Cascading Condition	Please Specify, the wind condition for cascade condition. As per standard transmission line practice, Every Day Nil wind condition is considered for Cascading. Please Confirm.	Everyday temperature and full wind
443	22.4.9.4. Cascading Condition	Only tension towers are needed to be design for cascading condition. Please confirm.	Refer to item no. 393 of this Clarification.

444	22.4.9. Assumed working load	As per the clause "22.4.9. Assumed working load of Section VII. Employer's Requirements- B - Specifications" it states that all maximum working loadings on towers are to be considered and also as per clause "22.4.2. Applicable standards" IEC 60826 to be used for Design criteria for Overhead Transmission lines. IEC 60826 is a Limit state design approach i.e. all tower loads are ultimate loads. Moreover, as per specification clause "22.4.9.5. Factor of safety of towers" For Normal condition factor of safety to be considered as 2.0 times the working loads & For broken wire condition factor of safety to be considered as 1.5 times the working loads. We understand that loading is to be derived as per the clause "22.4.9". & IEC 60826 & Factor of safety as per clause 22.4.9.5 are to be applied over and above these loadings. Please confirm.	Confirmed.
445	Section VII Page No. 39 of 488 GCC Cl. 2.5.8 A tender Bond as per Part-1, Section II-Bid Data Sheet in ITB 19-1, 20-1 and Form of Bid Security, obtained from a locally registered insurance Company or Bank.	We presume that the EMD/Bid Security can be submitted in the Form of Bank Guarantee or Insurance Surety Bond. Please confirm our understanding. Further, Please provide the format for Insurance Surety Bond.	Refer to item no 4 of this Clarification.

446	Part 1 to 3 213 of 343 GCC Cl. 10.3 The Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located which (a) such authorities or undertakings require the Employer to obtain in the Employer's name, (b) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract, and (c) are specified in the Appendix (Scope of Works and Supply by the Employer).	Bidder Understand that, all the Charges for Permits, Approvals and Licenses from All Local, State and National Govt. Authorities are to be paid by the Employer.	This is not correct. Under the conditions of contract, each party must bear the cost of acquiring the necessary permits, approvals, and/or licenses applicable to them. Specifically, the Employer is responsible for those under GCC 10.3, and the Contractor for those under GCC 9.3.
447	Section VII 52 of 85 The Contractor's scope of delivery includes all site test and inspection expenses, e.g. all labour, materials, water, electricity, consumables, chemicals and stores. The Contractor is responsible for and shall include in his delivery all safety measures such as barriers, warning signs etc. required for inspection and testing while erection is in progress and all interruption of work in this connection will be at his expense	Please provide the applicable tariff rates for both water and power intended for use during construction work.	Bidder to conduct due diligence as this is part of their scope.
448	Section IX 303 of 343 Clause 27 PCC, DLP	Whether the Defect Liability Period for Power Transformers and Other equipment mentioned in the clause will start from the date of Completion or from the date of Operational Acceptance. Please confirm.	Refer to item 155 of this Clarification.

449	Section I to III Page 82 of 343 Qualification Cl. 4.1 Experience in energy transmission sector under contracts in the role of contractor, subcontractor, or management contractor for at least the last ten (10) years starting 1st January 2014 and with activity in at least nine (9) months in each year.	We request to please confirm whether 33KV and 11KV Distribution work experience is considered under Energy Transmission sector.	Transmission is considered from 132kV and above.
450	Section I to III Page 47 of 343 BDS, ITB 11.3(d) The Bidder shall submit the following additional documents in the Financial Part of its Bid: Source of labor and materials indices, source of exchange rates and the base date indices, percentage of fixed element in Contract price (a = %), percentage of labor component in Contract price (b= %), and percentage of material and equipment component in Contract price (c= %) in line with Appendix 2 (Price Adjustment) of the Contract Agreement.	As per Clause No. ITB 17.7, The prices quoted by the Bidder shall not be subject to adjustment. In view of above, we understand that, the additional documents to be provided in Financial Part of Bid as per BDS clause No. 11.3 (d) not required to submit. Kindly confirm our understanding.	Refer to item 104 of this Clarification.
451	General New Kimuka 400/220kV Substation.	Please provide following details: 1. Earth Resistivity Report. 2. Soil investigation report 3. Contour of plot Plan	Refer to Clarification no 1, item 2
452	Section VII Clause 1 of Scope of Work of Section-VII-2A- Scope & General Requirements New Kimuka 400/220kV Substation.	We understand that the Kimuka 400/220kV station does not require an HVAC system; however, split AC unit shall be provide. Please confirm.	Refer to item no 213 of this Clarification.

453	General New Kimuka 400/220kV Substation.	We understand that PMU and accessories (Layer-2 switch, GPS, LIU) shall be mounted in respective protection and control panels and Layer-3 switch shall be mounted in communication panel. Separate panels for PMU is not envisaged. Kindly confirm.	Not correct. The PMU's shall be in their dedicated panel. Refer to the 400 kV and 220 kV PSD's that indicate this.
454	Section VII Clause 1.2.1 X of Scope of Work of Section-VII-2A-Scope & General Requirements New Kimuka 400/220kV Substation.	We understand that the necessary modifications will be required at the local and remote substations, as well as at the dispatching centers. Kindly confirm	Refer to section VII. Employer's requirement, A, Scope of supply Clause 1.2 and 1.3
455	General New Kimuka 400/220kV Substation.	As per the SLD, we understand that the Kimuka 400/220kV future bay bus extension work is not included in scope of this project. Kindly confirm	Refer to section VII. Employer's requirement, A, Scope of supply Clause 1.2.1
456	General New Kimuka 400/220kV Substation.	Please provide the specification for Solar package required for Auxiliary load consumption.	Refer to Employer's Requirements- B – Specifications clause 11.3.2
457	General New Kimuka 400/220kV Substation.	We understand that the main earth mat connection is required only for the present bays, and that the complete substation main earth mat connection are not in the contractors scope. Kindly confirm	The earth mat shall be implemented on the present and future bay areas. Refer to item no 24 of addendum 4.
458	General New Kimuka 400/220kV Substation.	We presume that Right of Way (ROW) is in clients Scope. Please confirm.	Confirmed, acquisition of right of way is the Employer's responsibility.
459	Section VII Clause 1.2.4 C of Scope of Work of Section-VII-2A-Scope & General Requirements Existing 400/220kV Isinya Substations.	We presume that 220kV Cable and 2 Sets of 220kV CSE are available at site. Please Clarify.	Confirmed. The cable and the sealing ends are already installed
460	Section VII Clause 1.2.4 C of Scope of Work of Section-VII-2A-Scope & General Requirements Existing 400/220kV Isinya Substations.	We presume Connection between 2 Sets of 220kV CSE's are available on site. Please Clarify.	Confirmed. The cable and the sealing ends are already installed

461	General Existing 400/220kV Isinya Substations.	Please provide the following documents and details : 1.Make and model of the existing Bus bar panel, CRP&SAS 2.Make and model of the existing FOTE 3.Plan 4.Section 5.Layout	Refer to Clarification no 1, item 89, 83 For the plan, section and layout this will be provided to the winning bidder
462	General Existing 400/220kV Isinya Substations.	We understand that Contractor scope is limited to the integration of the present bays into the existing SAS, and that no software upgrade of the existing SAS is required. Kindly confirm	Refer to Employer's Requirements- B – Specifications clause 10.1 which indicates that all required modifications works of the SAS are included as part of the scope of works
463	General Existing 400/220kV Isinya Substations.	We understand our scope is limited to integration of present bays to existing SAS, hence supply of Ethernet Switches for NCC Sub-systems connection are not in Contractors scope of supply. Kindly confirm	Refer to Employer's Requirements- B – Specifications clause 10.1 which indicates that all required modifications works to integrate the extension to NCC are included as part of the scope of works
464	General Existing 220/66kV Kimuka Substations.	Please provide the following documents and details : 1.Make and model of the existing Bus bar panel, CRP&SAS 2.Make and model of the existing FOTE 3.Plan 4.Section 5.Layout	Refer to Clarification no 1, item 106,100 For the plan, section and layout this will be provided to the winning bidder
465	General Existing 220/66kV Kimuka Substations.	We understand that Contractor scope is limited to the integration of the present bays into the existing SAS, and that no software upgrade of the existing SAS is required. Kindly confirm	Refer to item 462 of this Clarification.
466	General Existing 220/66kV Kimuka Substations.	We understand our scope is limited to integration of present bays to existing SAS, hence supply of Ethernet Switches for NCC Sub-systems connection are not in Contractors scope of supply. Kindly confirm	Refer to item 463 of this Clarification.

467	General Existing 400/220kV Suswa Substations.	Please provide the following documents and details : 1.Make and model of the existing Bus bar panel, CRP&SAS 2.Make and model of the existing FOTE 3.Plan 4.Section 5.Layout	Refer to Clarification no 1, item 72 and 66. For the plan, section and layout this will be provided to the winning bidder
468	General Existing 400/220kV Suswa Substations.	We understand that Contractor scope is limited to the integration of the present bays into the existing SAS, and that no software upgrade of the existing SAS is required. Kindly confirm	Refer to item 462 of this clarification
469	General Existing 400/220kV Suswa Substations.	We understand our scope is limited to integration of present bays to existing SAS, hence supply of Ethernet Switches for NCC Sub-systems connection are not in Contractors scope of supply. Kindly confirm	Refer to item 463 of this clarification
470		In the Bid Data Sheet, one of the Mandatory Requirements is a Bid Security amounting to KES 66,300,000 (Sixty-Six Million and Three Hundred Thousand Kenya Shillings). It's also indicated that a bidder must have a Minimum Average Annual Turnover of Twenty-six Million United States Dollars (26M USD). The above requirements may not be met by the local firms and may lock out majority of the potential local bidders. We, therefore, request for a review of the same and suggest that the Bid Security be reduced to KES 6,630,000 (Six Million, Six Hundred and Thirty Thousand Kenya Shillings). We hope you find this in order	Not accepted

471	QTY-CT & CVT 400kV PRIMARY PLANT Post type current transformer for Protection and Measuring, Five Cores (1-phase)	As per the Kimuka-SS-400kV-SLD Following CT ratio with core details as follow: Core 1: 4000-2000/1A, 5P20, Core 2: 4000-2000/1A, 5P20, Core 3: 4000-2000/1A, 5P20(1), Core 4: 4000-2000/1A, 5P20, Core 5: 4000-2000/1A, 5P20, Kindly confirm above CT ratio and core details as per SLD also VA burden is missing in both SLD & GTP. Kindly confirm the same.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD
472	QTY-CT & CVT 400kV PRIMARY PLANT Post type current transformer (High Accuracy) for Tariff Metering, Two Cores, (1-phase)	As per the Kimuka-SS-400kV-SLD Following CT ratio with core details as follow: Core 1: 2000-1000/1A, 0.2S, Core 2: 2000-1000/1A, 0.2S, Kindly confirm above CT ratio and core details as per SLD also VA burden is missing in both SLD & GTP. Kindly confirm the same.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD
473	QTY-CT & CVT 400kV PRIMARY PLANT Capacitive voltage transformer, for Protection and Measuring, Three Cores (1-phase)	As per the Kimuka-SS-400kV-SLD Following CVT ratio with core details as follow: Core 1:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 0.2, Core 2:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 3P(1), Core 3:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 3P(1), Kindly confirm above CT ratio and core details as per SLD also VA burden is missing in both SLD & GTP. Kindly confirm the same.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD
474	QTY-CT & CVT 400kV PRIMARY PLANT Capacitive voltage transformer (High Accuracy) for Tariff Metering , Two Cores (1-phase)	As per the Kimuka-SS-400kV-SLD Following CVT ratio with core details as follow: Core 1:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 0.2, Core 2:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 0.2, Kindly confirm above CT ratio and core details as per SLD also VA burden is missing in both SLD & GTP. Kindly confirm the same.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD

475	QTY-CT & CVT 400kV PRIMARY PLANT Capacitive voltage transformer, for Protection and Measuring, Two Cores (1-phase)	As per the Kimuka-SS-400kV-SLD Following CVT ratio with core details as follow: Core 1:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 3P(1) Core 2:400/ $\sqrt{3}$ /0.110/ $\sqrt{3}$ kV, 3P(1) Kindly confirm above CT ratio and core details as per SLD also VA burden is missing in both SLD & GTP. Kindly confirm the same.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD
476	QTY-CT & CVT 220kV PRIMARY PLANT Post type current transformer for Protection and Measuring, Five Cores (1-phase)	As per the Kimuka-SS-220kV-SLD Following CT ratio with core details as follow: Core 1: 2000-1000/1A, 5P20, 50VA* Core 2: 2000-1000/1A, 5P20, 50VA* Core 3: 2000-1000/1A, 5P20(1), 50VA* Core 4: 2000-1000/1A, 5P20, 50VA* Core 5: 2000-1000/1A, 5P20, 50VA* Kindly confirm above CT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4
477	QTY-CT & CVT 220kV PRIMARY PLANT Post type current transformer (High Accuracy) for Tariff Metering, Two Cores, (1-phase)	As per the Kimuka-SS-220kV-SLD Following CT ratio with core details as follow: Core 1: 800-100/1A, 0.2S, 50VA* Core 2: 800-100/1A, 0.2S, 50VA Kindly confirm above CT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4
478	QTY-CT & CVT 220kV PRIMARY PLANT Post type current transformer (High Accuracy) for Tariff Metering, Two Cores, (1-phase)	As per the Kimuka-SS-220kV-SLD Following CT ratio with core details as follow: Core 1: 1000-500/1A, 0.2S, 50VA* Core 2: 1000-500/1A, 0.2S, 50VA Kindly confirm above CT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4

479	QTY-CT & CVT 220kV PRIMARY PLANT Capacitive voltage transformer, for Protection and Measuring, Two Cores (1-phase)	As per the Kimuka-SS-220kV-SLD Following CVT ratio with core details as follow: Core 1:220/V3/0.110/V3kV, 0.2, 50VA* Core 2:220/V3/0.110/V3kV, 3P(0.2), 50VA* Kindly confirm above CVT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4
480	QTY-CT & CVT 220kV PRIMARY PLANT Capacitive voltage transformer, for Protection and Measuring, Three Cores (1-phase)	As per the Kimuka-SS-220kV-SLD Following CVT ratio with core details as follow: Core 1:220/V3/0.110/V3kV, 0.2, 50VA* Core 2:220/V3/0.110/V3kV, 3P(1), 50VA* Core 3:220/V3/0.110/V3kV, 3P(1), 50VA* Kindly confirm above CVT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4
481	QTY-CT & CVT 220kV PRIMARY PLANT Capacitive voltage transformer (High Accuracy) for Tariff Metering , Two Cores (1-phase)	As per the Kimuka-SS-220kV-SLD Following CVT ratio with core details as follow: Core 1:220/V3/0.110/V3kV, 0.2, 50VA* Core 2:220/V3/0.110/V3kV, 0.2, 50VA* Kindly confirm above CVT ratio and core details as per the SLD * 50 VA burden mentioned in GTP. Kindly confirm.	Follow the details indicated in the SLD For the VA, take note of the notes in the SLD. The 50VA is not applicable Refer to item 19 of Addendum 4
482	3. Open Terminal Switchgear-CB-Disconnecter-ES 3.2.1 Circuit Breakers 1.Pre-insertion resistors to be provided if found necessary as result of the insulation coordination studies that are to be provided. 2.The 400kV circuit breakers shall equipped with Point on Wave Switch (POW) to open or close breakers at a pre-determined point on the voltage waveform	Kindly confirm the requirement of 400kV SF6 Circuit breaker with Pre-insertion resistor(PIR) with Control switching device(CSD) because in technical data sheet it mentioned without PIR.	Refer to item 285 of this Clarification.

483	400 & 220kV GCB TDS Electrical endurance class E1	We will offer electrical endurance class E2 instead of E1. Please confirm.	Refer to item 194 of this Clarification.
484	Section-VII Specification-11.1	Clarify whether the boost can be manual or automatic	This shall be automatic. Refer to item no 28 of Addendum 4
485	General	Due to unavailability of suitable range we unable to offer Disconnecter for this particular project.	Question is not clear
486	General	Altitude 1850masl. Kindly reconfirm the same.	Refer to item 113 of this Clarification.
487	Section - VII-2B-Specification	Request to please confirm on below points; 1. Please provide us strength details of Post Insulators. If possible please share more technical details of post insulator. i.e. Ground height, Anti-corrosion level, Dry arc distance, Electrical parameter, Mechanical parameter, Interface information etc.	1. The strength class of post insulator shall be determined after presentation and acceptance of tubular mechanical calculation acc to IEC60865 and mentioned standards in tender document for both 220 and 400 kV switchyard. This shall be subject to approval by the Employer/Employer's representative.
488	Section_IV-Price_Schedules_16-5-24 Section-VII-2A-Scope & General Requirements Item 15.31	The BOQ specifies a 1km access road, Please provide the Path plan about the access road.?	Refer to item no. 61 of this Clarification.
489	Page 13 OF 85 Section VII. Employer's Requirements- A - Scope of Supply clause 1. "Scope of work"	Internal access roads to switchyard and to buildings shall be implemented to bituminous standard. Please provide the reference drawing for internal roads.	Refer to item no. 31 of Addendum 4