

Our Ref: KE-KETRACO-413024-CW-RFB

08 July 2025

Notice to all Bidders

RE: CLARIFICATION NO. 3

Contract Title: Design, supply, installation and commissioning of STATCOMs and shunt devices on the KETRACO Network at Suswa and Rabai Substations (Lot 1 - Suswa 400/220 kV Substation & Lot 2 - Rabai 220/132 kV Substation)

Contract No.: KE-KETRACO-413024-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 thirty-two (32) pages with attachments.



SENIOR MANAGER, SUPPLY CHAIN

Attachments:

1. Revised sheet 1 of 2 of drawing no. ESP-001-RAB-001
2. Form of Bid Security - Bid Bond
3. Form of Bid - Securing Declaration

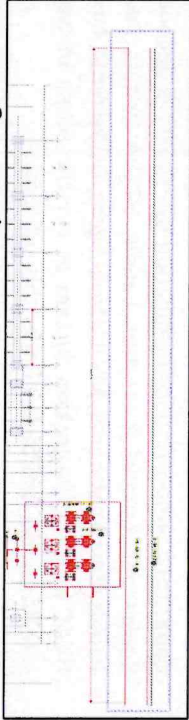
Clarification No. 3

	Clarifications	Responses
1.	In Part 1-Section IV-Bidding Forms-Price Schedules_Suswa/Rabai: For both Rabai and Suswa: kindly clarify whether a fault recording system is to be integrated at the Substations. Additionally, please specify the manufacturer and type of the existing fault recording systems at both Substations and confirm if they have sufficient spare inputs for the newly supplied equipment.	There is no existing fault recording system at Rabai substation and no external/new fault recorder system will be required. For Suswa, the existing fault recorder is ibaPDA – V6 System. Bidders will be required to provide additional binary inputs, analogue input and CPU cards to integrate and include the scope of works.
2.	In Part 1-Section IV-Bidding Forms-Price Schedules_Suswa/Rabai: For both Rabai and Suswa, please confirm that the protection functions outlined in the PS LD take precedence over the Specifications and Technical Schedules, as referenced in the BOQ and Bidding Forms.	The Bidder is required to comply with all the requirements in both the PS LD as well as the Specification and Technical Schedules.
3.	In reference to Part 2-C_Schedules of Technical Information, kindly confirm whether items listed in the Technical Schedules but not included in the BOQ should be marked as 'Not Applicable.	The Bidder is required to comply with all Technical Requirements.
4.	In reference to Part 1-Section IV-Bidding Forms-Price Schedules_Suswa/Rabai. One lot of Bay Marshalling Kiosk is required. Kindly confirm the exact quantity.	Quantity to be determined by the Bidders as part of their designs.
5.	Refer to Part 1-Section IV-Bidding Forms-Price Schedules_Suswa/Rabai: Please clarify the difference between items 15.28.1 and 8.3.2 for the Power Quality Meter in the RABAI BOQ, as they appear to be duplicates.	Item 15.28.1 of the BOQ are spares.
6.	In reference to Part 1-Section IV-Bidding Forms-Price Schedules_Suswa/Rabai, please confirm that the test tools, test kit, and software specified in Part C, Section 32 of the Employer's Requirements are required only for Suswa Substation, not for Rabai, as indicated in the BOQ.	Confirmed.
7.	In reference to Part 2-A_Scope_Supply_Specification, please clarify that only the ABB FOX 615/612 multiplexers require upgrading for the telecom link between Isinya, Makindu, Manyani, Mariakani, and Rabai substations (STM 4 to STM 16), and that the optical fibres are excluded from the scope.	The Bidders are required to provide all the necessary equipment required to meet the Specification and implement the scope of works.

	Clarifications	Responses
8.	In reference to Part 2-A_Scope_Supply_Specification and Part 2-C_Schedules of Technical Information: The technical specification requires halogen-free LV cables, conflicting with the PVC requirement in the Schedules of Technical Information. Please clarify the priority. Also, specify the insulation type (XLPE or PVC), jacket material, and armour type (steel wire or steel tape).).	For LV cables, SWA PVC cables are required.
9.	In reference to Part 1 Bidding Procedures, Section III Evaluation and Qualification Criteria, pages 73 and 74 the Reliability, Availability and Maintainability (RAM) requirement: Penalties apply if FOA, SOA, and FOR are below requirements. Please confirm if exceeding these limits results in a price benefit.	Exceeding the limits will not result in any price benefit.
10.	In reference to Part 2-C_Schedules of Technical Information 5. STATCOM Losses, page 8/44; Transformer losses are typically 0.4%–0.6%, and STATCOM valve losses 0.7%–1%. Therefore, achieving total STATCOM losses below 1% is unrealistic. Please clarify the requirement.	Refer to Addendum 3 for the functional guarantees for the coupling transformer, the same will also be applicable in Appendix 8 of the Contract Agreement.
11.	In reference to STATCOMS_Part1to3 (c) Functional Guarantees of the Facilities, page 77/342: The maximum no-load loss of 0.001% and load loss of 0.01% requirements for the 400 kV, 100 MVAR oil-immersed shunt reactor seem unreasonably low. Please clarify.	Refer to Addendum 3 for the revised functional guarantees for total losses for the Shunt Reactor, the same will also be applicable in Appendix 8 of the Contract Agreement.
12.	In reference to STATCOMS_Part1to3 (c) Functional Guarantees of the Facilities, page 77/342: The maximum loss requirement of 0.015% for the 132 kV, 100 MVAR shunt capacitor appears excessively low. Please clarify.	Refer to Addendum 3 for the revised functional guarantee for the total losses for the Shunt Capacitor, the same will also be applicable in Appendix 8 of the Contract Agreement.
13.	The technical parameters for the STATCOM and shunt device such as rated capacity, response time, harmonic characteristics, shunt device type, rated voltage, and rated current are missing. Please provide these details for accurate cost calculation and quotation.	Please refer to PART 2-A – EMPLOYER'S REQUIREMENTS, Part D Section 2.
14.	In reference to PART 3 – Conditions of Contract and Contract Forms, Section IX. Particular Conditions of Contract (PCC)	Refer to Addendum 2.

	Clarifications	Responses
	PCC No. 8 – PCC 8. Time for Commencement and Completion (Pg. 298 of 338) Could you kindly verify if the 18-month completion period for Lots 1 and 2 is adequate, considering the scope and import requirements? Manufacturing requires 16-18 months, plus 4-6 months for construction. We therefore request an extension to 24 months.	
15.	In reference to PART 3 – Conditions of Contract and Contract Forms Section X – Contract Forms Appendix 2. Price Adjustment (Pg. 321 of 338): Considering the clause requiring firm prices for the initial contract period, key foreign OEMs request price adjustments from bid submission due to market volatility and long timelines. Given the 180-day bid validity and 18-month execution, we propose applying price adjustments from the contract start date, per Appendix 2 formula, to ensure fair risk sharing and competitive bidding.	Not acceptable, price adjustment shall only be applicable as stated in ITB BDS 17.7.
16.	In reference to PART 3 - Conditions of Contract and Contract Forms Section X - Contract Forms, we kindly request the Employer to include re-mobilization, demobilization, and idling rates for substation activities (i, ii, iii) in Appendix 9 as detailed below:; <ul style="list-style-type: none"> • S No (i)- All kinds of Civil foundations for Equipment & Civil works in the STATCOM Container/Building works, with the rate/formulae mentioned under this sub-clause $IF = CF / 6$ in which: $IF = \text{Idling rate of foundation team per day}$ $CF = \text{Average unit rate for foundation installation}$ $CME = \text{Excavation volume for the dominant type of foundation}$ $\text{Re-mobilization / Demobilization rate} = AR \times 10$ Conditions $a. AR = IF \text{ where } IF \leq 250,000, \text{ otherwise } AR = 250,000 * CME / 100$	Not acceptable. Bidders shall include all costs associated with the execution of the scope of works in the Bid price.

	Clarifications	Responses
	<p>b. Maximum number of days of idling per calendar month shall not exceed 10 days.</p> <ul style="list-style-type: none"> • S No (ii) - All kinds of Erection Installation activities (STATCOM/Transformer/Shunt Reactors/Shunt Capacitor/Outdoor/Indoor Installation of Primary & Secondary Electrical Equipment, Control Protection Panels, SCADA System Panels, Telecom Panels, Busbar Material, MV/LV Switchgear, DC Systems, Auxiliary System, HVAC and Fire Protection System as per the scope of works) with the rate/formulae mentioned under this sub-clause <p>ITE = CTE / 6 in which: ITE = Idling rate per Equipment/panel erection team per day CTE = Average cost for the installation of equipment/panel STW = Equipment/Panel weight in tons</p> <p>Re-mobilization / Demobilization rate = AR x 10</p> <p>Conditions</p> <ol style="list-style-type: none"> AR = IF where IF \leq 250,000, otherwise AR = 250,000*STW/20 Maximum number of days of idling per calendar month shall not exceed 10 days. <ul style="list-style-type: none"> • S No (iii)- All kinds of Cable Laying activities (Outdoor/Indoor Installation for MV Power, LV Power, Control Cables and Busbar Conductor Stringing) with the rate/formulae mentioned under this sub-clause. <p>ICS = CS * 2 / 3 in which: ICS = Idling rate for Cabling team per day CS = Unit cost of Cabling per kilometer</p>	

	Clarifications	Responses
	<p>NC = Number of phase conductors</p> <p>Re-mobilization / Demobilization rate = AR x 20</p> <p>Conditions</p> <p>ii. AR = ICS where $ICS \leq 90,000 * NC/3$, otherwise AR = $90,000 * NC/3$</p> <p>Kindly confirm the above.Y</p>	
17.	<p>In reference to the Car Park, PART 2-A – EMPLOYER'S REQUIREMENTS Page 429, 2.16.11 Car Park Clause 2.16.11 requires a shaded car park for 10 vehicles, as referenced in the Bid drawings for Suswa (ESP-001-SUS-001 sheet 01 of 04) and RABAI (ESP-001-RAB-001 sheet 01 of 02). However, the current layouts do not show this provision.</p> <p>Kindly confirm if the shaded car park is within the bidder's scope and provides its location in the layouts if applicable.</p>	The car park is not part of the Bidders' scope of work.
18.	<p>In reference to the Access Road (RABAI) Part 2-B_Bid_Drawings (Page 17): Bid drawing "ESP-001-RAB-002" sheet 01 of 01 shows a 160m access road with no clear connection to existing roads. Kindly clarify if this road is within the Bidder's scope, and if so, confirm the required length and width.</p> 	<p>Yes, this road and all red marked roads (including that in 220kV side) in the drawings provided are in the Bidders' scope. This road shall connect to the existing road from the main gate, refer to the revised sheet 1 of 2 of drawing no. ESP-001-RAB-001 attached in this clarification (Attachment 1).</p> <p>The roads shall have a width of 6m and their lengths shall be approximately 200m (132kV side) and 60m (220kV side). The final lengths shall be determined by the contractor's design.</p>
19.	<p>In reference to RABAI 220kV SUBSTATION GEOTECHNICAL REPORT, please clarify the following.</p> <p>a) SPT test results are not provided as per the standard methodology. The calculation of number of blows is not clear (Pg 25-27) as per shown below image, kindly provide the standard test results</p>	The Bidder is advised to perform preliminary geotechnical investigations to inform their bid price as the bid price shall cover all works necessary to perform the scope. The geotechnical reports provided as part of the Bidding Documents are for information purposes only.

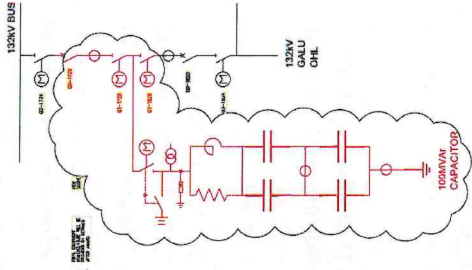
	Clarifications	Responses																																																																																																							
	<p>b) As per the Borehole detail, weathered sandstone encountered at shallow depth, No RQD values are provided, kindly provide the required values.</p> <p>c) There is a significant difference between the UCS test results on page 29 and the point load test results on page 30. Please confirm which values should be used for design purposes.</p> <table><tr><th rowspan="2">DEPTH (m)</th><th rowspan="2">SAMPLE TYPE</th><th rowspan="2">NO.</th><th colspan="5">BLOWS/15cm</th><th rowspan="2">SPT</th><th rowspan="2">N</th><th rowspan="2">CR</th><th rowspan="2">%</th><th rowspan="2">RQD</th><th rowspan="2">REMARKS</th></tr><tr><th>15</th><th>15</th><th>15</th><th>15</th><th>15</th></tr><tr><td></td><td>B</td><td>B1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>U</td><td>U2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Augering</td></tr><tr><td>1.3</td><td>D</td><td>D3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>SPT</td><td></td><td>4</td><td>4</td><td>4</td><td>4</td><td>3</td><td>15</td><td></td><td></td><td></td><td></td><td>U100.1.0-1.3 37 blows</td></tr><tr><td>1.75</td><td>D</td><td>D4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Clean borehole 1.75 2.0</td></tr></table>	DEPTH (m)	SAMPLE TYPE	NO.	BLOWS/15cm					SPT	N	CR	%	RQD	REMARKS	15	15	15	15	15		B	B1													U	U2											Augering	1.3	D	D3													SPT		4	4	4	4	3	15					U100.1.0-1.3 37 blows	1.75	D	D4												2													Clean borehole 1.75 2.0	<p>The Bidder shall also perform a detailed geotechnical investigation once the Contract has been awarded.</p>
DEPTH (m)	SAMPLE TYPE				NO.	BLOWS/15cm										SPT	N	CR	%	RQD	REMARKS																																																																																				
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20.	<p>In reference to PART 2-G: Schedules of Technical Information SUSWA 400kV Substation 1.2 400kV Coupling Transformer. Regarding the 400kV main transformer, the TDS does not specify whether the high-voltage side uses on-load or off-load tap changing, nor does it provide details on tap range, impedance, no-load loss, or load loss. Kindly provide this information.</p>	<p>The on load tap changer is required. The tap range shall be dependent on the bidder's design subject to the Employer's approval. Refer to Addendum 3 regarding the transformer losses.</p>																																																																																																							
21.	<p>In reference to PART 2-A: EMPLOYER's REQUIREMENTS, 6 Circuit breakers, 6.3.2.4 Mechanism Housings: Each cubicle assembly requires one 240VAC (Kenya standard) BS single-phase socket, protected by an RCBO. Kindly provide a sample socket catalogue for reference.</p>	<p>This refers to the standard British socket used in Kenya (refer to British Standard BS 1363).</p>																																																																																																							

	Clarifications	Responses
22.	In reference to PART 2-G: Schedules of Technical Information SUSWA 400kV Substation 1.4 400kV Circuit Breaker Item 8. Rated breaking current is 63.5kA. Please confirm if it is allowed to provide 63kA.	A rated breaking current of 63kA is acceptable.
23.	In reference to PART 2-G: Schedules of Technical Information SUSWA 400kV Substation 1.4 400kV Circuit Breaker Item 39. Spring charging time of 12s is required. Confirm if it is allowed to provide 15s.	This is acceptable.
24.	In reference to PART 2-A: EMPLOYER'S REQUIREMENTS, 7 Disconnectors and earth switches, SHVC does not provide locks but can reserve positions for locks. The conductors and blades of SHVC disconnect switches are silver-plated copper, not tin-plated copper. Only the fasteners of the conductor part of SHVC disconnect switches are made of stainless steel. There is no unbalanced protection for three-phase motors, only phase failure protection. Signalling contacts (break contacts) only have 1 normally open and 1 normally closed; the thermal protection relay cannot be automatically reset. SHVC disconnect switches only have normally open and normally closed contacts. Please clarify what MBB contacts are and whether a sample catalog can be provided. SHVC disconnect switches can only meet 0.3g and cannot provide a seismic resistance report:	Bidder to comply with the Employer's Requirements.
25.	In reference to Part 2-G: Schedules of Technical Information for the SUSWA 400kV Substation, specifically Sections 1.23 (LVAC Switchgear and Auxiliary Supplies) and 1.24 (DC Switchgear and Auxiliary Supplies), Technical Data Schedules (TDS) contain only limited parameters. For accurate completion of the technical tables, Provide additional information, such as the capacity of the DC system, the capacity and quantity of feeder switches, the number of cubicle panels, and the number of battery cells.	Bidder to size AC and DC systems according to the equipment they provide, fill in necessary offered details in the technical schedules all subject to bid evaluation and the Employer's Approval.

	Clarifications	Responses
26.	Referencing ITB 13.2, the fixed schedule is not feasible due to global supply challenges for key equipment. We request extending the timeline from 16 to 30 months.	Refer to Addendum 2.
27.	In reference to ITB 17.7, bid prices are fixed during the initial period. We request allowing price adjustments during project implementation.	Please refer to Item No. 15 in this clarification.
28.	Referring to ITB 19.1 and 19.3(a), the 180-day bid validity is too long given market volatility. We request reducing it to 90 days and allowing price adjustments beyond, up to 9 months.	Bid validity period shall not be changed. Please refer to the response provided in Item No. 15 regarding price adjustments.
29.	Please confirm whether the tax and duty exemptions outlined in ITB 17.5 (a), (d) and PCC 14 covering Excise Duty, Import Duty, VAT, IDF, and RDL for goods and services used exclusively in the project will apply to all schedules for both Suswa (1A-6A) and Rabai (1B-6B) Substations.	Refer to Clarification No 1., Item No 28.
30.	In reference to Appendix 1. Terms and Procedures of Payment Terms of Payment Schedule No. 1,2,3 and 4. Please confirm that, the payment for all schedules can be paid into Contractor's Bank Account in his country without any additional Tax to be paid in Kenya.	Refer to Clarification No 1., Item No 28.
31.	In reference to Part D of technical specifications, 2.2 STATCOM Performance and Control: The specification requires a dual redundant cooling control system with automatic switchover, but this is not standard practice and would increase costs. Confirmation is requested on whether it is mandatory.	Confirmed, this is mandatory.
32.	In reference to PART D of TECHNICAL SPECIFICATIONS, 2.9 Valve cooling system: The specification calls for automatic switchover between two ion exchange units via a timer, without impacting STATCOM operation. However, standard practice uses manual switchover based on conductivity testing, as resin typically lasts 2-3 years. Please confirm if manual switching based on conductivity is acceptable.	Not acceptable. Automatic switching is required.

	Clarifications	Responses																
33.	In reference to PART D TECHNICAL SPECIFICATIONS, 2 STATCOM 2.9 Valve cooling system High-speed pumps are preferred for reliability and low noise; low-speed options are costlier and less efficient. Please confirm if a low-speed pump is mandatory and provide its speed and key parameters if applicable.	Confirmed. Low speed pumps are required. Bidder to determine rating as per the design and application subject to Employer's review and approval.																
34.	In reference to PART D TECHNICAL SPECIFICATIONS, 2 STATCOM 2.9 Valve cooling system: In routine designs, the main pump is not equipped with a UPS and inverter. Please confirm if this requirement is mandatory and specify the required UPS backup duration.	Confirmed. This is a mandatory requirement. The minimum backup duration shall be 2 minutes. Bidder to determine rating as per the design and application subject to Employer's review and approval.																
35.	In reference to PART D TECHNICAL SPECIFICATIONS, 2.5 Harmonic filtering: Please confirm the maximum levels of the total and individual harmonic distortion limits at the PCC as specified in the latest version of the Kenya National Transmission Grid Code.	Please refer to Section 6.1.4.3 and Section 5.2.5.1 of the Kenya National Transmission Grid Code available on KETRACO website.																
36.	Capacitive and inductive load values for the STATCOM are missing. Please provide these parameters based on the project requirements. As per the table below. <table><tr><td>b) Operate cont. at high primary voltage at capacitive load, which give the following voltages</td><td>Mvar</td><td>-262.5 (primary)</td><td>-295.2 (secondary)</td></tr><tr><td></td><td>kV_{ms}</td><td>420.0</td><td>44.8</td></tr><tr><td>c) Operate cont. at high primary voltage at inductive load, which give the following voltages</td><td>Mvar</td><td>262.5 (primary)</td><td>235.2 (secondary)</td></tr><tr><td></td><td>kV_{ms}</td><td>420</td><td>35.7</td></tr></table>	b) Operate cont. at high primary voltage at capacitive load, which give the following voltages	Mvar	-262.5 (primary)	-295.2 (secondary)		kV _{ms}	420.0	44.8	c) Operate cont. at high primary voltage at inductive load, which give the following voltages	Mvar	262.5 (primary)	235.2 (secondary)		kV _{ms}	420	35.7	Please refer to Part 2-A Employer's Requirements, Part D, Section 2
b) Operate cont. at high primary voltage at capacitive load, which give the following voltages	Mvar	-262.5 (primary)	-295.2 (secondary)															
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	kV _{ms}	420	35.7															
37.	In reference to Part 2-C_Schedules of Technical Information & Part 2-A_Scope supply specification, clause 3.2.1: Please clarify the correct requirement as there is a discrepancy in overload capability. Part 2-A specifies 300% overload for a minimum of 3 seconds, while Part 2-C only states a 3-second duration without mentioning a minimum.	The overload capability is 300% for 3 seconds.																

	Clarifications	Responses									
38.	The type of bushing is not specified in the document. Please confirm whether it is Oil to Air, Oil to Oil, or Oil to SF ₆ , and whether it is OIP or RIP.	Bidders shall propose a type(OIP or RIP) that complies with IEC 60137 and meets all technical and performance requirements. The proposed type is subject to evaluation and Employer's approval.									
39.	Part D (Section 3.1) specifies a three-phase, outdoor, oil-immersed coupling transformer with no on-load tap-changer, while Part 2-C (Section 1.2, Article 4.1) indicates an on-load type. Please confirm which specification applies to proceed with design and procurement.	We confirm that an off load tap changer is required. Please see response provided in Item No. 20.									
40.	In order to determine the fire protection configuration of the station (SUSWA and RABAI) in this period, please provide the name and configuration of the fire protection manufacturer such as fire alarm in the early stage	Please see Clarification No 1, Item 69.									
41.	Please provide preliminary foundation treatment, slope, retaining wall setting and other schemes (SUSWA AND RABAI)	The Bidder shall design all works in accordance with Part 2A-Part E for Civil and structural works specifications subject to Employer's approval.									
42.	Please provide the preliminary cable trench diagram, station water supply and drainage pipeline diagram, oil discharge pipeline diagram (SUSWA AND RABAI)	Please see Clarification No 1, Item No. 38.									
43.	Please provide the time distribution of STATCOM output levels, at 10%, 20%, 40%, 60%, 80%, and 100%, to calculate average losses.	Please refer to the response provided in Item No. 10 of this clarification on the functional guarantee requirements for the STATCOM losses. The time distribution for the STATCOM operating levels is not available. Bidders are required to provide the losses at 10%, 20%, 40%, 60%, 80%, and 100% of STATCOM output levels as required in the Specification.									
44.	<p>In reference to (Part 2-C, Section 2.6), the specified 3P/0.1 accuracy level for the 220kV CVT appears unusually low compared to China's minimum standard of 0.2, requiring clarification.</p> <table border="1"> <tr> <td>10.</td><td>Rated accuracy class</td><td></td></tr> <tr> <td>10.1.</td><td>I secondary</td><td>3P/0.1</td></tr> <tr> <td>10.2.</td><td>II secondary</td><td>3P/0.1</td></tr> </table>	10.	Rated accuracy class		10.1.	I secondary	3P/0.1	10.2.	II secondary	3P/0.1	Bidder to comply with the Specification.
10.	Rated accuracy class										
10.1.	I secondary	3P/0.1									
10.2.	II secondary	3P/0.1									

	Clarifications	Responses
45.	In "Table 2.14 123kV inductive voltage transformer" the VT exceeds the maximum voltage. Clarification is needed to confirm whether this is an error.	We assume the Bidder refers to the Voltage ratio. It should be $132/\sqrt{3}/0.11/\sqrt{3}$ kV not $220/\sqrt{3}/0.11/\sqrt{3}$ kV
46.	If harmonic filtering is required, please provide the characteristic harmonics, harmonic voltage, and harmonic current.	Harmonic measurements were provided to the Bidders as part of the Bidding Documents – see Part 2-G.
47.	In reference to Part 2-A_10 Current Transformers, please clarify whether the specified ratio (1250/600/250/1) for the 132kV CT must be selected or if the supplier may propose an alternative.	Confirmed. The ratio of the CT must be as per the specified ratio in Part 2-A , 10 and Schedules of Technical Information clause 2.15
48.	Part 2-A_10 Current Transformers lacks technical specifications for capacitor bank bridge differential protection CTs and neutral point CTs; please provide these details.	This shall be as per Bidder's design. Bidders to submit offered technical specifications for evaluation purposes. The final design will be subject to review and approval by the Employer during detailed design stage.
49.	Please clarify if this project has a second-order high-pass filter? If yes, please provide the detailed parameter requirements for reactor and resistor.	<p>The Bidder shall determine if filters are required based on studies to be carried out as part of the design. Refer to Part 1, Section II, ITB 11.2(i)-7 and Part 2-A, Part D Clause 1.5.1 c, 1.5.2.3 and 1.5.2.6.</p> <p>Requirements of reactor and resistor are provided in Part 2-A, Part D Clause 14 and Schedules of Technical information clause 2.30. Other parameters shall be as per bidder's design subject to Employer's approval.</p> 

Clarifications					Responses	
50.	Please clarify if the scope of supply of this Project includes the following devices.					Bidder is required to provide all equipment required to meet the scope of works as detailed in Part 2A, Part A clause 3.2 -B.
		Device S.N.	Device description	Q'ty	Remark	
	1	Q0-1720	Circuit breaker	1 set		
	2		line CT	1 set		
	3	Q1-1728	Isolation switch (electrically operated)	1 set		
	4	Q1-1828	Isolation switch (electrically operated)	1 set		
	5		Isolation switch include earthing switch (main switch electrically operated, earthing switch manually operated)	1 set		
	6		Line potential transformer	1 set		
	7		Reactor	1 set		
	8		Resistor	1 set		
	9		Capacitor bank (output capacity: 100Mvar)	1 set		
	10		Protective current transformer	1 set		
	11		Neutral point protective current transformer	1 set		
51.	Please provide preliminary proposals for foundation treatment, slope stabilisation, retaining wall installation, and related works.					Refer to response for item No. 41.

	Clarifications	Responses
52.	To define the station's fire protection setup, please provide the fire protection manufacturer's name and early-stage equipment configuration, such as the fire alarm system.	Please see Clarification No 1, Item No. 69.
53.	Please provide preliminary diagrams for the cable trench, station water supply and drainage, and oil discharge pipelines.	Please see Clarification No 1, Item No. 38
54.	Part 2-A states software licences must be provided, but they are not listed in the Rabai Price Schedules. Clarification is requested on: <ol style="list-style-type: none"> Whether the Contractor must supply the software, and if so, whether a 2-year licence is sufficient for the design review period—please update the price schedule accordingly. As PSSE, PSCAD, DigSILENT, and ETAP have overlapping functions, confirm if only one is required. 	Please refer to item no 6 of this clarification. Please refer to Clarification No 1, item no 24 on requirements of the licences and softwares to be provided.
55.	Part 2-A requires telecom test tools (Table C-3) and one CPC 100 test system with software and licences, but these are missing from the Rabai Price Schedules. Please confirm if they must be provided and update the schedule accordingly.	Please refer to item no 6 of this clarification.
56.	In reference to Part 2-A_Scope_Supply_Specification, 32.5 Telecom test tools & 32.3 Primary test system/ Page 75 It is understood that only the new protection and control equipment will be integrated into the existing SCADA system; SCADA spare parts are not applicable. Please confirm.	Confirmed. The SCADA spares are not required to be integrated into existing SCADA systems
57.	We request the Employer to postpone the bid opening for 45 days so that we have design time after the bidding party responds to the clarification.	Refer to Addendum 2.
58.	Designing Rabai substation 132kV shunt capacitor requires knowledge of minimum 132kV three phase fault level for stable performance (MVA). Please provide parameter.	The minimum fault level is 1865 MVA.

	Clarifications	Responses
59.	From the Bidding Document "Part 2_G _ Harmonic measurement data", it is unclear whether the data corresponds to 220kV or 132kV. Additionally, what does V1N, V2N and V3N represents?	The data provided is for the 220kV busbar at Rabai. V1N, V2N and V3N represent the single phase to ground (neutral) voltages for the three phases.
60.	Please provide the harmonic values for the 132kV system at Rabai station.	Measurements for the 132kV system are not available.
61.	Is this Rabai substation 132kV shunt capacitor designed for filtering or shunt compensation? And what is the required reactance ratio (X%) of the reactor?	The capacitor bank is for shunt compensation and the Bidder shall determine if a filter is required during the design based on their harmonic studies. Refer to Part 1, Section II, ITB 11.2(i)-7 and Part 2-A, Part D Clause 1.5.1 c, 1.5.2.3 and 1.5.2.6. The reactance ratio of the reactor shall be dependent on the Bidder's design which shall be subject to Employer's approval.
62.	We kindly request a 45-day extension of the bid submission deadline, moving it from 27 June to 11 August 2025, to ensure proper preparation, Additionally, we have reviewed the tender documents available on the public website; however, we would like to request further information regarding the project's technical parameters. Could you kindly advise where we can obtain the complete technical details.	Please refer to the response provided in Item No. 57 of this clarification.
63.	We kindly request a two-week extension to the current bid submission deadline of 27th June 2025, to ensure a fully compliant and competitive offer.	Please refer to the response provided in Item No. 57 of this clarification.
64.	We are requesting extension of the bid submission date by Six (06) weeks from the current deadline of 27th June 2025.	Please refer to the response provided in Item No. 57 of this clarification.
65.	The current timeline under the amended clause may not allow sufficient time for any follow-up clarifications. In view of this, we kindly request KETRACO to revert the clarification deadline to 14 days before bid submission, as per the original tender condition. This will support a thorough and competitive bid preparation process. Kindly confirm.	Not acceptable.
66.	Referring to the single-line diagram provided in Part 2-A and Part 2-B documents, Rabai 132kV shunt capacitor bank may be functioning as a filter capacitor. Kindly confirm if this is correct.	The capacitor bank is for shunt compensation. The Bidder shall determine if a filter is required during the design phase based on their harmonic studies

	Clarifications	Responses																																																												
	<p>If so, we have not found the Harmonic Analysis Report or Filter Design Document in the tender materials. These documents are essential and should include harmonic background data and detailed specifications of all filter components (capacitors, reactors, resistors), including inductance, resistance, power, and current ratings.</p> <p>For your reference, we are seeking information similar to the parameters shown in the attached picture:</p> <table><caption>Table 4-15 15 MVA 33 kV C-type harmonic filter maximum component stress levels</caption><thead><tr><th>Frequency (Hz)</th><th>Voltage across C (kV)</th><th>Voltage across C₀ (kV)</th><th>Reactor current (A)</th><th>Resistor Current (A)</th></tr></thead><tbody><tr><td>50</td><td>21.25</td><td>9.48</td><td>292.71</td><td>0.05</td></tr><tr><td>100</td><td>0.93</td><td>0.22</td><td>11.87</td><td>5.37</td></tr><tr><td>150</td><td>0.36</td><td>0.06</td><td>5.41</td><td>4.01</td></tr><tr><td>200</td><td>0.44</td><td>0.03</td><td>3.62</td><td>2.69</td></tr><tr><td>250</td><td>0.86</td><td>0.02</td><td>2.58</td><td>3.43</td></tr><tr><td>300</td><td>0.01</td><td>0.00</td><td>0.22</td><td>0.84</td></tr><tr><td>350</td><td>0.04</td><td>0.01</td><td>7.00</td><td>3.62</td></tr><tr><td>400</td><td>0.02</td><td>0.00</td><td>0.34</td><td>0.75</td></tr><tr><td>450</td><td>0.02</td><td>0.00</td><td>0.66</td><td>2.14</td></tr><tr><td>500</td><td>0.02</td><td>0.00</td><td>0.33</td><td>0.69</td></tr><tr><td>550</td><td>0.01</td><td>0.00</td><td>1.30</td><td>3.91</td></tr></tbody></table>	Frequency (Hz)	Voltage across C (kV)	Voltage across C ₀ (kV)	Reactor current (A)	Resistor Current (A)	50	21.25	9.48	292.71	0.05	100	0.93	0.22	11.87	5.37	150	0.36	0.06	5.41	4.01	200	0.44	0.03	3.62	2.69	250	0.86	0.02	2.58	3.43	300	0.01	0.00	0.22	0.84	350	0.04	0.01	7.00	3.62	400	0.02	0.00	0.34	0.75	450	0.02	0.00	0.66	2.14	500	0.02	0.00	0.33	0.69	550	0.01	0.00	1.30	3.91	<p>and determine these parameters if required. Refer to Part 1, Section II, ITB 11.2(i)-7 and Part 2-A, Part D Clause 1.5.1 c, 1.5.2.3 and 1.5.2.6.</p> <p>Requirements of capacitance ,reactor and resistor are provided in Part 2-A, Part D Clause 14 and Schedules of Technical information clause 2.30. Other parameters shall be as per bidder's design subject to Employer's approval.</p>
Frequency (Hz)	Voltage across C (kV)	Voltage across C ₀ (kV)	Reactor current (A)	Resistor Current (A)																																																										
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67.	<p>RABAI SUBSTATION</p> <p>General</p> <p>AC & DC System</p> <p>We request you to kindly provide the AC and DC Auxiliary System single line diagrams (SLDs) with details of spare feeders available.</p>	<p>Refer to Clarification No 1., Item No 38.</p>																																																												
68.	<p>RABAI SUBSTATION</p> <p>1. Technical Data Sheet 2.10 & 2.17</p> <p>2. Price Schedule; Schedule 1B_SS 1.7</p> <p>Suspension and Tension Insulators</p> <p>Technical Data Sheet for Tension and suspension insulator string is not correct. (Technical Data Sheet for Bus Post Insulator is provided as Technical Data Sheet for insulator strings). Please furnish corrected Technical Data Sheet for insulator string. Further please confirm the type of insulator for Tension and suspension strings i.e whether Porcelain, Toughened glass OR composite polymer type.</p>	<p>Bidders to use the technical data sheets provided.</p> <p>Refer to Clarification No 2., Item No 46 for the type of insulators.</p>																																																												

	Clarifications	Responses
69.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 11.2 220kV Earthing System We request you to kindly provide the existing Earthing grid layout and equipment earthing details.	Refer to Clarification No 1., Item No 38.
70.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 11.3 132kV Earthing System We request you to kindly provide the existing Earthing grid layout and equipment earthing details.	Refer to Clarification No 1., Item No 38.
71.	RABAI SUBSTATION General Cable Trench We request you to kindly provide the existing Cable Trench Layout.	Refer to Clarification No 1., Item No 38.
72.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 5 & 6 132KV Automation System and Control system We request you to kindly provide the make of existing Substation Automation System and Control System.	There is no existing SAS and control system in 132 kV Rabai
73.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 7 & 8 220kV Automation System and Control system We request you to kindly provide the make of existing Substation Automation System and Control System.	There is no existing SAS and control system in 220 kV Rabai
74.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 9 Telecommunication at NCC/RCC/NSCC	Existing telecommunication system is ABB. Architecture shall not be provided at this time

	Clarifications	Responses
	We request you to kindly provide the make of existing Telecommunication System at the NCC/RCC/NSCC along with architecture drawing.	
75.	RABAI SUBSTATION General Cable Trench We request you to kindly provide the existing Cable Trench Layout.	Refer to Clarification No 1., Item No 38.
76.	RABAI SUBSTATION Price Schedule; Schedule 1B_SS 9 SCADA/EMS at NCC/RCC/NSCC We request you to kindly make of existing SCADA/EMS System at the NCC/RCC/NSCC along with architecture drawing.	Make is ABB. Architecture drawings shall not be provided at this time
77.	RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Contour Layout We request you to kindly provide the Contour map for substation Plot.	Refer to the topographic survey in Part 2-E_Rabai Geotech Report & Topo Survey of the bid. However, the Bidder is required to conduct their own due diligence to make their own assessment.
78.	RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Internal Road We request you to please confirm the type of internal road to be considered i.e whether concrete OR asphalt.	The internal road shall be a concrete road.
79.	RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Drainage system We request you to please provide the details and section drawing for Existing Strom water drainage system i.e. whether Open V Shape Drain or Pipes for Stormwater Drainage.	Refer to Clarification No 1., Item No 38.
80.	RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Fencing and Gate We request you to please provide the sectional drawing of the existing fence and gate, including dimensions and construction details.	Refer to Clarification No 1., Item No 38.

	Clarifications	Responses
81.	<p>RABAI SUBSTATION Part 1 - Section IV-Bidding Forms - Price Schedules Suswal Schedule 4A SS; Sr No. 15.3.8 STATCOM Container/Building We request you to please provide the Drawing for Statcom Container/Building.</p>	This shall be based on the Bidder's design subject to the Employer's approval.
82.	<p>RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Cable trench Section We request you to please provide the sectional drawing of the existing cable trench, including dimensions and construction details.</p>	Refer to Clarification No 1., Item No 38.
83.	<p>RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Road Section We request you to please provide the existing road sectional drawings.</p>	Refer to Clarification No 1., Item No 38.
84.	<p>RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Land Clear, Levelling, Cutting and Backfilling We request you to please share the details of existing foundations within the scoped area to facilitate demolition planning and execution.</p>	Refer to Clarification No 1., Item No 38.
85.	<p>RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Drainage System We request you to please provide the detailed as-built drawing of the existing drain, specifying its length, type, cross-section dimensions, and material specifications.</p>	Refer to Clarification No 1., Item No 38.
86.	<p>RABAI SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Oil Dam We request you to please provide the sectional drawing of oil containment tank.</p>	Refer to Clarification No 1., Item No 38.

	Clarifications	Responses
87.	<p>RABAI SUBSTATION SCHEDULE 4 _ CL.4.2.19.23. and Cl.4.3.19.15. Fencing and Gate We request you to please provide the existing Fence and Gate sectional drawings, including dimensions and construction details.</p>	Refer to Clarification No 1., Item No 38.
88.	<p>RABAI SUBSTATION SCHEDULE 4 _ CL.4.2.19.23. and Cl.4.3.19.15. Existing Foundation Drawings We request you to please provide the detailed As-Built drawings of existing equipment, gantry tower, reactor and fire wall foundations.</p>	Refer to Clarification No 1., Item No 38
89.	<p>RABAI SUBSTATION SCHEDULE 4 _ CL.4.2.19.23. and Cl.4.3.19.15. Demolition item for Slope protection or retaining wall We request you to kindly confirm whether there is any existing slope protection or retaining wall along the periphery of the substation that requires demolition. If yes then please provide the sectional drawing.</p>	Refer to response for item No. 41 & Refer to Clarification No 1., Item No 38
90.	<p>RABAI SUBSTATION Part 1-Section IV-Bidding Forms-Price Schedules_Suswal Schedule 4A SS; Sr No. 15.2 Water Supply System We request you to kindly provide detailed technical specifications, design criteria and scope of work for the complete water supply system inclusive of all requisite work, including source development, intake structures, treatment facilities, pumping arrangements, storage reservoirs, distribution networks, and associated civil, electrical, and mechanical components.</p>	<p>The scope of works for Rabai Substation has been outlined in part 2A-Part E-clause 2.20. The bidder is required to propose a solution that meets these requirements.</p> <p>The quantity and unit of measurement for Schedule 4B_SS item 15.2 shall be 1 and 'lot' respectively.</p>
91.	<p>RABAI SUBSTATION Part 2-B_Bid Drawings; ESP-001-RAB-002; 132 kV SS RABAI-KILIFI 132 kV CAP BANK; 132 kV SS Road section We request you to kindly confirm the Length and Section of the internal Road as mentioned in the "ESP-001-RAB-002" Drawing.</p>	Refer to Item No 18 of this clarification

	Clarifications	Responses
92.	<p>SUSWA SUBSTATION General AC & DC System We request you to kindly provide the AC and DC Auxiliary System single line diagrams (SLDs) with details of spare feeders available.</p> <p>SUSWA SUBSTATION 1. Technical Data Sheet 1.10 2. Price Schedule; Schedule 1A_SS 1.4 Suspension and Tension Insulators Technical Data Sheet for Tension and suspension insulator string is not correct. (Technical Data Sheet for Bus Post Insulator is provided as Technical Data Sheet for insulator strings). Please furnish corrected Technical Data Sheet for insulator string. Further please confirm the type of insulator for Tension and suspension strings i.e whether Porcelain, Toughened glass OR composite polymer type.</p>	<p>Refer to Clarification No 1., Item No 38.</p> <p>Bidders to use the technical data sheets provided. Refer to Clarification No 2., Item No 46 for the type of insulators.</p>
93.		
94.	<p>SUSWA SUBSTATION Price Schedule; Schedule 1A_SS 8.2 Earthing We request you to kindly provide the existing Earthing grid layout and equipment earthing details.</p>	<p>Refer to Clarification No 1., Item No 38.</p>
95.	<p>SUSWA SUBSTATION General Cable Trench We request you to kindly provide the existing Cable Trench Layout.</p>	<p>Refer to Clarification No 1., Item No 38.</p>
96.	<p>SUSWA SUBSTATION Price Schedule; Schedule 1A_SS 5 Automation System We request you to kindly provide the make of existing Substation Automation System and Control System.</p>	<p>Refer to Clarification No 1., Item No 79.</p>

	Clarifications	Responses
97.	<p>SUSWA SUBSTATION Price Schedule; Schedule 1A_SS 6 Telecommunication at NCC/RCC/NSCC We request you to kindly provide the make of existing Telecommunication System at the NCC/RCC/NSCC along with architecture drawing.</p>	Existing telecommunication system is ABB. Architecture shall not be provided at this time
98.	<p>SUSWA SUBSTATION Price Schedule; Schedule 1A_SS 7 SCADA/EMS at NCC/RCC/NSCC We request you to kindly provide make of existing SCADA/EMS System at the NCC/RCC /NSCC along with architecture drawing.</p>	Existing SCADA/EMS system is ABB. Architecture shall not be provided at this time
99.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Contour Layout We request you to kindly provide the contour map for substation Plot.</p>	Refer to Clarification No 1., Item No 38.
100.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Internal Road We request you to please confirm the type of internal road to be considered i.e whether concrete OR asphalt.</p>	The internal road at Suswa Substation is not within the scope of works for the Bidder.
101.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Drainage system We request you to please provide the details and section drawing of existing storm water drainage system i.e. Open V Shape Drain or Pipes for Stormwater Drainage.</p>	Refer to Clarification No 1., Item No 38.
102.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Fencing and Gate We request you to please provide the sectional drawing of the existing fence and gate, including dimensions and construction details.</p>	Refer to Clarification No 1., Item No 38.

	Clarifications	Responses
103.	<p>SUSWA SUBSTATION Part 1-Section IV-Bidding Forms-Price Schedules_Suswal Schedule 4A SS; Sr No. 12.10 STATCOM Container/Building We request you to please provide the drawing for STATCOM Container/Building.</p>	This shall be based on the Bidder's design subject to the Employer's approval.
104.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Cable trench Section We request you to please provide the sectional drawing of the existing cable trench, including dimensions and construction details.</p>	Refer to Clarification No 1., Item No 38.
105.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Road Section We request you to please provide the existing road sectional drawings.</p>	Refer to Clarification No 1., Item No 38.
106.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Land Clear, Levelling, Cutting and Backfilling We request you to please share the details of the existing foundation within the scoped area to facilitate demolition planning and execution.</p>	Refer to Clarification No 1., Item No 38.
107.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Drainage System We request you to please provide the detailed as-built drawing of the existing drain, specifying its length, type, cross-section dimensions, and material specifications.</p>	Refer to Clarification No 1., Item No 38.
108.	<p>SUSWA SUBSTATION Part 2-B_Bid_Drawings; Part 2-A_Scope_Supply_Specification Oil Dam We request you to please provide the sectional drawing of oil containment tank.</p>	Refer to Clarification No 1., Item No 38.

	Clarifications	Responses
109.	<p>SUSWA SUBSTATION SCHEDULE 4_ CL.4.2.19.23. and Cl.4.3.19.15. Fencing and Gate We request you to please provide the existing Fence and Gate sectional drawings, including dimensions and construction details</p>	Refer to Clarification No 1., Item No 38.
110.	<p>SUSWA SUBSTATION SCHEDULE 4_ CL.4.2.19.23. and Cl.4.3.19.15. Existing Foundation Drawings We request you to please provide the detailed As-Built drawings of existing equipment, gantry tower, reactor and fire wall foundations.</p>	Refer to Clarification No 1., Item No 38.
111.	<p>SUSWA SUBSTATION SCHEDULE 4_ CL.4.2.19.23. and Cl.4.3.19.15. Demolition item for Slope protection or retaining wall We request you to kindly confirm whether there is any existing slope protection or retaining wall along the periphery of the substation that requires demolition. If yes then please provide the sectional drawing.</p>	Refer to response for item No. 41 & Refer to Clarification No 1., Item No 38
112.	<p>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.</p>	The various Forms of Bid Security were erroneously missing in the Bidding Documents. The missing forms have now been provided in this Clarification. Refer to Attachment 2 & 3.
113.	<p>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.</p>	This is acceptable.

	Clarifications	Responses
114.	<p>Section VII - Employer's Requirements</p> <p>Contractor's Representative and Key Personnel</p> <p>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 do not have any such specific license issued to carry out EPC works. Request you to accept the academic qualification degree. Please confirm.</p>	The Bidder is required to demonstrate that their personnel are authorized to practice engineering by submitting a valid license or equivalent certification. This authorization need not explicitly cover EPC work and should originate from the personnel's country of origin or residence.
115.	<p>Section VIII – General Conditions of Contract; Clause 26.2</p> <p>Liquidated Damages</p> <p>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.</p>	Not correct. Refer to PCC 26 which indicates the percentage rate of liquidated damages that shall be applied on the contract price
116.	<p>Section X – Contract Forms; Appendix 1. Terms and procedure of Payment</p> <p>Mode of Payment</p> <p>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.</p>	The preferred mode of payment is direct disbursement by the World Bank into the Contractor's designated account; however, this arrangement remains subject to modification at the sole discretion of the Employer.
117.	<p>Section X – Contract Forms; Appendix 8. Functional Guarantees</p> <p>Losses – Shunt Reactor</p> <p>The maximum no load losses for shunt reactor is mentioned as 1kW and Maximum load losses for shunt reactor is mentioned as 10kW. We would like to bring to your notice that the losses mentioned are very low. Request you to please check & confirm.</p>	Refer to response for item No. 11 of this clarification.
118.	<p>Section VIII – General Conditions of Contract; Clause 13.3</p> <p>Performance Guarantee</p> <p>We understand that the Performance Guarantee shall be valid for five hundred and forty (540) days after Completion of the Facilities or three</p>	This is confirmed. Refer to GCC Clauses 13, 27 and PCC clauses 13.3.3 and 27.

	Clarifications	Responses
	<p>hundred & sixty five (365) days after Operational Acceptance of the Facilities, whichever occurs first. Please confirm.</p> <p>Further the performance guarantee shall cover the extended defect liability for five (5) years for the Power Transformer, Reactor, Capacitor, STATCOM and Harmonic Filters and three (3) years for Protection Equipment, Instrument Transformers, Circuit Breakers, Disconnectors and Earth Switch</p> <p>No separate performance guarantee shall be provided for the operation & maintenance period of 3 years. Please confirm our understanding.</p>	
119.	<p>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.</p> <p>Alternatively, please confirm whether the Advance Payment Security & Performance Security in the form of insurance bond is acceptable.</p>	<p>The list of large banks can be obtained from the Central Bank of Kenya website: https://www.centralbank.go.ke/reports/bank-supervision-and-banking-sector-reports/ Bidders to conduct due diligence. Refer to PCC 13 on the acceptable form of advance payment security and performance security.</p>
120.	<p>Bid Data Sheets; Clause 22.1 Submission and Opening of Bids We are pleased to inform you that we are qualifying & participating in both the lots. In this case we request you to accept a single common submission for both the lots. However, details with respect to specific lots viz. bid security, price schedule, etc. shall be submitted lotwise.</p>	Refer to Clarification No 1., Item No 13
121.	<p>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</p>	<p>In accordance with the laws of Kenya, foreign contractors are required to seek registration with the National Construction Authority for class one (NCA 1) after issuance of an award letter and before signing the contract. This registration is sufficient to undertake all works if there is no intention</p>

	Clarifications	Responses
	<p>building engineering works and mechanical and electrical engineering works respectively.</p> <p>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.</p> <p>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.</p>	<p>of subcontracting. However, bidders are advised to conduct their own due diligence to inform their bid.</p>
122.	<p>Section IX – Particular Conditions of Contract; Clause PCC 14</p> <p>Taxes & Duties</p> <p>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.</p>	<p>Refer to Clarification No 1., Item No 28 and PCC 14 for guidance on the exemptions provided under the applicable laws.</p> <p>The process of seeking exemption will involve coordinated effort between the Employer and the Contractor.</p> <p>The Contractor will initiate the request to enable the Employer to facilitate the request through Ministry of Energy, National Treasury, and Kenya Revenue Authority.</p> <p>However, the Contractor must engage a competent agent to follow up with the relevant agencies such as Kenya Revenue Authority, Kenya Bureau of Standards, and Kenya Ports Authority.</p>
123.	<p>Section IX – Particular Conditions of Contract; Clause PCC 14</p> <p>Taxes & Duties</p> <p>1. 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.</p> <p>2. Please confirm if VAT & other local Taxes are exempted for this project. Further please confirm whether the same exemption can be extended to</p>	<p>1. As per applicable laws, tax exemptions specified in PCC 14 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 Item No. 122 in this Clarification for the procedure for seeking tax exemptions.</p> <p>2. As per applicable laws, tax exemptions specified in PCC 14 may be extended to subcontractors and local suppliers specific to the execution of the project..</p> <p>3. The Contractor, their local subcontractors and suppliers shall be liable for payment of withholding tax as per applicable laws. The</p>

	Clarifications	Responses
	<p>the Subcontractor and local supplier also who will be working in association with Contractor.</p> <p>3. Please confirm whether any withholding tax is applicable on payments made by the Employer to contractor towards:</p> <ol style="list-style-type: none"> Offshore portion i.e. imported supply, Onshore portion i.e. installation/ construction portion. <p>4. 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.</p>	<p>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.</p> <p>4. Refer to Item No. 122 in this Clarification.</p>
124.	<p>Section IX – Particular Conditions of Contract; Clause PCC 14</p> <p>Taxes & Duties</p> <p>Please confirm whether any contract registration fees/ Stamp Duty is applicable.</p>	Refer to Clarification No 1., Item No 28
125.	<p>Part 2-C_Schedules of Technical Information</p> <p>1.3 400kV Busbar Reactor, NO 30.2. Type designation: Diala S4 ZX-I</p> <p>Kindly note that Petro45X can meet the requirements of oil. We request you to please confirm whether this type of oil can be accepted.</p> <p>Part 2-C_Schedules of Technical Information</p> <p>1.3 400kV Busbar Reactor, NO 32. Sound power level at rated conditions: <77 dB</p>	Refer to Clarification No 1., Item No 4
126.	<p>In the 4 Busbar Reactors 4.1 General Requirements section of the file Part 2-A_Scope_Supply_Specification, The requirements for Noise levels are described as " Noise level (Sound Pressure) limits are based on NEMA TR1 which are generally assessed as high for modern times construction, consequently the limit for this specification has been reduced by 5 dB(A)." The noise level requirements are determined for the sound pressure, not the sound power, so the noise requirements of the shunt reactor do not apply.</p>	Refer to Clarification No 1., Item No 5

	Clarifications	Responses																											
	Vendor shall guarantee that the “sound pressure level” at rated conditions shall be less than 77 dB. Please confirm whether the same is acceptable.																												
127.	Part 2-A_Scope_Supply_Specification 4 Busbar Reactors 4.4 Windings The clause states that “The minimum nitrogen content of the upgraded paper shall be 2%”. After communicating with our suppliers, we understand that the thermally upgraded paper can be only with 1.3% nitrogen content. High nitrogen content will affect heat dissipation. Please confirm whether the same will be acceptable.	Refer to Clarification No 1., Item No 6																											
128.	Type of Bushing - Reactor Please confirm whether the type of bushing is OIP or RIP.	Refer to Clarification No 1., Item No 8																											
	Technical requirement-7 Disconnectors and Earth Switches	Refer to Clarification No 1., Item No 87																											
129.	<p>The number of normally open (NO) and normally closed (NC) auxiliary switches required shall be as dictated by the particular scheme of application plus 30% extra as spare. Where any particular scheme requires special timing of auxiliary contacts, these shall be provided. The design of the NO and NC auxiliary contacts shall allow for equipment intermediate position i.e., a state in which both NO and NC contacts do not make.</p> <p>The number of the NO and NC contacts shall be as per the schedules of technical information</p> <p>The auxiliary contacts shall comprise of NO, NC as well as MBB (Make before break) type auxiliary Contacts.</p> <table border="1"> <thead> <tr> <th>Particulars</th><th>Unit</th><th>Particular requirement</th></tr> </thead> <tbody> <tr> <td>Type</td><td></td><td>Double side break/</td></tr> <tr> <td>Rated normal current</td><td>A</td><td></td></tr> <tr> <td>Rated maximum system voltage (U_m)</td><td>kV</td><td>Dependent on supplier design</td></tr> <tr> <td>Rated nominal system voltage (U_n)</td><td>kV</td><td></td></tr> <tr> <td>Short circuit rating (1 sec)</td><td>kA</td><td>31.5</td></tr> <tr> <td>Charging current breaking capacity</td><td>A</td><td>> 50</td></tr> <tr> <td>Magnetising current breaking capacity</td><td>A</td><td>IEC 62271</td></tr> <tr> <td>Operating mechanism</td><td></td><td>Motorised and manual</td></tr> </tbody> </table>	Particulars	Unit	Particular requirement	Type		Double side break/	Rated normal current	A		Rated maximum system voltage (U _m)	kV	Dependent on supplier design	Rated nominal system voltage (U _n)	kV		Short circuit rating (1 sec)	kA	31.5	Charging current breaking capacity	A	> 50	Magnetising current breaking capacity	A	IEC 62271	Operating mechanism		Motorised and manual	
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	<p>Table 11 – Standard rated bus-charging currents</p> <table><tr><th>Rated voltage U_r kV (RMS value)</th><td>72.5</td><td>100</td><td>125</td><td>145</td><td>170</td><td>245</td><td>300</td><td>362</td><td>420</td><td>550</td><td>600</td><td>1100</td><td>1200</td></tr><tr><th>Rated bus-charging current A (RMS value)</th><td>0.1</td><td>0.1</td><td>0.1</td><td>0.1</td><td>0.1</td><td>0.25</td><td>0.25</td><td>0.5</td><td>0.5</td><td>0.5</td><td>0.5</td><td>1.0</td><td>1.0</td></tr></table> <p>According to IEC62271-102, the charging current value is much lower than the 50A specified in the technical document. Please clarify and confirm whether this value is required for actual working conditions.</p>	Rated voltage U_r kV (RMS value)	72.5	100	125	145	170	245	300	362	420	550	600	1100	1200	Rated bus-charging current A (RMS value)	0.1	0.1	0.1	0.1	0.1	0.25	0.25	0.5	0.5	0.5	0.5	1.0	1.0	
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130.	Particular Conditions of Contract 25.1.1 : We propose amending the phrase " due to reasons not attributable to the Employer " to "due to the contractor's reasons" for clarity and accountability.	Not accepted.																												
131.	Particular Conditions of Contract 25.2.2 : Since GCC Clause 25.2.2 is not applicable, we request guidance on handling delays in guarantee testing due to reasons beyond the contractor's control.	This scenario is not envisaged.																												

Attachment 2

Form of Bid Security- Bid Bond

BOND NO. _____

BY THIS BOND _____ as Principal (hereinafter called "the Principal"), and _____, **authorized to transact business in** _____, as Surety (hereinafter called "the Surety"), are held and firmly bound unto _____ as Obligee (hereinafter called "the Employer") in the sum of _____¹(_____), for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written Bid to the Employer dated the ____ day of _____, 20__, for the construction of _____ (hereinafter called the "Bid").

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) withdraws its Bid prior to the Bid validity expiry date set forth in the Principal's Letter of Bid, or any extended date provided by the Principal; or
- (b) having been notified of the acceptance of its Bid by the Employer prior to the expiry date of the Bid validity or any extension thereto provided by the Principal, (i) fails or refuses to execute the Contract Form, if required; or (ii) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

then the Surety undertakes to immediately pay to the Employer up to the above amount upon receipt of the Employer's first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiry of the Bid validity set forth in the Principal's Letter of Bid or any extension thereto provided by the Principal.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

Principal: _____

Surety: _____

Corporate Seal (where appropriate)

(Signature)

(Signature)

(Printed name and title)

(Printed name and title)

¹ The amount of the Bond shall be denominated in the currency of the *Employer's Country* or the equivalent amount in a freely convertible currency.

Attachment 3

Form of Bid-Securing Declaration

Date: _____

RFB No.: _____

Alternative No.: _____

To: _____

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for Bidding or submitting proposals in any contract with the Employer for the period of time specified in Section II – Bid Data Sheet, if we are in breach of our obligation(s) under the Bid conditions, because we:

- (a) have withdrawn our Bid prior to the expiry date of the Bid validity specified in the Letter of Bid or any extended date provided by us; or
- (b) having been notified of the acceptance of our Bid by the Employer prior to the expiry date of the Bid validity in the Letter of Bid or any extended date provided by us, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiry date of the Bid validity.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

