

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

09 June 2025

Notice to all Bidders

Clarification No. 1

RE: Clarification No. 1 to the Bid Document for the 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) (KE-KETRACO-413024-CW-RFB)

Find herein the responses to the clarifications requested by Bidders consisting of 20 pages with attachments.



Ag. SENIOR MANAGER, SUPPLY CHAIN

Attachments:

1. Various revised drawings

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1.	With reference to BDS, ITB-23.1 of the Submission of Bids, we request KETRACO to extend the Bid submission deadline to allow the Bidders sufficient time to prepare and submit compliant Bids.	Please refer to Tender Addendum and Clarification No. 1.
2.	In relation to Clause 3.26.3 of the Employer's Requirements, please confirm the impedance parameter for the 400 kV and 220 kV coupling transformers.	Bidders are required to select impedance values for the 400 kV and 220 kV coupling transformers that are appropriate for their proposed design and that meet all the specified performance requirements of the Employer's Requirements. The selected parameters will be subject to review and approval by the Employer during the detailed design stage.
3.	In Clause No.30.1(b) of PCC, we note that the Limitation of Liability is 1.25 times the Contract Price. We request KETRACO to reduce the Limitation of Liability to 1 times the Contract Price.	This is not acceptable.
4.	In Clause 30.2 in Part 2-C of the Schedules of Technical Information, 1.3 400kV Busbar Reactor , please consider if Pero45X could be accepted as we have found that this type of oil can meet the requirements.	This is not acceptable.
5.	In Clause 30.2, Part 2-C of the Schedules of Technical Information, 1.3 400kV Busbar Reactor , please confirm that noise requirements are based on sound pressure, not sound power, and thus the shunt reactor limits noise requirements stated do not apply. We can guarantee a sound pressure level below 77 dB at rated conditions.	Confirmed. The noise requirement is based on sound pressure level. Bidders shall comply with the shunt reactor limits noise requirements stated in the Bidding Documents.
6.	In Paragraph 4.4, "Windings" in Section 4 of the Busbar Reactors (Part 2-A, Scope Supply Specification), please confirm whether thermally upgraded paper with only 1.3% nitrogen content is sufficient and acceptable as the requirement specifies that "The minimum nitrogen content of the upgraded paper shall be 2%."	This is not acceptable.
7.	In reference to Clause 2.2 in Part 1, Section 4 Bidding Forms Price Schedules Suswa, 2. 400kV Shunt Reactors , please confirm that the surge arrestors are not in the Contractor's supply scope.	The surge arrestors are included in the Bidder's supply, installation and commissioning scope. The surge arrestors should comply with IEC 60071 and IEEE C62.11.

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		It is the responsibility of the Bidder to furnish all equipment necessary to meet the functional and performance requirements, whether or not explicitly mentioned in the Bidding Documents
8.	Please confirm the bushing type as either OIP or RIP as this was not addressed in the Bidding Documents.	Bidders shall propose a bushing type that complies with IEC 60137 and meets all technical and performance requirements. The proposed type is subject to approval of the Employer.
9.	With reference to Table D-4 in Part 2-A of the Scope Supply Specification, please confirm whether the 300% Overload-3s requirement applies, as it would significantly increase the voltage and number of IGBTs, resulting in a larger STATCOM. If confirmed, please clarify whether sufficient land will be allocated to accommodate the increased footprint.	Confirmed. The 300% Overload for 3 seconds requirement applies as specified in Table D-4. Bidders must ensure that their STATCOM design and STATCOM transformer accommodates this requirement within the portion of land available at the site.
10.	With reference to BDS, ITB-11.2 (Type Tests), which requires contact details (title, email, fax) of the certifying laboratory for tests conducted within the last five years, please confirm if tests conducted within the last 10 years are acceptable and if submission of only the title pages showing the manufacturer name, product name, and laboratory details is sufficient.	Accepted. The results of type tests shall have been conducted with in the last ten years prior to the date of tender submission. The bidder shall submit the entire report including contact details with its bid, not just a cover page.
11.	With regards to bid security, please confirm if the bid security issued must be from the Employer's country or if it can be from a bank in any other country.	The Bid Security may be issued either by a reputable bank from the Bidder's country or a non-bank financial institution from the Bidder's country with a local corresponding bank/financial institution.
12.	In reference to Section 3 Evaluation of Qualification Criteria, please confirm that for the manufacturing of the transformers, shunt reactors, STATCOM, circuit breakers, CT/VT and disconnectors, can 5 years of manufacturing experience be acceptable as opposed to the 10 years stated?	This is not acceptable.
13.	Regarding BDS, ITB-23.1 Submission of Bid, please confirm that the Bid needs to be submitted on a lot-wise basis.	As per BDS 1.1 and ITB 17.10, Bidders will each submit one Bid for either a single Lot or both Lots. Refer to Letter of Bid – Technical Part and Letter of Bid – Financial Part for further reference.

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14.	Regarding Part 2 B- Drawings, please confirm if the drawings should be provided in DWG format, if not please specify.	Drawings shall be provided in both PDF and editable AutoCAD DWG format.
15.	In reference to Section VII - Employer's Requirements, please consider experience at the 330kV level as applicable toward the required experience for 400kV when selecting the Contractor's Representative and Key Personnel.	The Employer reserves the right to assess the adequacy of the submitted personnel on a case-by-case basis.
16.	In relation to Line Item 3.8 in the BOQ for Suswa, please provide details for the MV cabling, conductors, circuit breakers, isolators, CT's, VT's, surge arrestors, etc.	The responsibility lies with the Bidder to propose, size, and specify the necessary components to ensure that the entire system meets the functional, operational, and safety requirements outlined in the Employer's Requirements. Its final design shall be subject to approval of the Employer.
17.	In reference to Line Item 3.1 & 3.7 in the BOQ for Suswa, please confirm if the auxiliary transformer should be considered with the STATCOM or separately as provided in Line Item 3.7.	The auxiliary transformer is to be considered separately, as provided under Line Item 3.7 of the BOQ. It should not be included as part of the STATCOM package under Line Item 3.1.
18.	With reference to Line Item 4.7 in the BOQ for Suswa, please clarify the auxiliary transformer rating.	The responsibility lies with the Bidder to propose, size, and specify the necessary components to ensure that the entire system meets the functional, operational, and safety requirements outlined in the Employer's Requirements. The auxiliary transformer rating shall be selected by the Bidder based on the detailed assessment of the STATCOM auxiliary load requirements. Its final design shall be subject to approval of the Employer.
19.	Request to conduct geotechnical soil investigation and topographical survey at the 400kV Converter Station at Suswa (Lot-1) and 220kV Substation at Rabai (Lot-2) given that the referenced reports dated 2011 and 2016 are old.	This is acceptable. Bidders may request access to the sites to conduct investigations by forwarding the request to the following email statcomstender@ketraco.co.ke and complying with the procedure outlined in item no. 38 below. However, the costs associated with these investigations shall be borne by the Bidder. It ultimately remains the responsibility of the Bidder during project implementation to identify the soil and rock types and profiles and other

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		matters that may influence the civil design and construction and their Bid Price shall take this into account.
20.	In reference Part 2-A_Scope_Supply_Specification, PART A3 Overview of the scope of works, please confirm that KETRACO holds the sole and final approval authority for the project or whether approval from other external regulatory agencies is also required.	The Bidder shall be responsible for ensuring compliance with all statutory and regulatory requirements and for facilitating the necessary submissions or inspections, as required by the laws and regulations in the Employers' country.
21.	In reference Part 2-A_Scope_Supply_Specification, PART A3 Overview of the scope of works, confirm that Bidders may refer solely to the latest KETRACO standards and RFB requirements for the proposal presentation.	Bidders shall base their proposal on the requirements outlined in the RFB/Bid documents.
22.	In reference Part 2-A_Scope_Supply_Specification, PART A3 Overview of the scope of works, please confirm if a conceptual approach in the technical proposal is acceptable at Bidding stage for managing unidentified underground utilities, including identification methods, risk assessment, relocation planning, coordination, and indicative contingency allowances.	This is at the Bidder's discretion. Refer to General Condition of Contract Clause 7 and 11.
23.	In reference Part 2-A_Scope_Supply_Specification, PART A3 Overview of the scope of works, please clarify the required level of detail for the work implementation plan at the bidding stage. Should bidders submit a preliminary methodology and general approach, or is a more detailed submission required, including initial scheduling, outage minimisation strategies, and coordination measures?	At the Bidding stage, Bidders are required to submit detailed preliminary plans as indicated in BDS ITB 11.2 outlining the general methodology and approach and their understanding of the project scope and constraints. However, during project negotiation and contract execution, the winning Bidder will submit final detailed implementation plans that will ensure compliance with the project scope and any identifiable constraints. These will be subject to review and approval by the Employer.
24.	Part 2-A_Scope_Supply_Specification, PART C 32.1 Software, please confirm the specific ETAP modules required for this Project.	See below the requirements for the Modules of each software and licences requirements: <u>A. ETAP Modules required:</u> 1. Transmission System Planning Module

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		<p>2. Transmission Protection Module</p> <p>3. Low voltage Electrical Design and Engineering Package</p> <p>Licences Requirements</p> <ol style="list-style-type: none"> 1. 2 numbers 2. Users- 5 concurrent users 3. Period: 5 year subscription including maintenance and support 4. Server based <p><u>B. Digsilent Modules Required</u></p> <ol style="list-style-type: none"> 1. Contingency Analysis 2. Quasi Dynamic Simulation 3. Network Reduction 4. Time Overcurrent Protection 5. Distance Protection 6. Power quality and Harmonic Analysis 7. Transmission Network Tools 8. Outage Planning 9. Techno Economical Analysis 10. Stability Analysis Function (RMS) 11. Electromagnetic Transients(EMT) 12. Small Signal Stability (Eigenvalue Analysis) 13. Scripting and Automation <p>Licences Requirements</p> <ol style="list-style-type: none"> 1. 2 numbers 2. Users- 2 concurrent users 3. Period: 5 year subscription including maintenance and support 4. Server based <p><u>C. PSSSE (version 36 and above, commercial edition) required Modules</u></p> <ol style="list-style-type: none"> 1. Base Module

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		<p>2. Short circuit Calculations</p> <p>3. Dynamic Simulation Control Section and Model Library</p> <p>4. Line properties Calculation</p> <p>5. Graphical Model Builder (GMB)</p> <p>6. Intel Visual Fortran Compiler for windows 10 and above</p> <p>7. E -TRAN Module</p> <p>Licences Requirements</p> <ol style="list-style-type: none"> 1. 2 numbers 2. Users- 2 concurrent users 3. Period: 5 year subscription including maintenance and support 4. Server based <p><u>D. PSCAD (version 5 professional edition) required Modules</u></p> <p>1. Base Module</p> <p>Licences Requirements</p> <ol style="list-style-type: none"> 1. 2 numbers 2. Users- 2 concurrent users 3. Period: 5 year subscription including maintenance and support 4. Server based
25.	Part 2-A_Scope_Supply_Specification, PART C 32.1 Software, please confirm if the software will be used for system design, review/validation, advanced studies or a combination thereof.	The software is for the Employer's internal use.
26.	Part 2-A_Scope_Supply_Specification, PART C 32.1 Software, please confirm the type of licenses that are expected either annual, perpetual or server based. Should the licenses be transferable or bound to specific users or machines?	See response in Item no. 24 on software requirements.

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27.	<p>Part 2-A_Scope_Supply_Specification, PART D 1.5.1 Information to be submitted with the Bid, please confirm if preliminary reports based on industry best practices and reference data are acceptable at Bidding stage, with detailed engineering studies for the STATCOM system to follow post-award.</p>	<p>The requirements in BDS ITB 11.2 (i) prevail.</p>
28.	<p>In reference PART 3 – Conditions of Contract and Contract Forms, Section IX. Particular Conditions of Contract (PCC), PCC No. 14 – Taxes & Duties, please confirm that the bidder is exempt from the following taxes and duties:</p> <ul style="list-style-type: none"> a) Custom & import duties, Value Added Taxes (VAT) on import from outside the Employer's country for all goods and services performed under this contract. b) Value Added Taxes (VAT), Withholding Tax (WHT) and Income Taxes for all goods and services inside domestic / local transactions. c) the exemption for Value added tax (VAT) will be provided for complete project including Main Contractors, Sub-contractors & Sub-Suppliers. 	<p>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.</p>
29.	<p>In relation to, PART 3 – Conditions of Contract and Contract Forms Section X – Contract Forms Contract Agreement, we request the employer to amend this clause and to read this clause as follows “3.1 The Effective Date from which the Time for Completion of the Facilities shall be counted is the date when all of the following conditions have been fulfilled.” a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor;</p>	<p>This is not accepted.</p>

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	<p>b) The Contractor has submitted to the Employer the Performance Security and the advance payment guarantee;</p> <p>c) The Employer has paid the Contractor the advance payment;</p> <p>d) The Contractor has been advised that the documentary credit referred to in Article 2.2 above has been issued in its favour; constitution of the DB.</p> <p>f) Legal Possession of the land/free site access to complete line corridor should be provided by the Employer.</p>	
30.	<p>In reference to PART 3 - Conditions of Contract and Contract Forms, Section X - Contract Forms, Appendix 1. Terms and Procedures of Payment, Sub clause for Schedule No. 1. Plant and Equipment Supplied from Abroad –the following changes are proposed to relate with our knowledge of multi-lateral funding projects</p> <p>a) Twenty percent (20%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favour of the Employer.</p> <p>b) Seventy percent (70%) of the total or pro rata CIP amount upon Incoterm “CIP”, upon delivery to the carrier.</p> <p>c) Five percent (5%) of the total or pro rata CIP amount upon issue of the Completion Certificate.</p> <p>d) Five percent (5%) of the total or pro rata CIP amount upon issue of the Operational Acceptance Certificate.</p>	This is not acceptable. The payment terms shall remain as specified in the Bidding Documents
31.	In reference to Clause PC 25.1.1, Section IX of Part 3 – Conditions of Contract and Contract Forms, please confirm and clarify as per our understanding whether the 0.5% deduction of the Contract price per week shall be applied on that balance part for which the Contractor fails to achieve Commissioning and this deduction will be made on the “final	Retention collectively refers to the 5% payable upon issuance of Completion and Operational Acceptance certificates respectively. Therefore 10% of each invoice will be withheld as retention and 5%

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	payable 5% amount against Operational Acceptance." Moreover, does the word retention used refer to the final 5% amount payable against operational acceptance?	released upon issuance of Completion certificate and remaining 5% upon issuance of the Operational Acceptance certificate. The 0.5% to be deducted upon failure to achieve commissioning is calculated on the entire Contract Price and deducted from the retention payable upon issuance of Operational Acceptance certificate.
32.	In reference to appendix 1 Terms and Procedures of Payment in Section X or Part 3 Conditions of Contract and Contract Forms, request to include the clause below: "To enable Pro rata/monthly invoice (Supply, design & Installation services) against the work done/progress, we propose to provide Billing breakup for each price schedule item after award of contract and invoicing will be submitted as per billing breakup complying to the payment procedures as per Appendix 1 Terms and Procedures Payment."	This is not acceptable. The payment terms and procedures shall remain as stated in the Bidding Documents.
33.	In relation to clause 25.5 Delayed Precommissioning and/or Guarantee Test, Section VIII of Part 3-Conditions of Contract and Contract Forms, request to amend the clause as follows: 25.5.3 In the event that the period of suspension under above Sub-Clause 25.5.1 actually exceeds Sixty (60) days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor".	This is not acceptable. The clause shall remain as stated in the Bidding Documents. Compensation or adjustments due to delays will be addressed in accordance with the applicable provisions of the Contract.
34.	In regard to Clause GCC 9.3 Contractor's Responsibilities, Section VIII of PART 3 - Conditions of Contract and Contract Forms, request to include the following clause in Section 9.3: "PC.9.3 – If the Contractor suffers delays and/or incurs additional costs against delays by authorities in obtaining the Contractor's required permits and the following conditions apply:	The proposed amendment is not accepted.

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	<p>(a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,</p> <p>(b) these authorities delay or disrupt the Contractor's work, and</p> <p>(c) the delay or disruption was Unforeseeable,</p> <p>Then, the Contractor shall be entitled to an extension in the Time for Completion, pursuant to GC Clause 40, and additional cost costs incurred shall be subject to Clause 45"</p>	
35.	<p>In relation to Clause 28, Section VIII, of PART 3 - Conditions of Contract and Contract Forms, request to include the following clause under the section:</p> <p>28.5 The aggregate cap of delay liquidated damages under Clause 26.2 and the Functional Guarantees liquidated damages under Clause 28.4 shall not exceed Ten (10%) of the Contract Price.</p>	This is not acceptable.
36.	<p>In relation to Clause PCC 46, Section IX of PART 3 - Conditions of Contract and Contract Forms, suggestion to change the dispute regulation mechanism to Neutral and reputable institutions and suggest for the following amendment:</p> <p>a) Applicable Arbitration rules: ICC Rules of arbitration or LCIA Rules of Arbitration.</p> <p>b) Seat & Place of arbitration shall be London – United Kingdom.</p>	<p>The applicable arbitration rules shall remain as defined in the Bidding Documents.</p> <p>Seat and Place shall be neutral and agreed upon during contract negotiations with the winning bidder.</p>
37.	<p>In relation to Appendix 1, Section X of PART 3 - Conditions of Contract and Contract Forms, request to change the cycle of payment to be reduced from 90 days to 45 days for:</p> <ul style="list-style-type: none"> Schedule No. 1. Plant and Equipment Supplied from Abroad, 	This is not acceptable. The 90-day payment cycle shall remain as specified in the Bidding Documents.

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	<ul style="list-style-type: none"> Schedule No. 2. Plant and Equipment Supplied from within the Employer's Country, Schedule No. 3. Design Services, Schedule No. 4. Installation Services 	
38.	<p>In relation to Clause 3.1 & 3.2, of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the following reference drawings of existing Suswa 400kV converter and Rabai 220/132kV converter, Lot-1 and Lot-2 respectively:</p> <p>Existing Substation Equipment layout drawing, earthing and Lightning layout drawing, lighting (illumination) layout drawing, layout Plan & Section drawing, Cable Trench Layout Drawings and Control building Equipment layout drawing.</p>	<p>The drawings listed below are provided with this clarification:</p> <ul style="list-style-type: none"> i) Existing Suswa Earthing Layout ii) Existing Suswa Lightning Protection iii) Existing Suswa Drainage Layout iv) Existing Rabai 220 kV Earthing Layout v) Existing Rabai 220 kV Lightning Protection vi) Existing Rabai 220 kV Drainage Layout <p>Refer to Attachment no. 1 for the drawings available.</p> <p>The drawings not provided will be given to the winning Bidder subject to availability.</p> <p>However, Bidders are encouraged to visit the respective sites to make their own assessments. Bidders who wish to visit the site(s) should send an official request to statcomstender@ketraco.co.ke providing the following information:</p> <ol style="list-style-type: none"> Proposed dates for visiting site(s) (at least one week prior to request). Details of activities to be undertaken. Details of the staff who will undertake the activities. Details of the authorized personnel to receive permits to carry out any work in case working in live area. Commitment to ensure staff visiting sites have Personal Protective Equipment.

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		<p>6. In case of tests, method statement/schedule indicating what tests will be done, how the tests will be done, location of the tests, duration of the tests, machinery etc.</p> <p>7. Commitment to restore the sites to their original condition after the tests.</p>
39.	In Clause General of Part 2-C_Schedules of Technical Information, please confirm that the insulation levels are altitude corrected for altitude for 2000m.a.s.l.	Insulation levels given in the Technical Schedules are given for standard conditions (up to 1000m). It is the Bidder's responsibility to ensure that all equipment meets the specified insulation requirements under the actual site conditions.
40.	In Clause 2.8 - 220kV Surge Arrestors of Part 2-C_Schedules of Technical Information, the rated voltage MOA should be 198kV for the 220kV surge arrester, please correct this in the reference clause and share the updated GTP as it states 360kV.	The Rated Voltage-MOA indicated in item 9 of Schedule 2.8 - 220kV Surge Arrestors in Part 2-C_Schedules of Technical Information is 198kV.
41.	In both Part 2-B_Bid_Drawings and 3.1 Suswa substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, mentions that "F. construct a new oil containment dam for Reactor 3" however, the layout drawing doesn't show this. Please provide an updated layout drawing.	The drawings provided are conceptual. The Bidder is responsible for the design and the location of the oil dam.
42.	In 3.1 Suswa substation works PART 2-A – EMPLOYER'S REQUIREMENTS, please provide existing Earthmat details (e.g. conductor size, riser size, grid spacing) to enable proper integration with the new Earthmat.	See response in Item no. 38 above.
43.	In relation to Clause: 1.7.9 Outdoor Lighting of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm if the outdoor lighting, dedicated spare feeders are already available in the existing lighting distribution board for the proposed lighting fixtures.	The Bidder shall implement a new outdoor lighting system according to the requirements in Clause 1.7.9 PART 2-A – EMPLOYER'S REQUIREMENTS
44.	In 3.1 Suswa substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide existing lightning protection drawings.	See response in Item no. 38 above.

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45.	In 3.1 Suswa substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the existing relay houses and buildings have sufficient space to install new panels.	Confirmed. Refer to Bid Document Part 2A, Part D Clause 19.5.1 that indicates where the panels need to be installed.
46.	In 3.1 Suswa substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that sufficient space is available in the existing cable trench to install our proposed cables.	It is the responsibility of the Bidder to confirm the adequacy of the existing trenches for their proposed cable layout. Bidders are encouraged to verify trench dimensions and routing during the site visit and to account for any necessary modifications or extensions in their technical and commercial Bids.
47.	In 3.2 Rabai substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the existing Earthmat details	See response in Item no. 38 above.
48.	In 3.2 Rabai substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the existing control building has sufficient space to install the proposed panels.	Yes there is space however the space is constrained. Refer to Bid Document Part 2A, Part D Clause 19.5.2 that indicates the panels requirements, numbers and where they need to be installed.
49.	In 3.2 Rabai substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that sufficient space is available in the existing cable trench to install our proposed cables.	The Bidder must make allowance for new cable trenches for both the 132 kV and 220 kV sides. Bidders are encouraged to verify trench dimensions and routing during the site visit and to account for any necessary modifications or extensions in their technical and commercial Bids.
50.	In 3.2 Rabai substation works of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the existing Lightning protection drawings.	See response in Item no. 38 above.
51.	With reference to Table D-36: 220kV current transformer key requirements of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm which burden rating should be considered: Technical Specification & GTP: CT burden is mentioned as 20 VA per core. Single Line Diagram (SLD): CT burden is indicated as 15 VA per core.	Burden rating indicated in Table D-36: 220kV current transformer key requirements in Part 2-A_Scope_Supply_Specification Specification (or PART 2-A – EMPLOYER'S REQUIREMENTS) is 15 VA per core. However, Bidder shall use the rating provided as a minimum and ensure that the current transformer (CT) meets the application requirements.

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52.	In reference to Table D-37: 132kV current transformer key requirements of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the Class Burden ratings for the remaining 2 Cores of the 132kV Current Transformer with 4 of the 6 being accounted for.	The 132 kV application require 4 core CTs.
53.	In reference to General-CVT, please provide 400kV CVT and 220kV CVT capacitance values.	This shall be as per Bidder's design. The Bidder (together with their proposed manufacturer(s) for the VT) shall select appropriate values for the capacitors. This will be subject to review and approval by the Employer during detailed design stage.
54.	In Table D-36: 220kV current transformer key requirements of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm if Bidder can use one core as a PQM metering core specifically for the 220kV Current Transformer as they are all shown as 5P20.	Confirmed, one metering class core shall be required for PQM function. The class of Core 4 given in item 10.10.2 of Schedule 2.7 – 220kV Current Transformer in Part 2-C_Schedules of Technical Information is 0.2S.
55.	In Clause 19.5.1.1.2 Protection Panels, section 19 Suswa substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the Bidder can propose protection panels from other manufacturers provided the proposed panels match the existing ones like Mechanical design, Colour, Dimensions, Labelling and Glass door style.	Yes, Bidders are required to provide similar look and design panels.
56.	In Clause 19.5.1.1.2 Protection Panels, section 19 Suswa Substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm whether relays must match the SIEMENS make, or if alternatives are acceptable.	The bidder may propose alternative relay makes to SIEMENS, however the relays proposed for this project must have been in successful operational use within the KETRACO network for at least five (5) years, or must have successfully undergone a proof of concept demonstrating seamless interoperability with the KETRACO existing protection, control, automation, telecommunications, and SCADA systems. Additionally, the proposed relays must be fully compliant with IEC standards, meet all detailed functional requirements outlined in the tender documents, and have a proven track record of reliability and performance.
57.	In Clause 19.5.1.7 AC and DC Supplies, section 19 Suswa substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the	There is sufficient space in the existing panel to accommodate the new schemes. Modifications will be required to accommodate the new

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	required spare MCB feeders are already available in the existing AC and DC distribution boards. Therefore, Bidder shall not consider any extension, or modification works in the LVAC panel, DCDB, Battery Charger, or Battery Bank under the current scope of works	circuits and existing spare MCBs used to accommodate the Bidder's design shall be replaced and installed.
58.	In clause 19.5.2.1.1 Bay Control and POW relays, section 19 Protection and Control for 220/132kV Rabai Substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the Bidder can propose control cubicle/mimic panels from other manufacturers provided the proposed panels match the existing ones (like Mechanical design, Colour, Dimensions, Labelling and Glass door style) Panel, except for the make of protection relays.	Yes, Bidders are only required to provide similar look and design panels.
59.	In Clause 19.5.2.1.4 AC and DC Supplies, Section 19 Protection and Control for 220/132kV Rabai Substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the required spare MCB feeders are already available in the existing AC and DC distribution boards. Therefore, bidder shall not consider any extension, or modification works in the LVAC panel, DCDB, Battery Charger, or Battery Bank under the current scope of works.	There is sufficient space in the existing panel to accommodate the new schemes. Modifications will be required to accommodate the new circuits and existing spare MCBs used to accommodate the Bidder's design shall be replaced and installed.
60.	In 2.5.4 Wastewater drainage of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that Wastewater drainage network is not required for Lot-1 and Lot-2 as there is no requirement of toilets in STATCOM Container/building.	Bidders to note that a wastewater drainage network is not required.
61.	In 2.2 Water supply system and storage at Rabai Substation of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm the general arrangement of water storage tank/type of tank (open/closed & underground or overhead).	The water storage facility shall be ground mounted and the water storage tank material shall be suitable for coastal areas.

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62.	In Clause 2.5.5 Stormwater drainage of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the existing drain network drawing and details for Lot-1 and Lot-2	See response in Item no. 38 above.
63.	<p>For the General – Drawings for 400kV Suswa Substation (Lot-1) and 220/132kV Rabai Substation (Lot-2), please provide the following details:</p> <ul style="list-style-type: none"> • Switchyard Fence – Detail drawings of existing fencing. • Drainage – drain network Layout and cross section detail drawings. • Internal and Access Road – Cross sectional details. • Tower, Gantry & Equipment structural GA drawings. • Tower & Equipment foundation drawings. • Equipment supports structure and foundation drawings. • Oil dam detailed drawing. • Storm water drainage layout. • Buried services details if any. 	See response in Item no. 38 above.
64.	<p>2.11– Fire Protection, STATCOM & Shunt Reactors of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the Lot-1 and Lo-2 Converter Substation is fully covered by a hydrant network, fire water pump house, fire water tank, and that there is no need to provide additional fire water tanks or pumps.</p> <p>Only hydrant pipe tapping is to be considered for 400kV and 220kV STATCOM area & 400kV and 132kV Shunt Reactors areas for the respective Lots.</p>	<p>The Busbar Reactors are not required to be covered by the existing hydrant network.</p> <p>See response in Item no. 66 below for fire protection requirements.</p>
65.	2.11– Fire Protection, STATCOM & Shunt Reactors Of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that that the existing fire water tank and pump capacities are sufficient to support the new tapping	The existing hydrant system will not be extended to cover the new STATCOM and Shunt Reactors.

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	from the existing hydrant pipeline, maintaining a pressure of 7 bar for the STATCOM area, Coupling Power Transformer area, and shunt reactors area. Moreover, please provide the existing fire hydrant layout for Lot-1 and Lot-2.	
66.	In 2.11– Fire Protection STATCOM of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm that the 400kV & 220kV STATCOM (120MVar) is protected with external hydrant coverage, portable fire extinguishers, and a fire detection system consisting of addressable smoke/heat detectors and manual call points and provide any details if any additional fire protection measures are required for the STATCOM	<p>The STATCOM MV yard does not require hydrant coverage.</p> <p>The STATCOM coupling transformer shall have an active and passive fire suppression system as documented in Clause 3.24– Fire Protection Power Transformer in Part 2-A_Scope_Supply_Specification (or PART 2-A – EMPLOYER'S REQUIREMENTS).</p> <p>The STATCOM valve housing shall be equipped with a fire detection system. This detection system shall automatically initiate shutdown of the unit in the event of a fire. In addition, the Contractor shall provide suitable active and passive fire suppression measures for the valve housing based on a detailed fire risk assessment of the building. The contractor shall consider the fire risk of the valve cooling liquid and provide suitable active fire suppression in the event of a fire. A suitable active fire suppression system for the valve housing is considered to be included in the Contractor's offer. The building shall comply with BS 9999:2017 – Fire safety in the design, management, and use of buildings code of practice.</p>
67.	In 3.24– Fire Protection Power Transformers of PART 2-A – EMPLOYER'S REQUIREMENTS, nitrogen injection is required for the coupling transformer protection, while existing units use a spray system. Please confirm if nitrogen injection is still the only acceptable protection for the new transformers.	Confirmed, only nitrogen suppression system is acceptable for new coupling transformer.
68.	In General Fire Protection of PART 2-A – EMPLOYER'S REQUIREMENTS, it is understood that shunt reactors will be protected by external hydrants and portable fire extinguishers, with no requirement for water spray or	The Shunt Reactors will be protected by portable fire extinguishers and fire trolleys. Fire protection measures must comply with applicable

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	nitrogen injection systems. Please confirm if this understanding is correct and specify any additional fire protection requirements, if applicable.	international fire protection standards and shall be subject to the Employer's review and approval during the detailed design stage.
69.	In General Fire Protection of PART 2-A – EMPLOYER'S REQUIREMENTS, please provide the details of the existing fire alarm system, including the type (addressable or conventional) and the make of the system for both 400kV Suswa Substation & 220/132kV Rabai Substation.	There are no requirements to integrate into an existing fire alarm system. A new fire alarm system is to be provided. Any new Fire Alarm system must be independent and will integrate into the existing SCADA.
70.	In General Fire Protection of PART 2-A – EMPLOYER'S REQUIREMENTS, please confirm if Bidder is required to supply a new fire alarm panel or integrate with the existing fire alarm panel at both 400kV Suswa Substation & 220/132kV Rabai Substation.	The Bidder shall provide a new fire alarm system for the STATCOM. The system must be fully functional, compliant with relevant fire protection standards, and subject to the Employer's approval during the detailed design stage.
71.	With respect to the bid security, is a bid security issued by RFIKI MICROFINANCE BANK acceptable?	Refer to ITB 20.3.
72.	With reference to the Bidding Documentation, are there any additional requirements or documentation required to ensure compliance with the bidding document requirements.	Question is not clear.
73.	In reference to page 27 & 236 of Part 2-C Shcdules of Technical information, would an off-load tap changer be acceptable for the 400kV transformer that meets the technical requirements of the STATCOM?	Off load tap changer is not acceptable. Bidder to comply to the requirements in the Schedule of Technical Information.
74.	In reference page 43-44 in Request for Bids Plans, request for the HVDC, generator control and FACTS device models to facilitate the proposed STATCOM study.	This is not available at this stage.
75.	In reference to "Low-speed pumps shall be used" in Part 2-A Scope Specification, 2.9, is a vertical multi-stage centrifugal pump suitable for the water pumps in the referenced specifications.	Provided it qualifies as a low-speed pump and is suitable for the intended application. Bidders are responsible for selecting equipment that meets all performance requirements specified in the Bidding Documents.
76.	In reference In Part 1-Section IV-Bidding Forms-Price Schedules_Rabai page 69 and section 2 Software and equipment to be procured for use by KETRACO in Part 2- A Scope Supply Specification, please confirm that the	This is confirmed.

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	price schedule prevails, and the software and equipment are not required for Lot 2.	
77.	Please provide the MLFB or ordering number for the existing breaker failure protection BCU 7VK87 in 400kV Suswa substation.	The MLFB/ordering number/order code details and other details for the existing breaker failure protection BCU 7VK87 in 400kV Suswa substation are as follows: Short code: P1D43041 Long Code: 7VK87-DAAA-AA0-0AAAAA0-AB0112-23111B-AAA000-000ACO-CB3BA1-CB1EB0-CG0CG0 Firmware and configuration version: V07.54
78.	Please provide the MLFB or ordering number for the existing breaker failure protection SEL-751A in 220kV Rabai substation.	The MLFB/ordering number/order code detail for the existing breaker failure protection SEL-751A in 220kV Rabai substation is: 751A51A1A0X0X811830
79.	Please provide the type and version information for the existing SAS in 400kV Suswa Substation.	The type and version information for the existing SAS in 400kV Suswa Substation is: SIMATIC WinCC V7.4 SP1
80.	Please clarify if the STATCOM needs to have a control threshold with 0 dead-zone.	Bidder to clarify which section of the specification is being referred to here.
81.	In reference 7.3.4 Main contacts/Page No.225 of Part 2-A_Scope_Supply_Specification, will a disconnect with switch blades made of aluminium and anodized on the aluminium surface, which has a good anti-corrosion function meet the requirements?	Aluminium switch blades, even if anodized, are not acceptable.
82.	In reference Table D-5: 220kV STATCOM Requirements/Page No.124 of Part 2-A_Scope_Supply_Specification, please clarify if the overload requirement follows current overload or reactive power capacity overload and if considering reactive power capacity, does it follow the rated voltage or how many times the overvoltage is considered.	The overload requirement specified in Table D-5 refers to reactive current rating for both leading and lagging.
83.	Please provide the Manufacturer details and technical specifications of the existing equipment at Rabai Substation, particularly components interfacing with the expansion (e.g., circuit breakers, transformers, protection systems, busbars, and switchgear).	This will not be provided.

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84.	Please provide the interface parameters (voltage, current ratings, communication protocols, etc.) for equipment connected to the STATCOM and shunt installation areas.	The information requested has been provided in the Bid document.
85.	Please provide the details of equipment to be removed for the 132kV expansion, including Manufacturer names, model numbers and technical specifications (e.g., ratings, installation date, operational status).	This will not be provided.
86.	With reference to the bid security to be provided by the bank is two weeks, like February 5, 2026, more than the tender requirements acceptable.	This question is not clear.
87.	Regarding Technical Requirement-7 (Disconnectors and Earth Switches), IEC 62271-102 specifies a lower charging current than the 50 A specified in the document. Please confirm if 50 A is required under actual operating conditions.	Bidders to ensure that the rated capacitive and inductive switching capacity of the disconnectors and earth switches complies with the minimum requirements of IEC62271:2018 as well as the expected site operating conditions.

