



REF: KE-CWSB-232660-CW-RFB (34)

DATE: 17<sup>th</sup> September, 2021

TO: ALL BIDDERS,

**RE: CLARIFICATION-CONSTRUCTION WORKS FOR THE SECOND BARICHO – KAKUYUNI WATER SUPPLY PROJECT- LOT 1: SECOND BARICHO – KAKUYUNI PIPELINE**  
**CONTRACT NO: KE-CWSB-232660-CW-RFB**  
**Clarification No. 4**

The above subject matter refers.

Please find attached herewith clarifications addressing issues raised by some bidders.

Yours,

**MARTIN TSUMA**  
**Aq. CHIEF EXECUTIVE OFFICER.**



**CLARIFICATION NO.4: CONSTRUCTION WORKS FOR THE SECOND BARICHO-KAKUYUNI WATER SUPPLY PROJECT-LOT 1-SECOND BARICHO KAKUYUNI PIPELINE**

**CONTRACT NO.:KE-CWSB-232600-CW-RFB**

S/No.	Enquiry from Bidders	Response from the Client
1.	Is our company from Iran country will be generally eligible to participate in this Bidding process according to World bank rules?	The bidding will be conducted through the National Competitive Bidding procedures as specified in the World Bank's Guidelines: Procurement of Goods, Works and Non-Consulting Services Under IBRD Loans and IDA Credits and Grants by World Bank Borrowers. The Bidding is open to all eligible bidders as defined in the Procurement guidelines.
2.	For 26Km of water transmission pipe lines, we don't see any water hammer facilities like chambers, etc.? if water hammer analysis done and prove that there is no need for such equipment please clarify, otherwise please add them to BOQ (bill of quality).	Refer to the advert, item 3. Water hammer analysis was done during designs. Bladder type surge vessels have been provided to take care of the water hammer under Bill 4 item 1.10.
3.	In the pipe line profile, the ground level rise from 103.42 to 122.38 so there is about 20meters elevation height but in pump type we see $Q=700m^3/h$ , $H=100m$ pump specification. What is the base concept of 100m head selection for 20meters height difference?	Further, along the pipeline suitably located air valves have been provided for under Bill 2 item J86. The pumps shall be $Q=820m^3/hr$ , $H=70m$ . The pumping head of 70m is a combination of static head, frictional losses along the pipeline and station fitting losses.
4.	Profile sheet in page 5 of same document (VOL3) mentioned as DN 800mm. What is the right diameter?	The proposed pipeline will be a DN 800mm PN 16.
5.	What is the type of steel pipe: welded or seamless steel pipe? This Determine the maximum size of pipe diameter because very few steel companies can make pipe diameter larger than 28" (700mm) seamless steel pipe.	The pipes will be spiral welded; and will be push fit (socket/spigot), epoxy lined (inside), epoxy coated with polyethylene wrapping (outside). Further the pipeline joints will be wrapped with Denso-tape.
6.	The major and vital pipe lines have an access road along them for future maintenance and repairs. Are	The pipeline will be laid along an existing road reserve and way leave. There is adequate working space along the pipeline route.

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	such roads provided in the project? Even though for construction of the pipe lines and transfer large and heavy segment of steel pipes we need such access roads. What is the specification of such roads and BOQ?	
7.	Where is the location (UTM) of Kilifi and Ganda tanks as mentioned in the documents? What is the relation between them and Kakyuni reservoir?	The Kilifi and Ganda tanks are not part of the current works and therefore their location is not required for the preparation of this bid.
8.	As you see in plan map about 60% of pipe line cross forests and protected area like Arabuko Sokoke forest. This will damage natural resources. Is there any Environmental evaluation assessment (EIA) for this project? So, what is the legal construction restrictions for contractor to work in forest and cut trees?	An ESIA for the project has been prepared and all pertinent issues have been addressed. During the work execution, minimal tree cutting is expected.  Note that though a section of the pipeline seems to traverse across the Arabuko Sokoke forest, the pipeline will be laid along the road reserve which is on the edge of the forest. As such only normal bush clearing for the pipeline route is expected.
9.	As in google earth indicated the pipe line crossed rivers or some ponds or shallow water like point around (x=601785, y=9646555). For such crossings what is the proposed facilities? What about BOQ?	The pipeline will be buried except for the starting section at the Baricho water works where the pipeline will be supported on mini piles for a short distance of about 30m. This will be covered under the Bill 2 item K61
10.	Where is the nearest factory to provide materials like cement factory, steel pipe production factory, water pump factory, etc.?	The mentioned location is on a depression but the pipeline will be buried.  The source of construction material will be the responsibility of the Contractor but subject to prior approval by the Engineer.  The Construction materials shall meet the technical specifications to guarantee quality of the works.
11.	Is there any formal vendor list of company or trademarks to purchase materials and equipment? Can we provide our materials like electro pumps from Iran, like pumpriar company?	Please refer to the specifications on the requirements of the materials and equipment. As per ITB 5.1 and BDS 11.1(h) of the bidding documents, bidders should provide evidence of the origin of materials, equipment and services
12.	Please, clarify the number of crossings of our transmission pipe lines with Rural roads, Bituminous	For the crossing of other services like communication lines, cables, water lines etc., the Contractor with guidance of the

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	roads, Gas lines, Communication lines, underground facility? What is the drawing maps and Bill of Quantity for them?	supervising engineer will work with the respective authorities during work execution to mark out the location of such lines. For road crossings, three road crossings (micro tunnelling) totalling to about 30m (Bill 2 Item K692) are expected. For other related works and payments to the relevant authority Bill 1 item 1A279.1 will be applicable.
13.	In page 32 of VOL3 document in the pump station plan mentioned in the inlet and outlet pipes to MCA Malindi, what are these location? In page 31 VOL3, the pump drawings we see more than 3 pumps mentioned BOQ (in BILL 4 – PUMP STATION mentioned that 3 pump units required (2 duty, 1 standby), what is the right number of pumps?	The pumps to be installed are 3No. (2No. duty + 1No. standby). The proposed location of the 3No. pumps is indicated in a different shade in the layout drawing labelled as available base plinth. The drawing has captured both the existing and proposed pumps.
14.	How far the nearest power line from pump station? What is about power transfer costs to main transformer at pump station location?	There is power at the pump station serving the existing pumps. Bidders are expected to quote for power supply as per Bill 4 items 2.0 – 5.0.
15.	Is there any geological or Geotechnical survey and study for pipeline path? What is the major type of earth for excavation: rocks, soil mud? What is the percentage? Is there any rock and soil classification for path line? What is the type of rock and soil under the reservoir? Is there need for Blast for excavation?	The pipeline route mainly comprises of normal soil. Where rock excavation is encountered, this has been provided for in the BoQ – Bill 2 item L111. For large structure like the RC storage tank. The BoQ has provided for confirmatory geotechnical investigations under Bill 1 item 1A42.5
16.	Contractor will need more geotechnical, soil, material and concrete standard tests to ensure good material qualification. Please clarify the responsibility to paying of these lab costs	All the material tests and confirmatory geotechnical investigations shall be Contractor's responsibility under Bill 1 items 1A250.1 and 1A42.5.
17.	What is the general depth of the Bedrock under pipe line path? What is the general underground water surface via pipe line path?	Rock quantities to be excavated are provided for in the BoQ.

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18.	<p>The conveyance structures usually have access road. In this project, although in the route pipe is located about 1.2 meters below the natural ground level, but there is necessity to access the pipe line in emergency or for maintenance and repairs. Are such roads provided in the project? Even though for construction of the pipe lines and transfer large and heavy segment of steel pipes we need such access roads. What is the specification of such roads and BOQ?</p>	<p>Refer to the response No. 6 above</p>
19.	<p>As you see in plan about 60% of pipe line cross forest and protected area like Arabuko Sokoke Forest. This will damage natural resources. is there any environmental evaluation (EIA) for the project? So, what is the legal or construction restrictions for the contractor to work in forest and cut trees?</p>	<p>Refer to the response No. 8 above</p>
20.	<p>It is obvious that there are many crossings for pipe and some pond, shallow water, natural channels etc., for instance (X=601785, Y=9646555). There is not any detail for these crossing. For such crossings what is the proposed facilities? What about BOQ?</p>	<p>Refer to the response No. 9 above</p>
21.	<p>Is there any factory close to the project to provide materials like cement factory, steel pipe production factory, pump factory, etc.?</p>	<p>Refer to the response No. 10 above</p>
22.	<p>As shown in the maps there is no any crossing with rural roads, bituminous roads, Gas lines, communication lines, etc. if there is any, what is the detail of the cross sections?</p>	<p>Refer to the response No. 12 above</p>
23.	<p>How far the nearest power line from pump station? what is about power transfer cost to main transformer at pump station location? Is this considered in the BOQ?</p>	<p>See above response No. 14</p>

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<b>S/No.</b>	<b>Enquiry from Bidders</b>	<b>Response from the Client</b>
24.	Is there any geological and geotechnical survey and study for pipe line path? what is the major type of excavation: rocks, soil Mud? What's the Percentage? Is there any rock and soil classification for path line? What is the type of soil and rock under reservoir? is there need Blast for excavation?	Refer to the response No. 15 above
25.	Is the 2 MVA transformer rated at 33/0.433 kV as per B.O.Q. or 3.3/0.433kV as per the specifications?	The transformer is rated at 33kV/0.433kV
26.	Which HV switchboard will the transformer be connected to? Are there spare HV circuit breakers available to connect to?	There is existing spare HV switchgear on some the unused transformers which will be used on this project.
27.	There is no mention of the AVR in the B.O.Q. but it is included in the specifications. Similarly, there are no cable measurements included for the AVR.	The AVR have now been included in the BOQ
28.	There is no mention in the Main Switchboard description of circuit breakers to connect to the AVR.	The breakers for connection of the AVR have been included in the BOQ
29.	Would it not be better to install transformer with OLTC (On load Tap changer) as per the existing installation rather than AVR?	Baricho pumping station has been experiencing problems with voltage variations and the client would want to deal with this issue within the installation but is also taking up the same with the utility firm –KPLC Ltd. The onload tap changers have not been effective in dealing with the voltage variations.
30.	What is the size (mm <sup>2</sup> ) of the 33 or 3.3 kV HV cabling and what length should be allowed for? Nothing is measured in B.O.Q.	We are not dealing with 3.3kV but on 33kV which the quantities are given
31.	Where is the SCADA computer to be located? What is required in terms of computer for SCADA system?	The SCADA computer is to be located in the pump station manager's office where a similar system for the boreholes is located. We expect the contractor to provide a system which can be integrated with the existing one and to give all the required parameters and also remote control of the system.
32.	Item 5.2 in B.O.Q. <i>Provide for the high and medium voltage reorganization and associate works</i> What does this mean and involve? There are no drawings or specification for these works.	This means that some existing systems/equipment can be reused for this project and will need to be reorganized and some to be decommissioned.

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33.	There are no instruments specified or measured in the B.O.Q. i.e. pressure switches, float switches – can we assume this shall be included in other rates or shall a supplementary list be provided.	These items are mentioned in the bills of quantities but the contractor is expected to make provisions for incorporating them in their works such that the system works properly to the engineer's satisfaction
34.	There are no control or instrumentation cables measured in the B.O.Q.	Those items will come complete with the works and that's why it was important to take the contractors for the site visit to appreciate the details required.

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