



# **NYERI WATER & SEWERAGE COMPANY LIMITED**

## **WATER METERS SCHEDULE 1 (A), (B), (C) & (D) TENDER REF NO: NWSC/OT/03/2019/2020**

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**2019/2020**



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**SECTION I      INVITATION TO TENDER**  
**DATE: 12<sup>th</sup> April 2019**

**TENDER REF NO:      NWSC/OT/03/2019/2020**

**TENDER NAME : WATER METERS SCHEDULE 1 (A), (B), (C) & (D)**

- 1.1 The Nyeri Water and Sewerage Company Limited (NYEWASCO) invites sealed bids from interested eligible bidders for WATER METERS SCHEDULE 1 (A), (B), (C) & (D)
- 1.2 Interested eligible bidders may obtain tender documents by downloading from the company's website [www.nyewasco.co.ke](http://www.nyewasco.co.ke). Applicants who download the tender and registration of suppliers' document shall email their names, contacts details and tender number to [info@nyewasco.co.ke](mailto:info@nyewasco.co.ke)
- 1.3 Completed tender documents should be serialized and be enclosed in plain sealed envelopes marked with tender reference number and be deposited in the Tender Box located at the MAIN OFFICE Reception situated off Kenyatta Off Road Nyeri Town, P. O. Box 1520-10100 NYERI or be addressed to The **Managing Director Nyeri Water and Sewerage Co. Ltd. P. O. Box 1520-10100 Nyeri** so as to be received on or before **29th April, 2019 at 11.00am**
- 1.4 Prices quoted should be inclusive of all taxes and delivery must be in Kenya Shillings and shall remain valid for **90 days** from the closing date of the tender.
- 1.5 Tenders will be opened immediately thereafter in the presence of the Candidates or their representatives who choose to attend at our main office situated Off Kenyatta Road, Behind Nyeri County Fire Offices, P. O. Box 1520-10100 NYERI at our Company Conference Hall.

**FOR MANAGING DIRECTOR  
NYERI WATER AND SEWERAGE COMPANY LIMITED**

**SECTION II - INSTRUCTIONS TO TENDERERS**

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## **SECTION II - INSTRUCTIONS TO TENDERERS**

### **2.1 Eligible Tenderers**

- 2.1.1 This Invitation for Tenders is open to all tenderers eligible as described in the Invitation to Tender. Successful tenderers shall complete the supply of goods by the intended completion date specified in the Schedule of Requirements Section VI.
- 2.1.2 The procuring entity's employees, committee members, board members and their relatives (spouse and children) are not eligible to participate in the tender.
- 2.1.3 Tenderers shall provide the qualification information statement that the tenderer (including all members of a joint venture and subcontractors) is not associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring entity to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods under this Invitation for tenders.
- 2.1.4 Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices.

### **2.2 Eligible Goods**

- 2.2.1 All goods to be supplied under the contract shall have their origin in eligible source countries.
- 2.2.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially-recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 2.2.3 The origin of goods is distinct from the nationality of the tenderer.

## **2.3 Cost of Tendering**

- 2.3.1 The Tenderer shall bear all costs associated with the preparation and submission of its tender, and the procuring entity, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 2.3.2 All firms found capable of performing the contract satisfactorily in accordance to the set registration criteria shall be registered.

## **2.4. The Tender Document**

- 2.4.1 The tender document comprises the documents listed below and **addenda** issued in accordance with clause 2.6 of these instructions to Tenderers
- (i) Invitation to Tender
  - (ii) Instructions to tenderers
  - (iii) General Conditions of Contract
  - (iv) Special Conditions of Contract
  - (v) Schedule of requirements
  - (vi) Technical Specifications
  - (vii) Tender Form and Price Schedules
  - (viii) Contract Form (Issued if awarded the tender)
  - (ix) Bank Guarantee for Advance Payment Form
  - (x) Confidential Business Questionnaire
- 2.4.2 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the tender documents. Failure to furnish all information required by the tender documents or to submit a tender not substantially responsive to the tender documents in every respect will be at the tenderers risk and may result in the rejection of its tender.

## **2.5 Clarification of Documents**

- 2.5.1 A prospective tenderer requiring any clarification of the tender document may notify the Procuring entity in writing or by post at the entity's address indicated in the Invitation to Tender. The Procuring entity will respond in writing to any request for clarification of the tender documents, which it receives not later than seven (7) days prior to the deadline for the submission of tenders, prescribed by the procuring entity. Written copies of the Procuring entities response (including an explanation of the query but

without identifying the source of inquiry) will be sent to all prospective tenderers that have received the tender document.

- 2.5.2 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.

## **2.6 Amendment of Documents**

- 2.6.1 At any time prior to the deadline for submission of tenders, the Procuring entity, for any reason, whether at its own initiative or in response to a clarification requested by a prospective tenderer, may modify the tender documents by amendment.
- 2.6.2 All prospective candidates that have received the tender documents will be notified of the amendment in writing or by post and will be binding on them.
- 2.6.3 In order to allow prospective tenderers reasonable time in which to take the amendment into account in preparing their tenders, the Procuring entity, at its discretion, may extend the deadline for the submission of tenders.

## **2.7 Language of Tender**

- 2.7.1 The tender prepared by the tenderer, as well as all correspondence and documents relating to the tender exchange by the tenderer and the Procuring entity, shall be written in English language, provided that any printed literature furnished by the tenderer may be written in another language provided they are accompanied by an accurate English translation of the relevant passages in which case, for purposes of interpretation of the tender, the English translation shall govern.

## **2.8 Documents Comprising of Tender**

- 2.8.1 The tender prepared by the tenderers shall comprise the following components
- (a) a Tender Form and a Price Schedule completed in accordance with paragraph 2.9, 2.10 and 2.11 below
  - (b) documentary evidence established in accordance with paragraph 2.1.2 that the tenderer is eligible to tender and is qualified to perform the contract if its tender is accepted;

- (c) documentary evidence established in accordance with paragraph 2.2.1 that the goods and ancillary services to be supplied by the tenderer are eligible goods and services and conform to the tender documents; and
- (d) tender security furnished in accordance with paragraph 2.14

## **2.9 Tender Forms**

2.9.1 The tenderer shall complete the Tender Form and the appropriate Price Schedule furnished in the tender documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

## **2.10 Tender Prices**

2.10.1 The tenderer shall indicate on the appropriate Price Schedule the unit prices and total tender price of the goods it proposes to supply under the contract.

2.10.2 Prices indicated on the Price Schedule shall include all costs including taxes, insurances and delivery to the premises of the procuring entity.

2.10.3 Prices quoted by the tender shall be fixed during the Tender's performance of the contract and not subject to variation on any account. A tender submitted with an adjustable price quotation will be treated as non-responsive and will be rejected, pursuant to paragraph 2.22.

2.10.4 The validity period of the tender shall be 90 days from the date of opening of the tender.

2.10.5 All Tenderers should fill their Tender prices in permanent ink and NOT pencil.

## **2.11 Tender Currencies**

2.11.1 Prices shall be quoted in Kenya Shillings unless otherwise specified in the Appendix to Instructions to Tenderers.

## **2.12 Tenderers Eligibility and Qualifications**

2.12.1 Pursuant to paragraph 2.1 the tenderer shall furnish, as part of its tender, documents establishing the tenderers eligibility to tender and



its qualifications to perform the contract if its tender is accepted.

2.12.2 The documentary evidence of the tenderers eligibility to tender shall establish to the Procuring entity's satisfaction that the tenderer, at the time of submission of its tender, is from an eligible source country as defined under paragraph 2.1.

2.12.3 The documentary evidence of the tenderers qualifications to perform the contract if its tender is accepted shall be established to the Procuring entity's satisfaction;

- (a) that, in the case of a tenderer offering to supply goods under the contract which the tenderer did not manufacture or otherwise produce, the tenderer has been duly authorized by the goods' Manufacturer or producer to supply the goods.
- (b) that the tenderer has the financial, technical, and production capability necessary to perform the contract;
- (c) that, in the case of a tenderer not doing business within Kenya, the tenderer is or will be (if awarded the contract) represented by an Agent in Kenya equipped, and able to carry out the Tenderer's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications.

## **2.13 Goods Eligibility and Conformity to Tender Documents**

2.13.1 Pursuant to paragraph 2.2 of this section, the tenderer shall furnish, as part of its tender, documents establishing the eligibility and conformity to the tender documents of all goods which the tenderer proposes to supply under the contract.

2.13.2 The documentary evidence of the eligibility of the goods shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment.

2.13.3 The documentary evidence of conformity of the goods to the tender documents may be in the form of literature, drawings, and data, and shall consist of:

- (a) a detailed description of the essential technical and performance characteristic of the goods;

- (b) a list giving full particulars, including available source and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period of two (2) years, following commencement of the use of the goods by the Procuring entity; and
- (c) a clause-by-clause commentary on the Procuring entity's Technical Specifications demonstrating substantial responsiveness of the goods and service to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.

2.13.4 For purposes of the documentary evidence to be furnished pursuant to paragraph 2.13.3(c) above, the tenderer shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procurement entity in its Technical Specifications, are intended to be descriptive only and not restrictive. The tenderer may substitute alternative standards, brand names, and/or catalogue numbers in its tender, provided that it demonstrates to the Procurement entity's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

## **2.14 Tender Security (Kindly Ignore)**

- 2.14.1 The tenderer shall furnish, as part of its tender, a tender security for the amount specified in the Appendix to Invitation to Tenderers.
- 2.14.2 The tender security shall be in the amount of 0.5 – 2 per cent of the tender price.
- 2.14.3 The tender security is required to protect the Procuring entity against the risk of Tenderer's conduct which would warrant the security's forfeiture, pursuant to paragraph 2.14.7
- 2.14.4 The tender security shall be denominated in Kenya Shillings or in another freely convertible currency, and shall be in the form of a bank guarantee or a bank draft issued by a reputable bank located in Kenya or abroad, or a guarantee issued by a reputable insurance company in the form provided in the tender documents or another form acceptable to the Procuring entity and valid for thirty (30) days beyond the validity of the tender.

- 2.14.5 Any tender not secured in accordance with paragraph 2.14.1 and 2.14.3 will be rejected by the Procuring entity as non responsive, pursuant to paragraph 2.22
- 2.14.6 Unsuccessful Tenderer's tender security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of tender validity prescribed by the Procuring entity.
- 2.14.7 The successful Tenderer's tender security will be discharged upon the tenderer signing the contract, pursuant to paragraph 2.27 and furnishing the performance security, pursuant to paragraph 2.28
- 2.14.8 The tender security may be forfeited:
- (a) if a tenderer withdraws its tender during the period of tender validity specified by the procuring entity on the Tender Form; or
  - (b) in the case of a successful tenderer, if the tenderer fails:
    - (i) to sign the contract in accordance with paragraph 2.27; or
    - (ii) to furnish performance security in accordance with paragraph 2.28

## **2.15 Validity of Tenders**

- 2.15.1 Tenders shall remain valid for 90 days or as specified in the Invitation to Tender after the date of tender opening prescribed by the Procuring entity, pursuant to paragraph 2.18. A tender valid for a shorter period shall be rejected by the Procuring entity as non responsive.
- 2.15.2 In exceptional circumstances, the Procuring entity may solicit the Tenderer's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The tender security provided under paragraph 2.14 shall also be suitably extended. A tenderer may refuse the request without forfeiting its tender security. A tenderer granting the request will not be required nor permitted to modify its tender.

## **2.16 Format and Signing of Tender**

- 2.16.1 The Procuring entity shall prepare two copies of the tender, clearly marking each "ORIGINAL TENDER" and "COPY OF TENDER," as appropriate. In the event of any discrepancy between them, the original shall govern.

2.16.2 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by the tenderer or a person or persons duly authorized to bind the tenderer to the contract. The latter authorization shall be indicated by written power-of-attorney accompanying the tender. All pages of the tender, except for amended printed literature, shall be initialed by the person or persons signing the tender.

2.16.3 The tender shall have no interlineations, erasures, or overwriting except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person or persons signing the tender.

## **2.17 Sealing and Marking of Tenders**

2.17.1 The Tenderer shall seal the original and each copy of the tender in separate envelopes, duly marking the envelopes as “ORIGINAL” and “COPY.” The envelopes shall then be sealed in an outer envelope.

2.17.2 The inner and outer envelopes shall:

- (a) be addressed to the Procuring entity at the address given in the Invitation to Tender;
- (b) bear, tender number and name in the Invitation for Tenders and the words, DO NOT OPEN BEFORE,” **29th April, 2019 at 11.00a.m.**

2.17.3 The inner envelopes shall also indicate the name and address of the tenderer to enable the tender to be returned unopened in case it is declared “late”.

2.17.4 If the outer envelope is not sealed and marked as required by paragraph 2.17.2, the Procuring entity will assume no responsibility for the tender’s misplacement or premature opening.

## **2.18 Deadline for Submission of Tenders**

2.18.1 Tenders must be received by the Procuring entity at the address specified under paragraph 2.17.2 no later than **29th April, 2019 at 11.00am**

2.18.2 The Procuring entity may, at its discretion, extend this deadline for the submission of tenders by amending the tender documents in accordance with paragraph 2.6, in which case all rights and obligations of the Procuring

entity and candidates previously subject to the deadline will therefore be subject to the deadline as extended.

## **2.19 Modification and Withdrawal of Tenders**

2.19.1 The tenderer may modify or withdraw its tender after the tender's submission, provided that written notice of the modification, including substitution or withdrawal of the tenders, is received by the Procuring entity prior to the deadline prescribed for submission of tenders.

2.19.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of paragraph 2.17. A withdrawal notice may also be sent by email ([info@nyewasco.co.ke](mailto:info@nyewasco.co.ke) or, telex but followed by a signed confirmation copy, postmarked not later than the deadline for submission of tenders.

2.19.3 No tender may be modified after the deadline for submission of tenders.

2.19.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the expiration of the period of tender validity specified by the tenderer on the Tender Form. Withdrawal of a tender during this interval may result in the Tenderer's forfeiture of its tender security, pursuant to paragraph 2.14.7

2.19.5 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

2.19.6 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

## **2.20 Opening of Tenders**

2.20.1 The Procuring entity will open all tenders in the presence of tenderers' representatives who choose to attend, on **29th April, 2019 at 11.00a.m** and in the location specified in the Invitation to Tender at the Company's Conference Hall.

The tenderers' representatives who are present shall sign a register evidencing their attendance.

2.20.2 The tenderers' names, tender modifications or withdrawals, tender prices, discounts and the presence or absence of requisite tender security and such other details as the Procuring entity, at its discretion, may consider appropriate, will be announced at the opening.

2.20.3 The Procuring entity will prepare minutes of the tender opening.

## **2.21 Clarification of Tenders**

2.21.1 To assist in the examination, evaluation and comparison of tenders the Procuring entity may, at its discretion, ask the tenderer for a clarification of its tender. The request for clarification and the response shall be in writing, and no change in the prices or substance of the tender shall be sought, offered, or permitted.

2.21.2 Any effort by the tenderer to influence the Procuring entity in the Procuring entity's tender evaluation, tender comparison or contract award decisions may result in the rejection of the tenderers' tender.

## **2.22 Preliminary Examination**

2.22.1 The Procuring entity will examine the tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the tenders are generally in order.

2.22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the candidate does not accept the correction of the errors, its tender will be rejected, and its tender security forfeited. If there is a discrepancy between words and figures the amount in words will prevail.

2.22.3 The Procuring entity may waive any minor informality or non-conformity or irregularity in a tender which does not constitute a material deviation,

provided such waiver does not prejudice or affect the relative ranking of any tenderer.

2.22.4 Prior to the detailed evaluation, pursuant to paragraph 2.23 the Procuring entity will determine the substantial responsiveness of each tender to the tender documents. For purposes of these paragraphs, a substantially responsive tender is one, which conforms to all the terms and conditions of the tender documents without material deviations. The Procuring entity's determination of a tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.

2.22.5 If a tender is not substantially responsive, it will be rejected by the Procuring entity and may not subsequently be made responsive by the tenderer by correction of the non-conformity.

## **2.23 Conversion to Single Currency**

2.23.1 Where other currencies are used, the procuring entity will convert these currencies to Kenya Shillings using the selling exchange rate on the date of tender closing provided by the Central Bank of Kenya.

## **2.24 Evaluation and Comparison of Tenders**

2.24.1 The Procuring entity will evaluate and compare the tenders which have been determined to be substantially responsive, pursuant to paragraph 2.22

2.24.2 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

2.24.3 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

## **2.25 Preference**

2.25.1 Preference where allowed in the evaluation of tenders shall not exceed 15%.

## **2.26 Contacting the Procuring entity**

2.26.1 Subject to paragraph 2.21 no tenderer shall contact the Procuring entity on any matter related to its tender, from the time of the tender opening to the time the contract is awarded.

2.26.2 Any effort by a tenderer to influence the Procuring entity in its decisions on tender, evaluation, tender comparison, or contract award may result in the rejection of the Tenderer's tender.

## **2.27 Award of Contract**

### **(a) Post-qualification**

2.27.1 In the absence of pre-qualification, the Procuring entity will determine to its satisfaction whether the tenderer that is selected as having submitted the lowest evaluated responsive tender is qualified to perform the contract satisfactorily.

2.27.2 The determination will take into account the tenderer's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the tenderer's qualifications submitted by the tenderer, pursuant to paragraph 2.12.3 as well as such other information as the Procuring entity deems necessary and appropriate.

2.27.3 An affirmative determination will be a prerequisite for award of the contract to the tenderer. A negative determination will result in rejection of the Tenderer's tender, in which event the Procuring entity will proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.

### **(b) Award Criteria**

2.27.4 The Procuring entity will award the contract to the successful tenderer(s) whose tender has been determined to be substantially responsive and has been determined to be the lowest evaluated tender, provided further that the tenderer is determined to be qualified to perform the contract satisfactorily.

### **(c) Procuring entity's Right to Vary quantities**

2.27.5 The Procuring entity reserves the right at the time of contract award to increase or decrease the quantity of goods originally specified in the



Schedule of requirements without any change in unit price or other terms and conditions.

**(c) Procuring Entity's Right To Accept Or Reject Any Or All Tenders**

2.27.6 The Procuring entity reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the Procuring entity's action.

**2.28 Notification of Award**

2.28.1 Prior to the expiration of the period of tender validity, the Procuring entity will notify the successful tenderer in writing that its tender has been accepted.

2.28.2 The notification of award will constitute the formation of the Contract but will have to wait until the contract is finally signed by both parties.

2.28.3 Upon the successful Tenderer's furnishing of the performance security pursuant to paragraph 2.28, the Procuring entity will promptly notify each unsuccessful Tenderer and will discharge its tender security, pursuant to paragraph 2.14

**2.29 Signing of Contract**

2.29.1 At the same time as the Procuring entity notifies the successful tenderer that its tender has been accepted, the Procuring entity will send the tenderer the Contract Form provided in the tender documents, incorporating all agreements between the parties.

2.29.2 The parties to the contract shall have it signed within 14 days from the date of notification of contract award unless there is an administrative review request.

2.29.3 Within thirty (30) days of receipt of the Contract Form, the successful tenderer shall sign and date the contract and return it to the Procuring entity.

## **2.30 Performance Security**

2.30.1 Within Fourteen (14) days of the receipt of notification of award from the Procuring entity, the successful tenderer shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the tender documents, or in another form acceptable to the Procuring entity.

2.30.2 Failure of the successful tenderer to comply with the requirements of paragraph 2.27 or paragraph 2.28 shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender security, in which event the Procuring entity may make the award to the next lowest evaluated Candidate or call for new tenders.

## **2.31 Corrupt or Fraudulent Practices**

2.31.1 The Procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contracts. When used in the present regulations, the following terms are defined as follows;

- (i) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
- (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring entity, and includes collusive practice among tenderer (prior to or after tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the Procuring entity of the benefits of free and open competition;

2.31.2 The procuring entity will reject a proposal for award if it determines that the tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

2.31.3 Further a tenderer who is found to have indulged in corrupt or fraudulent practices risks being debarred from participating in public procurement in Kenya.

2.31.4 Tenderers shall not be allowed to bid for the same tender with the different firms (multi-bidding). This will lead to automatic disqualification.

## **Appendix to Instructions to Tenderers**

The following information regarding the particulars of the tender shall complement supplement or amend the provisions of the instructions to tenderers. Wherever there is a conflict between the provision of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers

COPY OF TENDER

<b>INSTRUCTIONS TO TENDERERS REFERENCE</b>	<b>PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS</b>
2.1.3	Ignore
2.4.1 (x)	Ignore
2.4.1 (xi)	Added advantage
2.4.2	- Pre-qualified in the prequalification process - Goods must meet the specifications
2.14	Ignore
2.14.1(xi)	Ignore
(xii)	Added advantage
2.12.3(a)	Added advantage
2.13.2	Not mandatory
2.13.3 (b)	Ignore
2.14	Ignore
2.14.2	Ignore
2.15.1	60 days
2.29.1	Ignore
2.29.3	Delete..... thirty (30) ..... and insert .... fourteen (14) .....
2.30	Ignore
2.30.1	Ignore
2.30.2	Ignore
1.3	Ignore
2.3.2	Ignore
2.15.2	Applies only up to end of 2 <sup>nd</sup> sentence
2.23	Do not apply ignore
3.13.3	Ignore
3.13.4	Ignore
3.7	Kindly Ignore

### SECTION III: GENERAL CONDITIONS OF CONTRACT

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## **SECTION III - GENERAL CONDITIONS OF CONTRACT**

### **3.1 Definitions**

3.1.1 In this Contract, the following terms shall be interpreted as indicated:-

- (a) “The Contract” means the agreement entered into between the Procuring entity and the tenderer, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) “The Contract Price” means the price payable to the tenderer under the Contract for the full and proper performance of its contractual obligations
- (c) “The Goods” means all of the equipment, machinery, and/or other materials, which the tenderer is required to supply to the Procuring entity under the Contract.
- (d) “The Procuring entity” means the organization purchasing the Goods under this Contract.
- (e) “The Tenderer” means the individual or firm supplying the Goods under this Contract.

### **3.2 Application**

3.2.1 These General Conditions shall apply in all Contracts made by the Procuring entity for the procurement installation and commissioning of equipment

### **3.3 Country of Origin**

3.3.1 For purposes of this clause, “Origin” means the place where the Goods were mined, grown or produced.

3.3.2 The origin of Goods and Services is distinct from the nationality of the tenderer

### **3.4 Standards**

3.4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications.

### **3.5 Use of Contract Documents and Information**

- 3.5.1 The tenderer shall not, without the Procuring entity's prior written consent, disclose the Contract, or any provision therefore, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring entity in connection therewith, to any person other than a person employed by the tenderer in the performance of the Contract.
- 3.5.2 The tenderer shall not, without the Procuring entity's prior written consent, make use of any document or information enumerated in paragraph 3.5.1 above
- 3.5.3 Any document, other than the Contract itself, enumerated in paragraph 3.5.1 shall remain the property of the Procuring entity and shall be returned (all copies) to the Procuring entity on completion of the Tenderer's performance under the Contract if so required by the Procuring entity

### **3.6 Patent Rights**

- 3.6.1 The tenderer shall indemnify the Procuring entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring entity's country

### **3.7 Performance Security (Kindly Ignore)**

- 3.7.1 Within thirty (30) days of receipt of the notification of Contract award, the successful tenderer shall furnish to the Procuring entity the performance security in the amount specified in Special Conditions of Contract.
- 3.7.2 The proceeds of the performance security shall be payable to the Procuring entity as compensation for any loss resulting from the Tenderer's failure to complete its obligations under the Contract.
- 3.7.3 The performance security shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring entity and shall be in the form of a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in Kenya or abroad, acceptable to the Procuring entity, in the form provided in the tender documents.

- 3.7.4 The performance security will be discharged by the Procuring entity and returned to the Candidate not later than thirty (30) days following the date of completion of the Tenderer's performance obligations under the Contract, including any warranty obligations, under the Contract

### **3.8 Inspection and Tests**

- 3.8.1 The Procuring entity or its representative shall have the right to inspect and/or to test the goods to confirm their conformity to the Contract specifications. The Procuring entity shall notify the tenderer in writing in a timely manner, of the identity of any representatives retained for these purposes.
- 3.8.2 The inspections and tests may be conducted in the premises of the tenderer or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the tenderer or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring entity.
- 3.8.3 Should any inspected or tested goods fail to conform to the Specifications, the Procuring entity may reject the equipment, and the tenderer shall either replace the rejected equipment or make alternations necessary to make specification requirements free of costs to the Procuring entity.
- 3.8.4 The Procuring entity's right to inspect, test and where necessary, reject the goods after the Goods' arrival shall in no way be limited or waived by reason of the equipment having previously been inspected, tested and passed by the Procuring entity or its representative prior to the equipment delivery.
- 3.8.5 Nothing in paragraph 3.8 shall in any way release the tenderer from any warranty or other obligations under this Contract.

### **3.9 Packing**

- 3.9.1 The tenderer shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract.



3.9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract

### **3.10 Delivery and Documents**

3.10.1 Delivery of the Goods shall be made by the tenderer in accordance with the terms specified by Procuring entity in its Schedule of Requirements and the Special Conditions of Contract

### **3.11 Insurance**

3.11.1 The Goods supplied under the Contract shall be fully insured against loss or damage incidental to manufacturer or acquisition, transportation, storage, and delivery in the manner specified in the Special conditions of contract.

### **3.12 Payment**

3.12.1 The method and conditions of payment to be made to the tenderer under this Contract shall be specified in Special Conditions of Contract

3.12.2 Payments shall be made promptly by the Procuring entity as specified in the contract

### **3.13 Prices**

3.13.1 Prices charged by the tenderer for goods delivered and services performed under the Contract shall not, with the exception of any price adjustments authorized in Special Conditions of Contract, vary from the prices by the tenderer in its tender.

3.13.2 Contract price variations shall not be allowed for contracts not exceeding one year (12 months)

3.13.3 Where contract price variation is allowed, the variation shall not exceed 10% of the original contract price.

3.13.4 Price variation request shall be processed by the procuring entity within 30 days of receiving the request.

### **3.14. Assignment**

3.14.1 The tenderer shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring entity's prior written consent

### **3.15 Subcontracts**

3.15.1 The tenderer shall notify the Procuring entity in writing of all subcontracts awarded under this Contract if not already specified in the tender. Such notification, in the original tender or later, shall not relieve the tenderer from any liability or obligation under the Contract

### **3.16 Termination for default**

3.16.1 The Procuring entity may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the tenderer, terminate this Contract in whole or in part

- (a) if the tenderer fails to deliver any or all of the goods within the periods) specified in the Contract, or within any extension thereof granted by the Procuring entity
- (b) if the tenderer fails to perform any other obligation(s) under the Contract
- (c) if the tenderer, in the judgment of the Procuring entity has engaged in corrupt or fraudulent practices in competing for or in executing the Contract

3.16.2 In the event the Procuring entity terminates the Contract in whole or in part, it may procure, upon such terms and in such manner as it deems appropriate, equipment similar to those undelivered, and the tenderer shall be liable to the Procuring entity for any excess costs for such similar goods.

### **3.17 Liquidated Damages**

3.17.1. If the tenderer fails to deliver any or all of the goods within the period(s) specified in the contract, the procuring entity shall, without prejudice to its other remedies under the contract, deduct from the contract prices liquidated damages sum equivalent to 0.5% of the delivered price of the

delayed items up to a maximum deduction of 10% of the delayed goods. After this the tenderer may consider termination of the contract.

### **3.18 Resolution of Disputes**

3.18.1 The procuring entity and the tenderer shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract

3.18.2 If, after thirty (30) days from the commencement of such informal negotiations both parties have been unable to resolve amicably a contract dispute, either party may require adjudication in an agreed national or international forum, and/or international arbitration.

### **3.19 Language and Law**

3.19.1 The language of the contract and the law governing the contract shall be English language and the Laws of Kenya respectively unless otherwise stated.

### **3.20 Force Majeure**

3.20.1 The tenderer shall not be liable for forfeiture of its performance security or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

## **SECTION IV - SPECIAL CONDITIONS OF CONTRACT (SCC)**

4.1. Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, between the GCC and the SCC, the provisions of the SCC herein shall prevail over those in the GCC.

4.2. Special conditions of contract as relates to the GCC

<b>REFERENCE OF GCC</b>	<b>SPECIAL CONDITIONS OF CONTRACT</b>
3.7.1 to 3.7.4	Ignore
3.8.3	Delete 'equipment' and insert 'goods'
3.8.4	Delete 'equipment' and insert 'goods'
3.12.1	The payment will be made within 30 days of receipt of the goods or the invoice whichever is the latter
3.13.2	Ignore
3.16.2	Delete 'equipment' and insert 'goods'
3.17.1	The liquidated damages will be charged at 0.5% per day
3.13.3	Ignore
3.13.4	Ignore

## **SECTION V - TECHNICAL SPECIFICATIONS**

### **5.1 General**

- 5.1.1 These specifications describe the requirements for goods. Tenderers are requested to submit with their offers the detailed specifications, drawings, catalogues, etc for the products they intend to supply
- 5.1.2 Tenderers must indicate on the specifications sheets whether the equipment offered comply with each specified requirement.
- 5.1.3 All the dimensions and capacities of the equipment to be supplied shall not be less than those required in these specifications. Deviations from the basic requirements, if any shall be explained in detail in writing with the offer, with supporting data such as calculation sheets, etc. The procuring entity reserves the right to reject the products, if such deviations shall be found critical to the use and operation of the products.
- 5.1.4 The tenderers are requested to present information along with their offers as follows:
- (i) Shortest possible delivery period of each product
  - (ii) Information on proper representative and/or workshop for back-up service/repair and maintenance including their names and addresses.

<b>REFERENCE OF GCC</b>	<b>TECHNICAL SPECIFICATIONS</b>
5.1.4(ii)	Ignore

## **SECTION VII     -     STANDARD FORMS**

### **Notes on the sample Forms**

1.     Form of TENDER -     The form of tender must be completed by the tenderer and submitted with the tender documents. It must also be duly signed by duly authorized representatives of the tenderer.
2.     Confidential Business Questionnaire Form - This form must be completed by the tenderer and submitted with the tender documents.

## 8.1 **FORM OF TENDER**

Date \_\_\_\_\_  
Tender No. \_\_\_\_\_

To: \_\_\_\_\_

\_\_\_\_\_  
*[name and address of procuring entity]*

Gentlemen and/or Ladies:

1. Having examined the tender documents

Nos. .... *[insert numbers]*. the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver: ( ..... *(insert Tender Number)* in conformity with the said tender documents for the sum of ..... *(total tender amount in words and figures)* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Tender.

2. We undertake, if our Tender is accepted, to deliver materials in accordance with the indicated prices during the fiscal year 2019/2020.

3. We agree to abide by this Tender for a period of ninety (90) *[number]* days from the date fixed for tender opening of the Instructions to tenderers, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

4. This Tender, together with your written acceptance thereof and your notification of award, shall constitute a Contract, between us. Subject to signing of the Contract by the parties.

5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

\_\_\_\_\_  
[signature]

\_\_\_\_\_  
[in the capacity of]

Duly authorized to sign tender for an on behalf of \_\_\_\_\_

## 8.2 CONFIDENTIAL BUSINESS QUESTIONNAIRE FORM

You are requested to give the particulars indicated in Part 1 and either Part 2(a), 2(b) or 2 (c) whichever applied to your type of business

You are advised that it is a serious offence to give false information on this form

### *Part 1 – General:*

Business Name .....  
 Location of business premises. ....  
 Plot No..... Street/Road .....  
 Postal Address ..... Tel No. .... Fax ..... E mail .....  
 Nature of Business , .....  
 Registration Certificate No. ....  
 Maximum value of business which you can handle at any one time – Kshs. ....  
 Name of your bankers ..... Branch .....

### Part 2 (a) – Sole Proprietor

Your name in full ..... Age .....  
 Nationality ..... Country of origin .....  
 Citizenship details .....

### Part 2 (b) Partnership

Give details of partners as follows:

Name	Nationality	Citizenship Details	Shares
1. ....	.....	.....	.....
2. ....	.....	.....	.....
3. ....	.....	.....	.....
4. ....	.....	.....	.....

### Part 2 (c) – Registered Company

Private or Public .....  
 State the nominal and issued capital of company-  
 Nominal Kshs. ....  
 Issued Kshs. ....  
 Given details of all directors as follows

Name	Nationality	Citizenship Details	Shares
1. ....	.....	.....	.....
2. ....	.....	.....	.....
3. ....	.....	.....	.....
4. ....	.....	.....	.....
5. ....	.....	.....	.....

Date ..... Signature of Candidate .....

- If a Kenya Citizen, indicate under “Citizenship Details” whether by Birth, Naturalization or Registration.



### 8.3 CONTRACT FORM

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_ between  
..... [*name of Procurement entity*] of ..... [*country of Procurement entity*]  
(hereinafter called “the Procuring entity”) on the one part and ..... [*name of  
tenderer*] of ..... [*city and country of tenderer*] (hereinafter called “the tenderer”) on the  
other part;

WHEREAS the Procuring entity invited tenders for certain goods and has accepted a tender by  
the tenderer for the supply of those goods in the sum of ..... [*contract  
price in words and figures*] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are  
respectively assigned to them in the Conditions of Contract referred to:

2. The following documents shall be deemed to form and be read and construed as part of  
this Agreement is:

- (a) the Tender Form and the Price Schedule submitted by the tenderer
- (b) the Schedule of Requirements
- (c) the Technical Specifications
- (d) the General Conditions of Contract
- (e) the Special Conditions of contract; and
- (f) the Procuring entity’s Notification of Award

3. In consideration of the payments to be made by the Procuring entity to the tenderer as  
hereinafter mentioned, the tenderer hereby covenants with the Procuring entity to provide the  
goods and to remedy defects therein in conformity in all respects with the provisions of the  
Contract

4. The Procuring entity hereby covenants to pay the tenderer in consideration of the  
provisions of the goods and the remedying of defects therein, the Contract Price or such other  
sum as may become payable under the provisions of the Contract at the times and in the manner  
prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in  
accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Procuring entity

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the tenderer in the presence of \_  
\_\_\_\_\_

## 8.3 WATER METER SPECIFICATIONS

### 8.3.1 SUPPLY AND DELIVERY OF WATER METER CLASS 'C' OR EQUIVALENT – Sizes DN15mm, DN20mm, DN25mm and DN40mm - COPOLYMER AND BRASS

**Meter Application.** The meter is for use in POTABLE COLD WATER up to 50°C and working pressure up to 16 bars. The meter will perform with an accuracy registration of  $100\% \pm 5\%$  within the lower flow rate zone ( $Q_{min} \leq Q < Q_t$ ) regardless of the temperature range and  $100\% \pm 2\%$  for upper flow rate range. Both pressure loss and accuracy tests must be determined before delivery.

**Credibility of the meters:** The bidders on water meters will be required to submit a sample of the meter size quoted to NYEWASCO for calibration test. The sample meter provided shall undergo the calibration test in our Meter Calibration Laboratory and if it fails the tests it will be considered that the category represented has also failed.

On delivery after the award of contract, the company will be sampling 10% of the meters at random and calibrate them internally in presence of the awarded supplier if practical. A batch will be considered as failed if one or more meters do not comply with the established technical specifications or have failed the tests. Under these circumstances, the specific batch of meters has to be rejected. The costs for testing shall be taken over by the supplier. Furthermore, the supplier has also to bear the costs for replacement if rejected.

**Tamper Proof:** The meter supplied must offer outstanding resistance to illegal tampering. It should be designed such that it cannot be disassembled while in service and the mechanically – driven register cannot be interfered with magnetically. Shall have a seal increasing the chances of noticing any tamper attempt.

An individual serial number must be engraved on each body. It must bear the word NYEWASCO to reduce theft.

**Dry Dial Register:** The dry dial water meter has a reading mechanism hermetically separated from the water flow chamber. The register is fully – sealed, vacuum filled, with a sample straight – reading presentation. The number rollers could be totally immersed in a non – toxic liquid which acts as a lubricant. The sac attached to the register casing acts as a balancing membrane and ensures the pressure of the liquid in the register is the same as that of the water inside the meter. The register is placed in a window inside the meter body in the direction of flow for easy reading.

**Flow rate range:** The various flow rate ranges (minimum to maximum) for different meter sizes shall be as described below,

- DN15mm water meter - 15l/hr to 3000l/hr with Nominal Discharge of 1500l/hr or 15.625l/hr to 3125l/hr with Nominal Discharge of 2500l/hr.
- DN20mm water meter 25l/hr to 5000l/hr with Nominal Discharge of 2500l/hr or 4000l/hr.
- DN25mm water meter 35l/hr to 7000l/hr.
- DN40mm water meter 50l/hr to 10000l/hr.

**Installation:** The meter should be capable of being installed in a vertical, included and horizontal without loss of accuracy.

**Material of the Water Meter:** The material used shall be of adequate strength and durability. In particular,

- The material used shall not be adversely affected by water temperature variations within the working temperature range i.e. water meters have to endure a water temperature of  $0^{\circ}\text{C}$  to  $50^{\circ}\text{C}$
- The material should be resistant to normal exposures. The meter body shall be brass or (co-)polymer, NOT plastic. The meter may have brass threads. (The meter body material to be specified in the brochure)
- All parts of a water meter in contact with the water flowing through it shall be manufactured from materials which are inert with water, non-toxic and non-contaminating.
- The material used shall be resistant to internal and external corrosion.
- A water meter indicating device shall be protected by a transparent window. A cover of a suitable type may also be provided as additional protection.
- Where there is a risk of condensation forming on the underside of the window of a water meter indicating device, the water meter shall incorporate devices for prevention or elimination of condensation. The units should be permanently sealed and frost, moisture and dust proof.
- A water meter may be fitted with an adjustment device.

### **Additional Technical Specifications**

The following technical specifications should also be incorporated:

- In-built sieves/strainers shall be incorporated
- Threaded meters shall be supplied complete with a set of connectors that are made of copper alloy or equivalent material resistant to corrosion, rust and damage due to shock or vibration. The connectors shall be threaded to the correct male size, comprising cap nuts, linings and fiber/rubber sealing washers. The meter linings shall have adequate provisions to safeguard against tampering.
- The nominal flow rate and diameter shall be marked on the meter.
- The abbreviation of NYEWASCO shall be engraved to reduce the chance of theft.
- The water meter shall have a working pressure of 1,600 kPa and shall be indicated on the meter as well.
- The meter shall have inbuilt Non – Return Valve to reduce the risk of water meter reversal fraud.

- **Resistance against Water Hammer:** The meter has to be tested against the effect of water hammer for up to 100,000 cycles. The meter remains within the calibration range for period of minimum one year.
- **Protected Magnetic Transmission:** For magnetic transmission meters, the meters shall have a proof of protection from external influences.

#### **Additional Non-Technical Specifications**

- **Spare parts/after sales service:**  
Availability of spare parts has to be proven. The Supplier must provide a complete list of available spare parts (in English). Should permit serviceability and interchangeability of parts without loss of accuracy.
- **Maintenance manuals:** Maintenance manuals (in English) shall be provided.
- **Warranty:** The minimum warranty period shall be one year. Meters shall be guaranteed against defects in materials and service performance for a period of one year from the date of installation. Bidders should provide service warrant certificate.
- **Approval** – The meter must have been approved under the latest ISO and Kenyan standards (Measurement Instrument Directives)
- The meters should have thread caps to prevent thread damaging.
- The year of manufacture, nominal discharge, nominal diameter direction of flow and serialization shall be marked on the meter body. Serialization should be consistent.

The tendering company **MUST PROVIDE A SAMPLE** of the meter size quoted that shall **BE RETURNED** after the evaluation of tender. These samples shall be delivered to the **MANAGING DIRECTORS' OFFICE**.

The Tendering Company shall also provide the brochures for the water meters for evaluation.

## **REGISTRATION OF SUPPLIERS**

### **EVALUATION CRITERIA – Goods**

NYEWASCO will examine the tenders to determine completeness, general orderliness and sufficiency in responsiveness.

The method of evaluation will be Merit Point System

The criteria of evaluation and the points to be awarded on each criterion will be as follows:

A.	PRELIMINARY REQUIREMENTS	COMPLIANCE (YES/NO)
A1	Valid Certificate of Incorporation/Business Registration (Attach copy)	YES/NO
A2	Personal Identification Number(PIN) certificate (Attach copy)	YES/NO
A3	Valid Tax Compliance Certificate (Attach copy)	YES/NO
A4	Current Business Permit/License (Attach copy)	YES/NO
A5	Physical location of business premises ( <b>See business questionnaire</b> )	YES/NO
	Fulfillment of Special condition relevant to the category applied for	YES/NO
B.	GENERAL REQUIREMENTS	
B1.	<b>Supplier Availability:</b> - Postal Address   (2) - Contact Person   (2) - Email Address   (2)	10
B2.	<b>Business Ownership:</b> Company/Business Profile -Disclosure of Directors/Partners /Sole Proprietor	10
B3.	<b>Financial Capability:</b> Audited Accounts for the last 2 years. attach Bank Statements for the last 6 months	20
B4.	<b>Financial Stability</b> – Evidence of profit making in the attached 2 years audited reports	10
B5.	<b>Experience:</b> Indicate having undertaken similar assignment with at least 3 firms <b>(Attach Proof: copies of LPOs, Letters of Award, Completion Certificates, Contracts)</b>	20
B6	<b>Supply Capacity:</b> Maximum Volume of Business handled in the (last two years) - KShs. 2,000,001.00 and above                      (12) - KShs. 1,500,001.00 – KShs. 2,000,000.00       (9) - KShs. 1,000,001.00 – KShs. 1,500,000.00       (6) - KShs. 500,000.00 – KShs.1,000,000.00          (3)	12
B7.	<b>Credit Period:</b> Indicate Credit Period willing to offer - 90 Days                      (12) - 60 Days                     (9) - 30 Days                     (6) - Less than 30 days (3)	12
B9	Eligibility & Disclosure of litigation history	6
	<b>TOTAL</b>	<b>100</b>

**NB:** Bidders must meet all the mandatory requirements to qualify.

**THE PASS MARK FOR REGISTRATION SHALL BE 70%**

*(The Technical Evaluation Team will verify the information submitted by applicants and may visit the physical premises of the applicants. This will form part of the evaluation process).*

**Declaration (For the Tenderer only)**

(The tenderer is expected to state categorically whether he/she will/will not accept to be evaluated on the above criteria)

**Q. Will you accept your bid to be evaluated based on the above criteria and abide by them during the entire period of the tender? (Tick appropriately below)**

**No**

☐

**Yes**

☐

**Official Stamp .....****Sign.....**

**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS  
SUPPLY AND DELIVERY OF WATER METER CLASS 'C' OR EQUIVALENT  
DN 15mm**

**Evaluator Name**.....

**Evaluation Date**.....

**Tenderers' Name**.....

S. NO	Mandatory Requirements	Compliance
1.	Brochure provided (see the original brochure)	(Yes/No)
2.	Sample provided (see the sample)	(Yes/No)
3.	The sample has passed calibration test (see calibration results from Nyeri water company Calibration Lab )	(Yes/No)
4.	Material of the meter to be supplied to meet the requirements (sample and brochures provided)	(Yes/No)
5.	Sample has passed the pressure test from calibration team	(Yes/No)
6.	Tamper proof- outstanding resistance to illegal tampering	(Yes/No)
7.	Dry counter register (see details of the sample provided)	(Yes/No)
8.	Installation Plan: All positions (Horizontal and Vertical)	(Yes/No)
9.	Magnetic transmission protection or antimagnetic transmission (see brochure)	(Yes/No)
10.	Class of the meter to be class 'C' or equivalent Flow rate range 15l/hr to 3000l/hr or 15.625 l/hr to 3125l/hr.	(Yes/No)
11.	Warranty (Minimum 1 year)	(Yes/No)
12.	Serviceability (Attach a list of spare parts)	(Yes/No)
13.	Markings on the meter (Year of manufacture, serialization, Nominal discharge, Nominal diameter and direction of flow)	(Yes/No)
		<b>Qualified/Disqualified</b>

**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS  
SUPPLY AND DELIVERY OF WATER METER CLASS 'C' OR EQUIVALENT**

**DN 20mm**

**Evaluator Name**.....

**Evaluation Date**.....

**Tenderers' Name**.....

S. NO	Mandatory Requirements	Compliance
1.	Brochure provided (see the original brochure)	(Yes/No)
2.	Sample provided (see the sample)	(Yes/No)
3.	The sample has passed calibration test (see calibration results from Nyeri water company Calibration Lab )	(Yes/No)
4.	Material of the meter to be supplied to meet the requirements (sample and brochures provided)	(Yes/No)
5.	Sample has passed the pressure test from calibration team	(Yes/No)
6.	Tamper proof- outstanding resistance to illegal tampering	(Yes/No)
7.	Dry counter register (see details of the sample provided)	(Yes/No)
8.	Installation Plan: All positions (Horizontal and Vertical)	(Yes/No)
9.	Magnetic transmission protection or antimagnetic transmission (see brochure)	(Yes/No)
10.	Class of the meter to be class 'C' or equivalent Flow rate range 25l/hr to 5000l/hr with nominal discharge of 2500l/hr or 4000l/hr	(Yes/No)
11.	Warranty (Minimum 1 year)	(Yes/No)
12.	Serviceability (Attach a list of spare parts)	(Yes/No)
13.	Markings on the meter (Year of manufacture, serialization, Nominal discharge, Nominal diameter and direction of flow)	(Yes/No)
		<b>Qualified/Disqualified</b>



**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS  
SUPPLY AND DELIVERY OF WATER METER CLASS 'C' OR EQUIVALENT  
DN 25mm**

**Evaluator Name**.....

**Evaluation Date**.....

**Tenderers' Name**.....

S. NO	Mandatory Requirements	Compliance
1.	Brochure provided (see the original brochure)	(Yes/No)
2.	Sample provided (see the sample)	(Yes/No)
3.	The sample has passed calibration test (see calibration results from Nyeri water company Calibration Lab )	(Yes/No)
4.	Material of the meter to be supplied to meet the requirements (sample and brochures provided)	(Yes/No)
5.	Sample has passed the pressure test from calibration team	(Yes/No)
6.	Tamper proof- outstanding resistance to illegal tampering	(Yes/No)
7.	Dry counter register (see details of the sample provided)	(Yes/No)
8.	Installation Plan: All positions (Horizontal and Vertical)	(Yes/No)
9.	Magnetic transmission protection or antimagnetic transmission (see brochure)	(Yes/No)
10.	Class of the meter to be class 'C' or equivalent Flow rate range 35l/hr to 7000l/hr	(Yes/No)
11.	Warranty (Minimum 1 year)	(Yes/No)
12.	Serviceability (Attach a list of spare parts)	(Yes/No)
13.	Markings on the meter (Year of manufacture, serialization, Nominal discharge, Nominal diameter and direction of flow)	(Yes/No)
		<b>Qualified/Disqualified</b>

**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS  
SUPPLY AND DELIVERY OF WATER METER CLASS 'C' OR EQUIVALENT  
DN 40mm**

**Evaluator Name**.....

**Evaluation Date**.....

**Tenderers' Name**.....

S. NO	Mandatory Requirements	Compliance
1.	Brochure provided (see the original brochure)	(Yes/No)
2.	Sample provided (see the sample)	(Yes/No)
3.	The sample has passed calibration test (see calibration results from Nyeri water company Calibration Lab )	(Yes/No)
4.	Material of the meter to be supplied to meet the requirements (sample and brochures provided)	(Yes/No)
5.	Sample has passed the pressure test from calibration team	(Yes/No)
6.	Tamper proof- outstanding resistance to illegal tampering	(Yes/No)
7.	Dry counter register (see details of the sample provided)	(Yes/No)
8.	Installation Plan: All positions (Horizontal and Vertical)	(Yes/No)
9.	Magnetic transmission protection or antimagnetic transmission (see brochure)	(Yes/No)
10.	Class of the meter to be class 'C' or equivalent Flow rate range 50l/hr to 10000l/hr	(Yes/No)
11.	Warranty (Minimum 1 year)	(Yes/No)
12.	Serviceability (Attach a list of spare parts)	(Yes/No)
13.	Markings on the meter (Year of manufacture, serialization, Nominal discharge, Nominal diameter and direction of flow)	(Yes/No)
		<b>Qualified/Disqualified</b>

### **8.3.2 SUPPLY AND DELIVERY OF WATER METER CLASS 'B' OR EQUIVALENT-SIZES DN 25mm and Above.**

**Meter Application.** The meter is for use in POTABLE COLD WATER up to 50°C and working pressure up to 16 bars. The meter will perform with an accuracy registration of 100% ± 5% within the lower flow rate zone ( $Q_{min} \leq Q < Q_t$ ) regardless of the temperature range and 100% ± 2% for upper flow rate range. Both pressure loss and accuracy tests must be determined before delivery.

**Credibility of the meters:** The bidders on water meters will be required to submit ONE sample water meter 1" or 1½" (i.e. 25mm or 40mm) to NYEWASCO for calibration test. The meter shall undergo the calibration test in our Meter Calibration Laboratory and if it fails the tests it will be considered that this category represented i.e. 25mm and above has also failed.

On delivery after the award of contract, the company will be sampling 10% of the meters at random and calibrate them internally in presence of the awarded supplier if practical. A batch will be considered as failed if one or more meters do not comply with the established technical specifications or have failed the tests. Under these circumstances, the specific batch of meters has to be rejected. The costs for testing shall be taken over by the supplier. Furthermore, the supplier has also to bear the costs for replacement if rejected.

**Tamper Proof:** The meter supplied must offer outstanding resistance to illegal tampering. It should be designed such that it cannot be disassembled while in service and the mechanically – driven register cannot be interfered with magnetically. Shall have a seal increasing the chances of noticing any tamper attempt.

An individual serial number must be engraved on each body. It must bear the word NYEWASCO to reduce theft.

**Dry Dial Register:** The meter shall have a dry dial register driven magnetically or by gears.

**Installation:** The meter should be capable of being installed in horizontal position without loss of accuracy.

**Material of the Water Meter:** The material used shall be of adequate strength and durability. In particular,

- The material used shall not be adversely affected by water temperature variations within the working temperature range i.e. water meters have to endure a water temperature of 0 °C to 50 °C
- The material should be resistant to normal exposures. The meter body shall be brass. The meter may have threads or flanged.
- All parts of a water meter in contact with the water flowing through it shall be manufactured from materials which are inert with water, non-toxic and non-contaminating.
- The material used shall be resistant to internal and external corrosion.
- A water meter indicating device shall be protected by a transparent window. A cover of a suitable type may also be provided as additional protection.
- Where there is a risk of condensation forming on the underside of the window of a water meter indicating device, the water meter shall incorporate devices for

prevention or elimination of condensation. The units should be permanently sealed and should be frost, moisture and dust proof.

- A water meter may be fitted with an adjustment device.

### **Additional Technical Specifications**

The following technical specifications should also be incorporated:

- The meter may have in-built sieves/strainers
- Threaded meters shall be supplied complete with a set of connectors that are made of copper alloy or equivalent material resistant to corrosion, rust and damage due to shock or vibration. The connectors shall be threaded to the correct male size, comprising cap nuts, linings and fiber/rubber sealing washers. The meter linings shall have adequate provisions to safeguard against tampering.
- The nominal flow rate and diameter shall be marked on the meter.
- The abbreviation of NYEWASCO shall be engraved to reduce the chance of theft.
- The water meter shall have a working pressure of 1,000 kPa and shall be indicated on the meter as well.
- The meter may have inbuilt Non – Return Valve to reduce the risk of water meter reversal fraud.
- **Protected Magnetic Transmission:** For magnetic transmission meters, the meters shall have a proof of protection from external influences.

### **Additional Non-Technical Specifications**

- **Spare parts/after sales service:**  
Availability of spare parts has to be proven. The Supplier must provide a complete list of available spare parts (in English). Should permit serviceability and interchangeability of parts without loss of accuracy.
- **Maintenance manuals:** Maintenance manuals (in English) shall be provided.
- **Warranty:** The minimum warranty period shall be one year. Meters shall be guaranteed against defects in materials and service performance for a period of one year from the date of installation. Bidders should provide service warrant certificate.
- **Approval** – The meter must have been approved under the latest ISO and Kenyan standards (Measurement Instrument Directives)
- The year of manufacture, nominal discharge, nominal diameter direction of flow and serialization shall be marked on the meter body.

The tendering company **MUST PROVIDE ONE SAMPLE** of DN 25mm or 40mm that shall **BE RETURNED** after the evaluation of tender. This sample shall be delivered to the **MANAGING DIRECTORS' OFFICE**.

The Tendering Company shall also provide the brochures for the water meters for evaluation.

**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS  
SUPPLY AND DELIVERY OF WATER METER CLASS 'B' OR EQUIVALENT**

**Evaluator Name**.....

**Evaluation Date**.....

**Tenderers' Name**.....

S. NO	Mandatory Requirements	Compliance
1.	Brochure provided (see the original brochure)	Yes/No
2.	Sample provided (see the sample)	Yes/No
3.	The sample has passed calibration test (see calibration results from Nyeri water company Calibration Lab )	Yes/No
4.	Material of the meter to be supplied to meet the requirements (sample provided)	Yes/No
5.	Sample has passed the pressure test from calibration team	Yes/No
6.	Tamper proof- outstanding resistance to illegal tampering	Yes/No
7.	Dry counter register (see details of the sample provided)	Yes/No
8.	Class of the meter to be class 'B' or equivalent	Yes/No
9.	Warranty (Minimum 1 year)	Yes/No
10.	Serviceability (Attach a list of spare parts)	(Yes/No)
11.	Markings on the meter(Year of manufacture, serialization, Nominal discharge, Nominal diameter and direction of flow)	(Yes/No)
		<b>Qualified/Disqualified</b>

**NYERI WATER AND SEWERAGE COMPANY LTD****TENDER FOR THE SUPPLY OF (BRASS) CLEAN WATER  
METERS - CLASS "C" AND "B" OR EQUIVALENT****TENDER No. NWSC/OT/03/2019/2020 SCHEDULE 1 (a)**

ITEM	DESCRIPTION	UNIT	QTY	Meter class	UNIT RATE	KSHS	CTS
1	15mm (½")	NO	1000	Class "C"			
2	20mm (¾")	NO	100	Class "C"			
3	25mm (1")	NO	30	Class "C"			
4	40mm (1½")	NO	10	Class "C"			
5	25mm (1")	NO	30	Class "B"			
6	40mm (1½")	NO	10	Class "B"			
7	50mm (2")	NO	10	Class "B"			
8	80mm (3")	NO	6	Class "B"			
9	100mm (4")	NO	6	Class "B"			
10	150mm (6")	NO	6	Class "B"			
11	200mm (8")	NO	2	Class "B"			
12	250mm (10")	NO	1	Class "B"			
13	300mm (12")	NO	1	Class "B"			
14	350mm (14")	NO	1	Class "B"			
15	400mm (16")	NO	1	Class "B"			
16	450mm (18")	NO	1	Class "B"			
17	500mm (20")	NO	1	Class "B"			

**Tenderers' Signature:.....****Stamped:**

**NYERI WATER AND SEWERAGE COMPANY LTD****TENDER FOR THE SUPPLY OF (COPOLYMER) CLEAN WATER METERS - CLASS "C" AND "B"****TENDER NO.NWSC/OT/03/2019/2020 SCHEDULE 1(b)**

ITEM	DESCRIPTION	UNIT	QTY	Class of	UNIT RATE	KSHS	CTS
				meter			
1	15mm (½")	NO	1000	Class "C"			
2	20mm (¾")	NO	100	Class "C"			
3	25mm (1")	NO	30	Class "B"			
4	40mm (1½")	NO	10	Class "B"			

**Tenderers' Signature:.....**

**Stamped:**

### **8.3.3 TECHNICAL SPECIFICATIONS FOR PRE-PAID WATER METERS SIZES DN15, DN20, DN25 & DN50**

#### **1. General**

The meters described in these specifications are to be used with cold potable water for residential, industrial, commercial and institutional services and should be Class C or higher or Rated(Ratio) 160 and above

#### **2. Standards**

The prepaid meters should be manufactured in accordance with ISO or equivalent and conform to the accuracy requirements therein.

- The measuring element should be certified
- The quality system and manufacturing process should be qualified.
- The meters should be assembled to ISO 9001 and/or SANS 1529-9:2008, and tested to ISO 4064/1 (2005) or later versions if available. Measurement of water flow in closed conduits – Meters for cold potable water – Part 1: Specification.
- BS 5728 part 1 (1979) Measurement of water flow in closed conduits, Part 1 Specification of Meters for cold potable Water.
- The prepaid water metering vending system shall be approved Standard Transfer Specification (STS) Association approved and in conformity to IEC62055-41 and 62055-51 standards.

#### **3. Affidavit of Compliance**

The supplier shall provide an Affidavit of Compliance, separate certificate for each size of meter, attesting that the meters furnished comply with all applicable requirements of this Technical Specification.

#### **4. Manuals and training**

The supplier must provide, with each consignment, two sets of operations and basic maintenance manuals (hard copy and electronic) for each piece of equipment. These must be written in English language.

The Client users should be trained on how to use the system.

#### **5. Product requirements**

- The prepaid system shall be **STS** type and comprise of software, prepaid meter, user interface unit (UIU), mobile data collectors, field service terminals and password protected portable vending devices.
- The UIU shall have the following functions as a minimum:
  - Remotely display the meter reading
  - Display remaining allocation available to customer
  - Allow credit token top up entry
  - Provide various alarms for the customer such as leaks and tamper
  - Display meter number
- The prepaid water meter shall have an electronically controlled valve, digital communicating metering system with Automatic Meter Reading and AMI prepayment.
- The prepaid water metering vending system shall be STS type that allows multiple vending options through a wide variety of STS compliant vendors and also



incorporate a radio frequency and GSM data and command transfer system that enables two way communication between water service provider and meter.

- The vending system shall also have at least the following features:
  - Ability to collect arrears and implement fixed charges and block tariff
  - Connectivity to LAN/LWAN/internet
  - POS units over internet
  - Third party vending platform use capability
- The components shall all adopt non-toxic and non-pollution high quality materials, which will resist corrosion from water and air.
- The water meter should not be able to measure air and shall not be affected by sand or grit considering the nature of water that would be measured.
- The meter should have a pre-defined warning on either residual quantity of water or remaining credit to avoid inconveniencing customers before it shuts down.
- Bidders are required to include technical literature to support the details provided including brochures for the product. The information to include dimensions for the water meters offered.
- The meter shall be fitted with a non-return valve to avoid reverse flow and a strainer to prevent ingress of solids.

#### **6. Batteries**

The batteries of prepaid water meters should be able to last for more than 10 years or equivalent to meter lifespan, whichever is higher.

Replacement of batteries shall be in such a way that protects the security of data within the water meter. The controller unit shall also always close valves to stop the water supply. The controller automatically opens the valve to restore the water supply once the external users have replaced the batteries.

#### **7. Warranty**

The product should be free from defects in material workmanship for a period of 12 months from the date of commissioning in the field.

#### **8. Operating Conditions**

The equipment offered should be suitable for use in harsh local climatic conditions of temperature, dust, rainfall and humidity

Altitude	1250m above sea level
Maximum Temp	≥45 °Celsius
Minimum Temp	1 °Celsius
Mean ambient Temp	20 °Celsius
Maximum Relative Humidity	95%

#### **9. Operating Pressure**

Operating pressure of the meters should be 1600kPa and the test pressure should be 2400kPa for all meters. The pressure loss capability should be ≤0.06.

#### **10. Software Requirements**

The software should be compatible with all operating systems such as Microsoft Windows 10, Microsoft Windows 8 and Microsoft Windows 7.

The software should be able to produce the following reports

- Minimum night flows
- Number of purchase since installation
- Number of purchases in the last 30, 60 or 90 days
- Transaction per customer per day
- Vending site sales data
- Water usage report

#### **11. Information Display**

The prepaid meter system should have an excellent customer interface and as a minimum should provide the following information

- Monthly usage for the current month and previous 12 months
- Accumulated volume or credits
- Remaining credit or volume
- Tariff details (optional including step tariff)
- Valve status- open or close
- Emergency water – on /off
- Holiday scheme for not less than 5 days
- Low battery warning
- Tamper status
- Meter number
- Purchased times
- LCD display
- Monthly billing date
- Overdraft value
- Alarm value

#### **12. Meter Seal**

Meters must have provision for conventional lead and wire seal to prevent tampering.

#### **13. Markings**

The following markings shall be required on the meter body

- Type of meter
- Nominal flow ( $Q_n$ )
- Nominal pressure
- Metrological class or R-Rate
- Temperature class
- Symbol or name of manufacturer
- Patten approval number
- NYEWASCO(permanent) standing for Nyeri Water and Sewerage Company
- Meter number engraved on the top of the head.
- Size of the meter
- Direction of flow

#### **14. Metrological Performances**

The meters shall be approved for installation in horizontal direction.

The maximum flow rate ( $Q_{max}$ ) is the highest flow rate at which the meter can function over limited periods without damage, and without exceeding the maximum permissible error (+/-2%) and the maximum permissible value for loss of pressure (1 bar).

The normal flow rate ( $Q_n$ ) is equal to half the maximum flow rate,  $Q_{max}$ . It is expressed in cubic meters per hour and is used to designate the meter.

At the nominal flow rate  $Q_n$ , the meter should be able to function in normal use, i.e. in continuous and intermittent operating conditions, without exceeding the maximum permissible errors (+/-2%).

The minimum flow rate ( $Q_{\min}$ ) is the flow rate above which the meter must not exceed the maximum permissible error (+/-5%) and is fixed as a function of  $Q_n$ .

The transitional flow rate ( $Q_t$ ) is the flow rate that divides the upper and lower regions of the flow range and the rate of the maximum permissible error +/-2%.

#### 15. Metrological Characteristics

Item		Unit	Model			
			DN15	DN20	DN25	DN50
Diameter		mm	15	20	25	50
$Q_3$		m <sup>3</sup> /h	1.5	2.5	3.5	5
R			160	160	160	160
Accuracy Class			2	2	2	2
$Q_2/Q_1$			1.6	1.6	1.6	1.6
Error	$Q_2 \leq Q \leq Q_4$		+/-2%			
	$Q_1 \leq Q < Q_2$		+/-5%			
Working temperature		°C	0.1~45			
Max. working pressure		MPa	1.6			
Pressure loss		MPa	≤0.063			
Rated working voltage		V	3.6V			
Static working current		Ua	≤ 8μa			
Battery Lifetime		Year	≥10			
Pulse equivalent		m <sup>3</sup>	0.1			
IP level			IP68			

*Note:*

$Q_2$ ;  $Q_3$  and maximum working pressure are not supposed to be less than what is provided in the table.

$Q_1$  and minimum reading are not supposed to be more than what is provided in the table.

#### Inspections and Tests

The following inspections and tests shall be performed:

##### a. INSPECTION ON DELIVERY

The Purchaser shall jointly inspect with the Supplier all prepaid water meters delivered. Confirmation Calibration tests will be done in the company's laboratory.

All prepaid water meters that do not comply with the specifications, fail the calibration tests and/or are damaged in transit shall not be accepted and the supplier will be required to replace or repair such damaged meters to the satisfaction of the purchaser.

b. **CERTIFICATION**

Manufacturers are required to provide a copy of the certificate and test reports either from KEBS, ISO or other recognized certification bodies. Test reports required shall be those tests conducted within a period of a year. The Purchaser reserves the right to refuse offer or reject supply if the relevant documents are not provided.

COPY OF TENDER

**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS**  
**SUPPLY AND DELIVERY OF SMART (PREPAID) WATER METERS**

**Evaluator Name .....**

**Evaluation Date .....**

**Tenderers' Name.....**

S.NO	Mandatory Requirement	Compliance
1	Brochure provide in both hard and soft copy (See the original Bronchure)	YES/NO
2	Sample provided (See the Sample)	YES/NO
3	Material of the meter to be supplied to meet the requirements (Sample Provided)	YES/NO
4	The sample has passed Calibration test (See calibration results from Nyeri water company calibration lab)	YES/NO
5	Sample has passed the pressure test from calibration team	YES/NO
6	Affidavit of Compliance to technical specifications	YES/NO
7	Tamper proof- outstanding resistance to illegal tampering	YES/NO
8	Dry counter register (See details of the sample Provided)	YES/NO
9	Class of the meter to be 'C' or R160	YES/NO
10	Warranty (Minimum 1 year)	YES/NO
11	Marking on the meter (Type of meter, Nominal flow, Nominal Pressure, Class of the meter, Temperature rating, Direction of flow, Size of the meter, Meter number, NYEWASCO)	YES/NO
12	Information to be displayed on the meter customer interface (Monthly usage, accumulated Volumes/credit, Remaining Credit/volumes Valve status, Low battery warning, Tamper status)	YES/NO
13	Software compatibility (Attach a list of its compatibility with operating system)	YES/NO
14	Software ability to generate report (Minimum night flows, Number of purchase since installation, Vending site sales data, Water usage report)	YES/NO
		Qualified/Disqualified

**NYERI WATER AND SEWERAGE COMPANY LTD****TENDER FOR THE SUPPLY OF PRE-PAID CLEAN WATER METERS - CLASS "C" OR R160****TENDER NO. NWSC/OT/03/2019/2020 SCHEDULE 1(c)**

ITEM	DESCRIPTION	UNIT	QTY	Class of	UNIT RATE	KSHS	CTS
				meter			
1	DN15	NO	100	Class "C" or R160			
2	DN20	NO	100	Class "C" or R160			
3	DN25	NO	30	Class "C" or R160			
4	DN50	NO	10	Class "C" or R160			

**Tenderers' Signature:**.....

**Stamped:**

### **8.3.4 TECHNICAL SPECIFICATIONS FOR ULTRASONIC SMART METERS**

#### **General specifications**

- Accurate and reliable
- Ultrasonic metering
- Low start flow
- Measuring cold water and ambient temperatures
- Remote reading
- No moving parts
- Long-term stable
- Powered by a lithium battery
- Multiple info codes
- Large clear display
- Hermetically sealed
- Fully waterproof

#### **Pinpoint accuracy**

Ultrasonic flow measurement must guarantee pinpoint measuring accuracy. The electronic meters should have no moving parts, meaning that there is no wear and should be resistant to any impurities in the water.

#### **Available possibilities for communication**

The water meter should come with the newest radio technology for smart metering, both for 'Drive-by', network or Sigfox installations. Radio packages should be available with transmission intervals of 16 or 96 seconds for Wireless M-Bus and daily for Sigfox. Consumption data should be legible manually directly from the display or using an optical eye and also consumption data can be remotely read by means of Wireless M-Bus, which is built into the meter.

#### **Temperature**

The meter measures both cold water and ambient temperatures.

#### **Low leakage limits**

The meter should have built-in sensitive leak monitoring, as low as 0.1 % of Q3.

#### **Long range**

The meter should be equipped with a long-range antenna that transmits strong radio signals with intelligent coding to the network. The meter should also be read from a long distance with 'Drive-by' technology

#### **Installation**

The water meter should be installed in all operating environments, horizontally as well as vertically, independent of piping and installation conditions without losing accuracy.

#### **MID classifications**

Approval DK-0200-MI001-015

Mechanical environment Class M1

Electromagnetic environment Class E1 and E2 for Wireless M-Bus version

Class E1 for Wired M-Bus version

Climatic environment 5...55 °C, condensing humidity

## **OIML R49 designations**

Accuracy class 2

Sensitivity class U0/D0

Ambient class Fulfils OIML R49 class B and O (building/outdoor)

Medium temperature, cold water 0.1...30 °C (T30) or 0.1...50 °C (T50)

Medium temperature, hot water 0.1...70 °C (T70) or T30/70 (Wired and Wireless M-Bus only)

Meter types Q3 = 1.6 m<sup>3</sup>/h, 2.5 m<sup>3</sup>/h and 4.0 m<sup>3</sup>/h

## **Material**

### **Wetted parts**

Meter housing and meter pipe Polyphenylene sulfide PPS with 40 % fibre glass

Reflectors Stainless steel

Strainer Polyethersulfone PES

## **Technical data**

### **Electrical data**

Battery 3.65 VDC, 1 C-cell lithium or 2 A-cells lithium

Battery lifetime: up to 16 years at t<sub>BAT</sub> < 30 °C

EMC data Fulfils MID class:

- E1 and E2 for Wireless M-Bus and Sigfox version

- E1 for Wired M-Bus version

Sigfox classification Class zero or equal and approved standard

Sigfox radio zone RC1, 868 MHz, 14 dBm

### **Mechanical data**

Metrological class 2

Ambient class Fulfils OIML R49 class B and O (building/outdoor)

Ambient temperature 2...55 °C

Protection class IP68

Storage temp. empty sensor -25...60 °C

Pressure stage PN16

### **Accuracy**

MPE (maximum permissible error)

MPE according to OIML R49

Meter approved 0.1...30 °C

• } 5 % in range  $Q1 \leq Q < Q2$

• } 2 % in range  $Q2 \leq Q \leq Q4$

At 30 °C < t < 70 °C

• } 5 % in range  $Q1 \leq Q < Q2$

• } 3 % in range  $Q2 \leq Q \leq Q4$



**METER EVALUATION SHEET BASED ON THE SPECIFICATIONS**  
**SUPPLY AND DELIVERY OF ULTRASONIC SMART METERS**

**Evaluator Name .....**

**Evaluation Date .....**

**Tenderers' Name.....**

S.NO	Mandatory Requirement	Compliance
1	Brochure provide in both hard and soft copy (See the original Bronchure)	YES/NO
2	Sample provided (See the Sample)	YES/NO
3	Material of the meter to be supplied to meet the requirements (Sample Provided)	YES/NO
4	The sample has passed Calibration test (See calibration results from Nyeri water company calibration lab)	YES/NO
5	Sample has passed the pressure test from calibration team	YES/NO
6	Affidavit of Compliance to technical specifications	YES/NO
7	Tamper proof- outstanding resistance to illegal tampering	YES/NO
8	Smart metering Technology (See details of the sample Provided)	YES/NO
9	Class of the meter to be 'Class 2'	YES/NO
10	Warranty (Minimum 1 year)	YES/NO
11	Marking on the meter (Type of meter, Nominal flow, Nominal Pressure, Class of the meter, Temperature rating, Direction of flow, Size of the meter, Meter number, NYEWASCO)	YES/NO
12	Information to be displayed on the meter-display (Leak, Burst, Tamper, Dry & Reverse status)	YES/NO
13	Software compatibility (Attach a list of its compatibility with operating system)	YES/NO
14	Software ability to generate report (Minimum night flows, volume of flow since installation.	YES/NO
		Qualified/Disqualified

**NYERI WATER AND SEWERAGE COMPANY LTD**

**TENDER FOR THE SUPPLY OF ULTRASONIC SMART CLEAN WATER METERS - CLASS 2**

**TENDER NO. NWSC/OT/03/2019/2020 SCHEDULE 1(d)**

ITEM	DESCRIPTION	UNIT	QTY	Class of meter	UNIT RATE	KSHS	CTS
1	DN15	NO	100	Class 2			
2	DN20	NO	100	Class 2			
3	DN25	NO	30	Class 2			
4	DN50	NO	10	Class 2			

**Tenderers' Signature:.....**

**Stamped:**