

KENYA BROADCASTING CORPORATION



TENDER NO. 11/KBC/2018-2019

**DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND
COMMISSIONING OF DIGITAL TV HEADEND**

KENYA BROADCASTING CORPORATION

P.O. BOX 30456 – 00100

NAIROBI

(JANUARY 2019)



KBC IS ISO 9001:2008 CERTIFIED

TABLE OF CONTENTS

	PAGE
* SECTION I INVITATION TO TENDER	3
* SECTION II INSTRUCTIONS TO TENDERERS	4
Appendix to Instructions to tenderers.....	22
* SECTION III GENERAL CONDITIONS OF CONTRACT.....	23
* SECTION IV SPECIAL CONDITIONS OF CONTRACT	30
* SECTION V SCHEDULE OF REQUIREMENTS AND PRICE..	31
* SECTION VI TECHNICAL SPECIFICATION	33
* SECTION VII EVALUATION CRITERIA	51
7.1 FORM OF TENDER	54
7.2 CONFIDENTIAL BUSINESS & QUESTIONNAIRE FORM.....	55
7.3 BANK QUARANTEE FOR ADVANCE PAYMENT	58

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SECTION I

INVITATION TO TENDER

Date 29th January 2019

The KBC invites sealed tenders from eligible candidates for the **DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND COMMISSIONING OF DIGITAL TV HEADEND**

- 1.1 Interested eligible candidates may obtain further information from and inspect the tender documents at **KBC Procurement Office** at Broadcasting House Harry Thuku road during normal office working hours (8.00am-1.00pm, 2.00pm-5.00pm). Bidders may also view and download the bidding document from KBC website: www.kbc.co.ke or tenders.go.ke and immediately forward their particulars for records and for the purposes of receiving any further tender clarifications and/or addendums to **KBC Procurement Office**. Prices quoted should be net inclusive of all taxes and delivery costs, must be expressed in Kenya shillings or one major easily convertible foreign currency and shall remain valid for a period of 90 days from the Closing date of the tender.
- 1.2 A complete set of tender documents may be obtained by interested candidates upon payment of a non-refundable fee of **Ksh 1,000** in cash or bankers cheque payable to Kenya Broadcasting Corporation cashier. Bidders who download the tender document will not be required to pay.
- 1.3 Completed tender documents are to be enclosed in plain sealed envelopes marked with tender reference number and be deposited in the Tender Box at Broadcasting House, Nairobi or be addressed to Kenya Broadcasting Corporation, P. O. Box 30456 -00100, Nairobi, Kenya so as to be received on or before **12th February 2019 at 10.00am**
- 1.4 Tenders will be opened immediately thereafter in the presence of the Candidates or their representatives who choose to attend at Broadcasting House Nairobi.

MANAGING DIRECTOR

KENYA BROADCASTING CORPORATION

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SECTION II - INSTRUCTIONS TO TENDERERS

Table of Clauses

	Page
2.1 Eligible Tenderers.....	5
2.2 Eligible Equipment.....	5
2.3 Cost of Tendering.....	5
2.4 Contents of Tender Document.....	6
2.5 Clarification of Tender Documents.....	6
2.6 Amendment of Tender Document.....	7
2.7 Language of Tender.....	7
2.8 Documents Comprising the Tender.....	7
2.9 Tender Forms.....	8
2.10 Tender Prices.....	8
2.11 Tender Currencies.....	9
2.12 Tenderers Eligibility and Qualifications.....	9
2.13 Goods' Eligibility and Conformity to Tender Document ...	10
2.14 Validity of Tenders.....	11
2.15 Format and Signing of Tenders.....	11
2.16 Sealing and Marking of Tenders.....	12
2.17 Deadline for Submission of Tender	12
2.18 Modification and Withdrawal of Tenders.....	13
2.19 Opening of Tenders.....	13
2.20 Clarification of Tenders.....	14
2.21 Preliminary Examination.....	14
2.22 Conversion to Single Currency.....	15
2.23 Evaluation and Comparison of Tenders.....	15
2.24 Contacting the KBC.....	17
2.25 Award of Contract.....	17
(a) Post Qualification.....	17
(b) Award criteria	18
(c) KBC's Right to Accept or Reject any or all Tenders.....	18
2.27 Notification of Award.....	19
2.28 Signing of Contract.....	19
2.29 Corrupt or Fraudulent Practices.....	20

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 Appendix to Instructions to Tenderers. Successful tenderers shall complete the supply, install and commissioning of the equipment by the intended completion date specified in the tender documents.

2.1.2 KBC's employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender unless where specially allowed under section 131 of the Act.

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 KBC 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 involved in corrupt or fraudulent practices or debarred from participating in public procurement shall not be eligible.

2.2 Eligible Equipment

2.2.1 All equipment to be supplied and installed 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 equipment(s) are 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 equipment is distinct from the nationality of the tenderer and shall be treated thus in the evaluation of the tender.

2.3 Cost of Tendering

- 2.3.1 The Tenderer shall bear all costs associated with the preparation and submission of its tender, and KBC, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 2.3.2 The price to be charged for the tender document shall not exceed Ksh. 1000.00
- 2.3.3 KBC shall allow the tenderer to review the tender document free of charge before purchase.

2.4. Contents of 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) Confidential Business Questionnaire Form
 - (ix) Declaration form
- 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 Tender Documents

- 2.5.1 A prospective tenderer making inquiries of the tender documents may notify KBC in writing or by post at the

KBC's address indicated in the invitation for tenders. KBC 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 KBC. Written copies of KBC's 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 KBC 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 Tender Documents

2.6.1 At any time prior to the deadline for submission of tender, KBC, 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 issuing an addendum.

2.6.2 All prospective tenderers that have obtained 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, KBC, 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 KBC, 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 the Tender

2.8.1 The tender prepared by the tenderers shall comprise the following components.

- (a) A Tender Form and a Price Schedule completed SEPARATELY in accordance with paragraph 2.9, 2.10 and 2.11 below
- (b) Documentary evidence established in accordance with paragraph 2.12 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 2.13 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
- (e) Confidential Business Questionnaire

2.9 Tender Form

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

2.10 Tender Prices

2.10.1 The tenderer shall indicate SEPARATELY on the appropriate Price Schedule the unit prices where applicable and total tender price of the equipment and installation it proposes to supply under the contract .Please note that only those bidders successful at Technical evaluation will have their Financial proposals opened. The rest will be returned unopened. Exposing the bid price in the technical proposal will lead to automatic disqualification.

2.10.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

- (i) The price of the equipment quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable;
- (ii) Charges for inland transportation, insurance, and other local costs incidental to delivery of the goods to their final destination; and
- (iii) Installation charges shall also be indicated separately for each equipment

2.10.3 Prices quoted by the tender shall remain fixed during the Tender's performance of the contract. A tender submitted with an adjustable price

quotation will be treated as non-responsive and will be rejected, pursuant to paragraph 2.22 unless otherwise agreed by the parties.

2.11 Tender Currencies

2.11.1 Prices shall be quoted in the following currencies:

- (a) For equipment that the tenderer will supply from within Kenya, the prices shall be quoted in Kenya Shillings; and
- (b) For equipment that the tenderer will supply from outside Kenya, the prices may be quoted in US Dollars or in another freely convertible currency.
- (c) Cost of installation and commissioning will be in Kenya Shillings.

2.12 Tenderers Eligibility and Qualifications

2.12.1 Pursuant to paragraph 2.1. the tenderers 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.

2.12.1 The documentary evidence of the tenderers eligibility to tender shall establish to KBC'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

2.12.2 The documentary evidence of the tenderes qualifications to perform the contract if its tender is accepted shall establish to KBC's satisfaction;

- (a) That, in the case of a tenderer offering to supply equipment under the contract which the tenderer did not manufacture or otherwise produce, the tenderer has been duly authorized by the equipment, Manufacturer or producer to supply the equipment
- (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 Document

2.13.1 Pursuant 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 equipment which the tenderer proposes to supply under the contract

2.13.2 The documentary evidence of the eligibility of the goods shall consist of 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 equipment 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 equipment
- 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 equipment for a period of two (2) years, following commencement of the use of the equipment by KBC; and
- c) A clause-by-clause commentary on KBC'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 commentary 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 KBC 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 KBC's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

2.14 Validity of Tenders

2.14.1 Tenderers shall remain valid for 120 days or as specified in the tender documents after date of tender opening prescribed by KBC, pursuant to paragraph 2.20. A tender valid for a shorter period shall be rejected by KBC as non responsive.

2.14.2 In exceptional circumstances, KBC 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.

2.15 Format and Signing of Tender

2.15.1 Tenderers shall prepare two separate Tenders, thus Technical shall be prepared separately from the Financials, clearly marking each "TECHNICAL" and FINANCIAL," as appropriate.

2.15.2 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. All pages of the tender, except for unamended printed literature, shall be initialed by the person or persons signing the tender.

2.15.3 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.

2.16 Sealing and Marking of Tenders

2.16.1 The Tenderer shall seal the TECHNICAL and FINANCIALS in separate envelopes, duly marking the envelopes as “TECHNICAL” and “FINANCIALS.” The envelopes shall then be sealed in an outer envelope.

2.16.2 The inner and outer envelopes shall:

- (a) Be addressed to KBC at the address given on the Invitation to Tender.

1.5 Bear the tender number and name in the Invitation to Tender and the words “DO NOT OPEN BEFORE **12th February 2019 at 10.00am**

2.16.3 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” OR in the case of FINANCIALS if one did not qualify from the TECHNICAL evaluation

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

2.17 Deadline for Submission of Tenders

1.6 2.17.1 Tenders must be received by KBC at the address specified under paragraph 2.17.2 not later than **12th February 2019 at 10.00am**

2.17.2 KBC 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 KBC and candidates previously subject to the deadline will therefore be subject to the deadline as extended

2.17.3 Bulky tenders, which will not fit in the tender box, shall be received by KBC as provided for in the Appendix.

2.18 Modification and Withdrawal of Tenders

2.18.1 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 KBC prior to the deadline prescribed for submission of tenders.

2.18.2 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 cable, telex but followed by a signed confirmation copy, postmarked not later than the deadline for submission of tenders.

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

2.18.4 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 Opening of Tenders

1.7 KBC will open all tenders in the presence of tenderers' representatives who choose to attend on **12th February 2019 at 10.00am** at KBC Vip Canteen Broadcasting House, Harry Thuku Road, Nairobi
The tenderers' representatives who are present shall sign a tender opening register evidencing their attendance.

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

2.19.2 KBC will prepare minutes of the tender opening.

2.20 Clarification of Tenders

2.20.1 To assist in the examination, evaluation and comparison of tenders KBC 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.

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

2.21 Preliminary Examination and Responsiveness

2.21.1 KBC will examine the Technical tenders to determine whether they are complete whether required sureties have been furnished, whether the documents have been properly signed, and whether the tenders are generally in order.

2.21.2 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 may be forfeited. If there is a discrepancy between words and figures the amount in words will prevail
- 2.21.3 KBC 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.
- 2.21.4 Prior to the detailed evaluation, pursuant to paragraph 2.23 KBC 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. KBC's determination of a tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.
- 2.21.5 If a tender is not substantially responsive, it will be rejected by KBC and may not subsequently be made responsive by the tenderer by correction of the non conformity.

2.22 Conversion to Single Currency

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

2.23 Evaluation and Comparison of Tenders

- 2.23.1 KBC will evaluate and compare the tenders which have been determined to be substantially responsive, pursuant to paragraph 2.22
- 2.23.2 KBC's evaluation of a tender will exclude and not take into account
- (a) In the case of equipment manufactured in Kenya or equipment of foreign origin already located in Kenya, sales and other similar

taxes, which will be payable on the goods if a contract is awarded to the tenderer; and

- (b) Any allowance for price adjustment during the period of execution of the contract, if provided in the tender.

2.23.3 The comparison shall be of the ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within Kenya, such price to include all costs, as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods.

2.23.4 KBC's evaluation of a tender will take into account, in addition to the tender price and the price of incidental services, the following factors, in the manner and to the extent indicated in paragraph 2.23.5 and in the technical specifications:

- (a) Delivery and installation schedule offered in the tender;
- (b) Deviations in payment schedule from the specifications in the Special Conditions of Contract;
- (c) The cost of components, mandatory spare parts and service;
- (d) The availability in Kenya of spare parts and after-sales service for the equipment offered in the tender;

2.23.5 Pursuant to paragraph 2.24.4 the following evaluation methods will be applied

- (a) *Delivery schedule*

KBC requires that the equipment under the Invitation for Tenders shall be delivered at the time specified in the Schedule of Requirements. Tenders offering deliveries longer than KBC's required delivery time will be treated as non-responsive and rejected.

- (b) *Deviation in payment schedule*

Tenderers shall state their tender price for the payment of schedule outlined in the special conditions of contract. Tenders will be evaluated on the basis of this base price. Tenderers are, however, permitted to state

an alternative payment schedule and indicate the reduction in tender price they wish to offer for such alternative payment schedule. KBC may consider the alternative payment schedule offered by the selected tenderer.

(c) *Spare parts and after sales service facilities*

Tenderers must offer items with service and spare parts back up. Documentary evidence and locations of such back up must be given. Where a tenderer offers items without such back-up in the country, he must give a documentary evidence and assurance that he will establish adequate back-up for items supplied.

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

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

2.24 Contacting KBC

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

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

2.25 Award of Contract

(a) **Post-Qualification**

2.25.1 In the absence of pre-qualification, KBC 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.

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

2.25.3 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 KBC will proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.

(b) Award Criteria

2.25.4 KBC 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.

2.25.5 To qualify for contract awards, the tenderer shall have the following:

- a) Necessary qualifications, capability experience, services, equipment and facilities to provide what is being procured.
- b) Legal capacity to enter into a contract for procurement
- c) Shall not be insolvent, in receivership, bankrupt or in the process of being wound up and is not the subject of legal proceedings relating to the foregoing.
- d) Shall not be debarred from participating in public procurement.

(c) KBC's Right to Accept or Reject Any or All Tenders

2.26.6 KBC 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 tenderer of the grounds for KBC's action

2.26.7 KBC may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination

2.26.8 KBC shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 7 days of receiving the request from any tenderer.

2.26.9 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.

2.27 Notification of Award

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

2.27.2 The notification of award will signify the formation of the Contract but will have to wait until the contract is finally signed by both parties. Simultaneous other tenderers shall be notified that their tenders have not been successful.

2.27.3 Upon the successful Tenderer's furnishing of the performance security pursuant to paragraph 2.29, KBC will simultaneously inform the other tenderers that their tenders have not been successful

2.28 Signing of Contract

2.28.1 At the same time as KBC notifies the successful tenderer that its tender has been accepted, KBC will simultaneously inform the other tenderers that their tenders have not been successful.

2.28.2 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

2.29 Corrupt or Fraudulent Practices

2.29.1 KBC requires that tenderers observe the highest standard of ethics during the procurement process and execution of contracts. A tenderer shall sign a declaration that he has and will not be involved in corrupt or fraudulent practices.

3.30.2 KBC 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.

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

Appendix to Instructions to Tenderers

Notes on the Appendix to the Instructions to Tenderers

1. The Appendix to instructions to the tenderers is intended to assist KBC in providing specific information in relation to corresponding clause in the instructions to Tenderers including in Section II and has to be prepared for each specific procurement.
2. KBC should specify in the appendix information and requirement specific to the circumstances of KBC, the goods to be procured and the tender evaluation criteria that will apply to the tenders.
3. In preparing the Appendix the following aspects should be taken into consideration;
 - (a) The information that specifies and complements provisions of Section II to be incorporated
 - (b) Amendments and/or supplements if any, to provisions of Section II as necessitated by the circumstances of the goods to be procured to be also incorporated
4. Section II should remain unchanged and can only be amended through the Appendix.
5. Clauses to be included in this part must be consistent with the public procurement law and the regulations.

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.

INSTRUCTIONS TO TENDERERS	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
2.18.1	12th February 2019 at 10.00am
2.20.1	<i>As in 2.18.1 above</i>
2.3.2	The price to be charged for the tender document shall be KES 1,000 and free for downloading from the website
3.23	Bidder shall provide a bid security of KES1,000,000/=

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 KBC 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 KBC under the Contract.
- (d) “KBC” 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 KBC for the procurement installation and commissioning of equipment to the extent that they are not superceded by provisions of other part of contract.

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 and will be treated thus in the evaluation of the tender.

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 Candidate shall not, without KBC’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 KBC 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 KBC'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 KBC and shall be returned (all copies) to KBC on completion of the Tenderer's performance under the Contract if so required by KBC

3.6 **Patent Rights**

- 3.6.1 The tenderer shall indemnify KBC 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 KBC's country

3.7 **Performance Security**

- 3.7.1 Within twenty eight (28) days of receipt of the notification of Contract award, the successful tenderer shall furnish to KBC the performance security where applicable in the amount specified in Special Conditions of Contract.
- 3.7.2 The proceeds of the performance security shall be payable to KBC 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 KBC and shall be in the form of
- a) Cash
 - b) Bank guarantee
 - c) Such insurance guarantee approved by the Authority
 - d) Letter of credit
 - e) Guarantee by a deposit taking microfinance institution, Sacco society, the Youth Enterprise Development Fund or the Women Enterprises Fund
- 3.7.4 The performance security will be discharged by KBC and returned to the Candidate not late 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 KBC or its representative shall have the right to inspect and/or to test the equipment to confirm their conformity to the Contract specifications. KBC 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. All reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to KBC.
- 3.8.3 Should any inspected or tested equipment fail to conform to the Specifications, KBC may reject the equipment, and the tenderer shall either replace the rejected equipment or make alterations necessary to make specification requirements free of costs to KBC.
- 3.8.4 KBC's right to inspect test and where necessary, reject the equipment after the equipment arrival and installation shall in no way be limited or waived by reason of the equipment having previously been inspected, tested and passed by KBC 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 and packaging of the equipment 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 equipment, documents and installation of the same shall be made by the tenderer in accordance with the terms specified by KBC in its Schedule of Requirements and the Special Conditions of Contract

3.11 **Insurance**

- 3.11.1 The equipment 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 by KBC as specified in the contract

3.13 Prices

3.13.1 Prices charged by the tenderer for equipment delivered and installation 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 requests shall be processed by KBC within 30 days of receiving the request.

3.14. Assignment

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

3.15. Subcontracts

3.15.1 The tenderer shall notify KBC 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 KBC 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 equipment within the periods) specified in the Contract, or within any extension thereof granted by KBC

- (b) If the tenderer fails to perform any other obligation(s) under the Contract
- (c) If the tenderer, in the judgment of KBC has engaged in corrupt or fraudulent practices in competing for or in executing the Contract

3.16.2 In the event KBC 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 KBC for any excess costs for such similar equipment.

3.17. Termination for convenience

3.18. Liquidated Damages

3.18.1 If the tenderer fails to deliver and/or install any or all of the items within the period(s) specified in the contract, KBC 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.

3.19. Resolution of Disputes

3.19.1 KBC 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

3.19.2 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 that the dispute be referred for resolution to the formal mechanisms specified in the SCC.

3.20. Language and Law

3.20.1 The language of the contract and the law governing the contract shall be English language and the Laws of Kenya respectively unless otherwise specified in the SCC

3.21. Force Majeure

3.21.1 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.

3.22 Notices

3.22.1 Any notice given by one party to the other pursuant to this contract shall be sent to other party by post or by fax or Email and confirmed in writing to the other party's address specified.

3.22.2 A notice shall be effective when delivered or on the notices effective date, whichever is later.

3.23 Tender Security

3.23.1 The tenderer shall furnish, as part of its tender, a tender security for the amount and form specified in the Appendix to Instructions to Tenderers.

The tender security shall be in the amount not less than 2 percent of the tender price.

3.23.2 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

3.23.3 The tender security shall be denominated in Kenya Shillings or in another freely convertible currency, and shall be in the form of

- a) Cash
- b) A bank guarantee
- c) Such insurance guarantee approved by the Authority
- d) Letter of credit
- e) Guarantee by a deposit taking microfinance institution, Sacco society, the Youth Enterprise Development Fund or the Women Enterprises Fund

3.23.4 Unsuccessful Tenderer's tender security will be discharged or returned as promptly as possible as but not later than thirty (30) days after the expiration of the period of tender validity prescribed by the Procuring entity.

3.23.5 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

3.23.6 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
 - 1. or
 - ii) to furnish performance security in accordance with paragraph 2.28
- c) If the tenderer rejects correction of an arithmetic error in the tender.

SECTION IV - SPECIAL CONDITIONS OF CONTRACT

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 these in the GCC.

4.2 Special conditions of contract as relates to the GCC

REFERENCE OF GCC	SPECIAL CONDITIONS OF CONTRACT
3.23	Kshs.1,000,000.00
3.7	Successful bidder to provide a performance security 10% of the Contract price

SECTION - V- SCHEDULE OF REQUIREMENTS AND PRICES

Notes on Schedule of Requirements and Prices

5.1. The contract with KBC will be for the **DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND COMMISSIONING OF DIGITAL TV HEADEND**

5.2 The tenderers may use additional paper as will be necessary to indicate the details of their costing.

SECTION V - SCHEDULE OF REQUIREMENTS AND PRICES

No.	Item Description	Quantity	Unit Price	Installation Period	Installation Price	
1	DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND COMMISSIONING OF DIGITAL TV HEADEND	As per detailed tender schedule	Separate Document		Separate document	

• All prices quoted shall be inclusive of all applicable taxes

• Bidders MUST provide a detailed breakdown of the prices for all the items to be installed.

Authorized Official: _____
Name

Signature

Date

SECTION VI - TECHNICAL SPECIFICATIONS

6.1 GENERAL

- 6.1.1. These specifications describe the basic requirements for equipment. Tenderers are requested to submit with their offers the detailed specifications, drawings, catalogues, etc for the products they intend to supply.
- 6.1.2 Tenderers must indicate on the specifications sheets whether the equipment offered comply with each specific requirement.
- 6.1.3 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. KBC reserves the right to reject the products, if such deviations shall be found critical to the use and operation of the products
- 6.1.4 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

SECTION VI – TECHNICAL SPECIFICATIONS

THE DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND COMMISSIONING OF DIGITAL TV HEADEND SYSTEM.

The scope of the Tender includes the design, manufacture, testing, factory training and commissioning, packing, shipping, clearing and forwarding, transportation up to project site, loading & unloading, storage in safe custody, erection, integration to existing electrical/electronic components/power supply, carrying out preliminary tests at site, training and commissioning, performance testing and operation and on-site training and eventual handing over to the KBC the SYSTEM installed for the Digital Video Headend at Broadcasting house Nairobi.

INTRODUCTION

The Kenya Broadcasting Corporation (KBC) intends to acquire a new Headend system that will facilitate the functions of Audio Video Acquisition, Encoding, Processing, Management, distribution and transmission for its content business. The corporation is seeking for a solution that is IP centric, utilizing flexible hardware that supports multiple video formats, Multi-language applications accommodating various audio compression formats and conditional access system. The design should be future proof to allow easy Hardware upgrades without platform replacement and offer technologies that have demonstrated greater efficiency.

SYSTEM ARCHITECTURE

The system will be configured for Content Acquisition in various formats from the Satellite, Fiber Receivers, live cables, off-Air etc and must have the capacity for signal conversion, Decryption and Decoding. Further it should enable encoding into various formats to give choices of transmissions in different quality standards. System should incorporate necessary engines for Video Processing, Transrating, Splicing, Multiplexing, and providing opportunities for Valued Add Services applications.

The system will form the super hub where broadcast audio video and data signals from our clients across the country will link their content for eventual transmission on the DVB-T2 platform. This will be a geographically wide area distributed network of content service provider clients whose content can be ingested from different locations. The Content Management is to be centralized at the Headend with a facility for remote control actions at various rebroadcast sites. The content contribution to the Headend shall involve third Party Equipment and the design should take this into account.

The Limuru site, which serves the City of Nairobi and its environs and is located 30 km away, will be linked via Radio Microwave links, Satellite and fiber. Appropriate reception and input equipment to the broadcast transmitters must be designed.

The DVB-T2 transmitters located at Limuru will carry different Multiplex Streams catering for separate programs depending on agreed compressions and bitrates. We are interested in new technologies that can enable flexible and value adds services on the stream as well.

SYSTEM DESCRIPTION

The Tenderer/Bidder is expected to design and supply an end-to-end processing chain solution on a **TURN-KEY BASIS** for a Digital Video and Value add services Headend System at Broadcasting House Nairobi and other units at Terrestrial transmitting site at Limuru plus local ingestion equipment at various sites across the country interlinked through IP and Radio networks. Apart from the Headend, the system will incorporate content distribution system via cable, radio links and satellite

The solution will take into account all factors and requirements necessary to achieve the desired outcomes as discussed and agreed upon with KBC i.e.:

- Content Acquisition,
- Encoding and multiplexing
- Processing and Value add
- Monitoring in both KBC Headend station and Earth station site
- Content distribution (via fiber, microwave and satellite)
- Standalone playout of SD/HD signals for KBC and future regional channels.
- Terrestrial transmission and reception equipment for Limuru DVBT transmitting station

The Digital video headed System is expected to provide capacity for at least 100 video programs scalable to 150 programs and in addition enable independent audio and data services streams.

SCOPE OF WORK

The work shall include the Design, Manufacturing, Supply, Installation, Testing and Commissioning of the Digital Video Headend System and integrating it with Terrestrial Broadcast Transmitting Systems to the satisfaction of KBC at Broadcasting House, Harry Thuku Road, Nairobi and at the Limuru Terrestrial Transmitting Site on a **TURN-KEY** basis. The Tenderer/Bidder will be provided with all technical details of existing systems that will work in conjunction with new system.

A Mandatory pre-bid site meeting will be held on 5th February 2019 at Broadcasting house Nairobi, Harry Thuku Road, and at the Limuru Transmitting site during which all requests for clarification from prospective bidders will be addressed.

In detail:

1. The entire works shall be performed on TURN-KEY basis. All the works related to the design, testing, installation and proper functioning of the systems shall be carried out by the Tenderer/Bidder at the prices offered.
2. The bidder MUST verify the correctness of the site specifications and data by visiting the project sites and carrying out comprehensive survey.
3. All works required for proper installation of Headend system including any necessary civil works (if any), shall be done by the Tenderer/Bidder.
4. All necessary electric cable/connections shall be supplied/made by the Tenderer/Bidder as per the requirements at the sites.
5. All the wiring required to energize the supplied equipment shall be done by the Tenderer/Bidder including supply of all required materials. Electrical installation shall be in accordance with IEE regulations.
6. Tenderers/Bidders must submit with their offers the detailed specifications, drawings, brochures, complete bills of quantities (BOM), catalogues, etc for all the products they intend to supply and integrate in to the system.
7. Winning bidders will be expected to supply the quoted for equipment with service manuals either in hard copy or CD-ROM. The prices quoted for the system /equipment will be assumed to include the Costs of the service manuals.
8. After completion of the proposed works, clearances of all temporary works/materials shall be the sole responsibility of the Tenderer/Bidder and this shall be removed immediately after the requirement of such temporary work is completed.
9. General Aesthetics & cleanliness in regard to the installation of various systems shall have to be maintained in accordance with the aesthetics of the site.
10. The Tenderer/Bidder shall supply/ install the necessary tools/instruments required for proper operation of the Installed systems and this must be included in the bill of quantities
11. The complete system installed shall be warranted by the Tenderer/Bidder against any manufacturing/design/ installation defects for a **minimum period of 2 years** from the date of commissioning.
12. Warranty period will include rectification/replacement of all the defective components/items.
13. The Tenderer/Bidder will be required to conduct a min **ONE (1) weeks Factory training** of the KBC's user personnel regarding operation, maintenance and repairs of the System. The Tenderer/Bidder will meets all the costs of the factory training including airfares, accommodation, transport and out out-of pocket expenses.
14. After installation of the System; the Tenderer/Bidder will be required to conduct a **ONE week on-site training** of the KBC's user personnel regarding operation, maintenance and repairs of the System.
15. The Tenderer/Bidder will meet all the costs of the onsite training including transport where necessary.
16. Rectification of all the defects developed in System during Warranty period shall have to be done by the Tenderer/Bidder promptly, at the most within 24 hrs from the receipt of compliant. To facilitate this, the bidder must show clearly

- how designed system incorporates remote IP access to the system from any part of the world for the purpose of maintenance and upgrades.
17. The details and number of the personnel to be trained will be as agreed with and APPROVED by KBC.
 18. Copies of all software's used in the transmitter and allied equipments should be provided in the form of CD(s), besides being loaded into the system.
 19. Software upgrades within 3 years of installation should be supplied free of cost. KBC should be registered as an ultimate user at the time of purchase of all software licenses without specifying any time limit or without specifying end of life of the software.
 20. The prices for Software wherever required should be included with the cost of equipment.

MANDATORY TECHNICAL REQUIREMENTS

1. Pre-bid site meeting attendance. Bidders must submit, with the bid, a signed copy of Confirmation of Mandatory Pre-bid Meeting Attendance form.
2. Tenderers/Bidders **MUST** have at least 10 years of experience in the Design and Installation of DVBT Transmitting System.
3. Tenderers/Bidders **MUST** provide detailed documentary evidence/proof of supply and installation and commissioning of at **LEAST 3 (three)** Digital Video Headed installations around the world in the last 10 years.
4. Tenderers/Bidders **MUST** provide a schedule of the timelines and deliverables for the implementation period of the Project from the time of the letter of offer to the successful commissioning of the Project.
5. Tenderers/Bidders **MUST** submit the CVs of the team to be involved in the implementation of the project which must include details confirming they are in their employment and periods they have worked with the company.
6. Tenderers/Bidders that do not Manufacture or produce the Goods they offer to supply and/or integrate shall submit the Manufacturer's Authorization using the format shown in "Manufacturer's Authorization Form" attached.
7. Bids submitted by a joint venture of two or more firms as partners **MUST** be signed so as to be legally binding on all partners with one partner nominated as being lead contractor, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.

EXISTING SYSTEM DESCRIPTION

The existing DVB-T2 Platform Headend at Broadcasting house has the structure below:

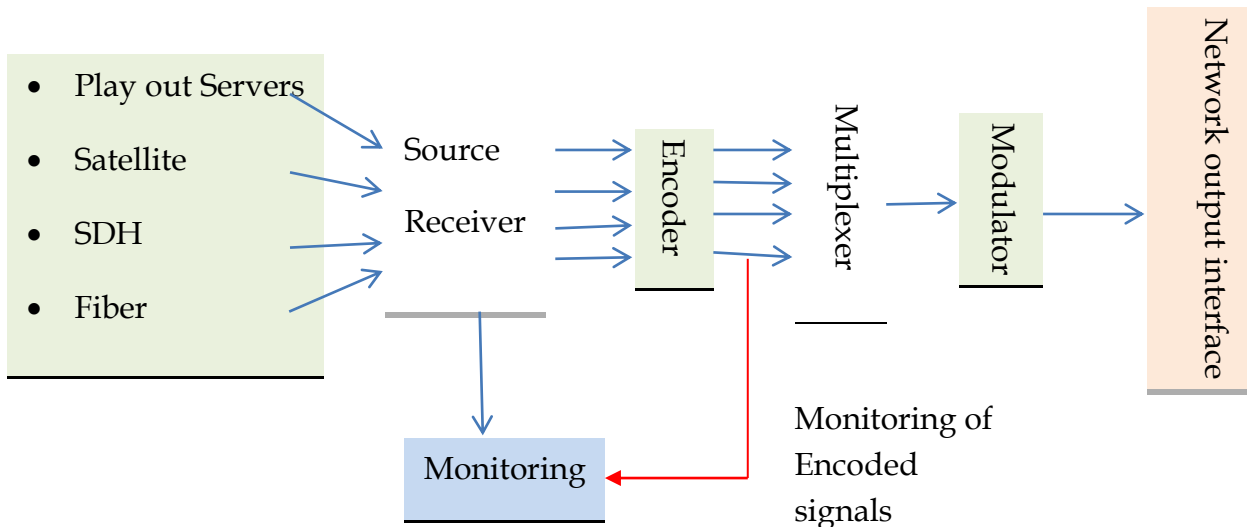


Fig. Signal flow path in the DVB-T2 Headend

Note: Content providers Supply their own IRDs to the system

Headend Floor Plan Diagram

Headend Floor Plan Diagram at Broadcasting House is as per drawing attached in **Annex1** below.

Tower at Limuru (existing) - 120 m

A drawing of the top section of the existing Tower at Limuru (proposed host to the Combined RF system for the additional transmitting equipment) is attached as **Annex 2** below.

Details of Limuru transmitter site.

1. Tower height - 120 Meters
2. GPS Coordinates: 36° 38' 30"E 01° 09' 02"S 2283M ASL
3. Distance of tower from transmitter building - 20Metres

Power

AC 3 phase, 415 V, 50Hz power exist at Broadcasting House and at Limuru site.

SYSTEM DETAILS AND SPECIFICATIONS

The proposed system is expected to comprise as a minimum; the following system components and deliverables and any other systems/components necessary to achieve a fully functional Headend system as described in this document.

No	Item description	Quantity required
1.	Headend Multiplex with capacity of up to 150 TV channels with full redundancy (N+1) per stream	1
2.	DVBT2 Transmitters Complete systems in 1+1 configuration (as detailed elsewhere in document) with RF Combiner system at Limuru	4
3.	Multi-channel multi-format ingest and playout server (this is for KBC's contribution to the Headend)	1
4.	High capacity modular UPS System for Headend - Nairobi	one
5.	High capacity modular UPS System for Transmitters - Limuru	1
6.	Air-conditioning System for Digital Video Headend- Nairobi site	one
7.	Sub-Headends for Regional TV (channel insertion, regional variation, and advertising substitution) to serve Kisumu, Webuye, Mombasa, Nyeri, Garissa, Nyambene and Eldoret , Kitui regions.	Eight
8.	Control and Management system	One
9.	Regulatory requirements (EPG (7 days) , Subtitling, Teletext etc)	One
10.	Monitoring - Audio Visual, etc. (video wall) (One for Broadcasting House One for Limuru Site	Two
11.	Linking to Limuru via Microwave	1
12.	Linking to Limuru via dedicated fibre	1
13.		lot
14.	Technology - to incorporate IP server based Headend system and remote web server operation, control and monitoring for all the sub-headends and transmitters.	One
15.	Testing , Training & Commissioning	lot
16.	Any other systems/components necessary to achieve a fully functional Headend system as described in this document.	lot

PREREQUISITE FEATURES

HEADEND

The envisaged system shall provide for but not be limited to the following:

- Digital Video Headend solution to cover the end-to-end processing chain.
- Signal contribution to Headend - SDI and IP plus other formats (Content providers Supply their own IRDs to the system)
- **H. 264** Compression, multiplexing and capable of adapting to SFN
- System must be IP Based and Fully IP managed infrastructure
- Support for all broadcast codecs (e.g., MPEG-2, H.264 and HEVC) and formats (e.g., SD, HD)
- Deployment of Statistical multiplexing
- Multiplexes prepared and injected easily to Satellite on ASI and IP formats
- High availability system, efficient redundancy mechanisms with no single point of failure
- seamless switch-over from main to backup path
- Multiplexes transported to the DTT over satellite, Microwave and Fiber
- Video Quality monitoring
- User-friendly network management system
- To incorporate Value-added services e.g. EPG (7 days), Subtitling, Teletext , enhanced background information on programs, internet access, video-on-demand, near video-on-demand e.t.c
- Regional Headends capable of content ingest compression and ad insertion and/or regional variation and/or advertising substitution/ Local TV/Channel Insertion, /Targeted ads insertion, Targeted News insertion, Targeted emergency Alerts, Targeted ads insertion,
- Capability for future multiplex extension
- Regional subheads in Kisumu, Mombasa, Nyeri, Nakuru, Nyambene, Eldoret.
- Multiplexer shall support DVB Simulcrypt connections to well known CAS vendors for conditional access scrambling (System design to consider SD resolutions on a FTA that is upgradable to introduce CAS in future where demand requests)

Mandatory features

- System must be IP based
- Single web interface for all components
- Seamless input / output failover mechanism
- Server redundancy in N+1 configuration
- Bit-identical output streams including SFN information
- Functionality software defined
- Flexible workflows, IP defined
- Multi-Codec support for video and audio
- HD, UHD and HDR expandable
- Low latency switching time for failover scenarios
- Multi I/O signal support
- Modular software

- Built-in automation capability

SOFTWARE

1. All the necessary software required for proper working of the system is to be supplied in original and should be licensed to KBC with perpetual validity.

CONTROL AND MANAGEMENT

1. The Network Management System shall be located at Headend
2. The Management system shall control the operation, redundancy switching and configuration of all parameters of encoders, multiplexers and switching.
3. To have capability to interrogate the sub headends and the Limuru transmitters.

VIDEO WALL/MONITORING

To monitor both pre-processed and off air signals

VIDEO WALL

- Supporting all codecs & protocols available in the market: Baseband (SD/HD/4K), TSoIP, ASI,...etc. ASPEN, AIMS, SMPTE 20221/2- 6, 7 and 2110. As well as MPEG 2, MPEG4 and HEVC.
- Fingerprinting: System should be able to provide content compare to ensure right channel is on-air with bow bit rate (below 100Kb/s) from remote system.
- Reference based Video latency measurement incl. lip sync (AV Delay) for some of the streams.
- Real-time Quality degradation (Live Quality Monitoring) and PSNR/SSIM/MOS-V measurement.
- Latency between reference signal and measured signal must be automatically synchronized.
- Possibility of having 4K Display output on HDMI.
- Dashboard-View and Preview via WebUI (Web User Interface) and Remote monitoring TSoIP (Transport Stream over IP).
- MPEG TS Monitoring: ERT 101 290
- Monitoring on A/V level (content monitoring) to include:
 - Video : Loss, Freeze, Black
 - Audio, Loss, Silence, Overload
- HDR metadata monitoring
- Audio preview
- Audible Audio alarm in case of error
- Video freeze whitelisting: to reduce amount of false negative scene, which are known to be of static content.
- Easy migration to cloud/Virtualization environment
- Software defined solution and based on Linux Operating system.
- To enable decentralized monitoring setup and allow any-signals on any-screen functionality.
- SNMP and API support

- Superior Multi-viewing quality
- Full OTT protocol support (Apple HLS, Adobe HDS, Microsoft HSS/MSS, Adobe RTMP, CMAF and DASH, HbbTV, Icecast, OGG)
- OTT Upload and download monitoring

Layout	- tile presets: video, Teletext, audio, quality, waveform, status - Tiles freely positionable - Multiple tile sizes for video and audio services
Visualization	- user-configurable Positioning of TV and Radio service tiles
Video track	- aspect ratio handling automatic scaling to correct aspect ratio, - Support of dynamic aspect ratio changes - Video codec, bit rate, aspect ratio, resolution (SD/ HD), Subtitle, Teletext
Audio track	- audio meter scale, peak indicator, RMS indicator
Error notifications	- animated transparent overlays per service tile (OSD)
Clocks	- analog and digital
SMTP support	- email notification
User Interface	- web-based user interface
Remote device monitoring and maintenance	- SNMP, web-configuration of services and software upgrades, remote control and automation
Software Config. , version management	- to be field-upgradeable via web UI

Two monitoring solution will be required:

- One for the Headend
- And one for the Limuru TX site

Note: Following the award of the project, and during the design discussions; KBC shall have the right to review the number of sources and possibilities of revising the sources to improve the overall workflow of signal monitoring and meet current and future requirements of 4K and IP.

TRANSMITTERS (1+1 configuration)

1. The TV transmitters are to be supplied as "a complete system"
2. TXs, RF system, input and monitoring equipment, cooling system, UPS, Isolation transformer, AVR, surge suppressors, interconnecting cables, installation material etc.
3. Every transmitter set to have own UPS, AVR and isolation transformer

Features and Specifications

- Overall entire transmitter system efficiency of >38%
- High power density
- Rapid channel change using a single amplifier
- Scalable system
- All in one transmitter with built in pump unit
- Built in band pass filter
- Advanced Doherty technology
- Touch screen transmitter control screen
- Web interface to operate the transmitter remotely
- Spares part availability 10 years after product discontinuation

5 KW (DVB-T2 RMS) UHF conforming to DVB-T2 standards (EN302755) comprising of:

- a) Dual Exciter System in 1+1 with changeover facility
- b) Modular Power Amplifier System
- c) Control System
- d) Liquid cooling system
- e) Transmitter cabinet
- f) Software for remote operation and monitoring of transmitter parameters through web interface,
- g) Licensed CD copies of all software(s) used in the transmitter and allied systems
- h) RF system – Combiner, feeder cable, patch panel, dummy load, panels.
- i) The operating frequencies: - KBC responsibility

Standard	DVB-T2 (EN302755)
Power	5 KW (RMS)
Cooling	Liquid Cooled
Channel bandwidth	1.7/5/6/7/8 MHz
Inputs	2 × ASI (BNC, 75 Ω), 2 × TSoIP (Gigabit Ethernet)
General data	
Frequency range	470 MHz to 790 MHz
Supply voltage	415 V/240 V
Max. installation height	2000 m above sea level
Operating temperature range	+1 °C to +45 °C
Relative humidity (max.)	95 %, noncondensing (indoor)

Synchronization	
Reference frequency	10 MHz, 0.1 V to 5 V (V_{pp}) or TTL, BNC
Reference pulse	1 Hz, TTL, BNC
Status panel with buttons and LEDs	local operation
Transmitter display unit	local display and operation touchscreen
Ethernet interface, RJ-45	web interface: local, remote network management interface via SNMP

MULTI-CHANNEL MULTI-FORMAT INGEST AND PLAYOUT SERVER

(Installed and wired to Headend system for playout of KBC and independent channels)

- The server shall provide a min. 4 bi-directional channels which can be operated independently from each other in three operational modes: Play, Record and Transform.
- The server input/output channels shall support 3G SDI I/Os for standard definition and high definition (720p & 1080i) video.
- The server shall support the given modes on a single channel without need to re-start or reboot.
- The server output must be available with up/down and cross conversion.
- Back-to-back playback of clips of different formats and codecs/wrappers, playback any mix of SD and HD content on a single timeline with the same frame rate are required.
- Comprehensive protocol support for control by wide range of automation and other applications through VDCP and Sony 9-pin as well as web services for Playout (MOS 3.X) and Ingest (FIMS).
- The server shall have the ability to record, store and playback multiple formats of media at the same time, including HD/SD MPEG-2 I-Frame & Long GOP, DV25, IMX 30/40/50, DVCPRO and DVCPRO 50, XDCAM-HD (all MXF OP1a) as well as Apple ProRes (MOV).
- The server shall support the given codecs on all 4 channels simultaneously in any combination.
- The server shall support uncompressed media like DPX and TIFF files
- The server shall support QuickTime formats natively
- Material must be able to play out while being recorded
- The server shall have internal media storage and shall provide at least 250 hours @ 50 Mbps of RAID 6 configuration
- To have 14TB internal storage.
- The storage shall be accessible to connected clients via SMB, NFS and FTP. Files shall be stored natively on the storage, with no re-wrapping while being copied to or from the internal storage.
- The OS disks shall be mirrored for redundancy; the media storage portion shall at least support RAID levels 5 and 6.

- All moving parts of the server need to be accessible directly, without the need to open the chassis.
- The video server shall have hot swappable disk drives and power supplies.

SERVER CONTROL

- A comprehensive, easy to use software application for server control.
- To have Tools/applications to control all ports in Record or Play.
- Tools to support crash, VTR control and scheduled recordings.
- To include playout list creation, individual clip looping or entire list loops, and dynamically handling of changes to the list's contents.
- To allow new clips arriving on the server to be immediately inserted into an active list at any desired point.
- Studio playout and multi-camera ingest software must be designed and operational in a clear client-server architecture.
- In case of a failure of the client, server must keep playout and ingest running without interruption.
- Possibility to change the play list such that the next clip "to air" may be removed and /or replaced by another clip in a meaningful distance to "On air" point.
- **There shall be optionally SW available which can pick up a lost control connection to a video channel and seamlessly resume ingest and playout operations without losing information about current and future scheduled operations.**
- Total of 16 SD/HD SDI Channels (4 inputs & 12 Playout channels)
- To use standard IT server hardware and very high quality SDI video cards
- Easy migration to IP in the future without Chassis or Video Board replacement.

UPS SYSTEMs

1. Provide High capacity modular UPS System for the Headend at Broadcasting House
2. Provide High capacity modular UPS System for the Transmitters at Limuru.
3. based on site requirements and to take into account the equipment the bidder proposes for the Headend

AIR-CONDITIONING SYSTEM

1. Provide adequate cooling for the Headend.
2. Design to be based on site requirements and take into account the equipment the bidder proposes for the Headend.

SUB-HEADENDS

1. Sub-headends for will be required for the following regions: Kisumu, Mombasa, Nyeri, Nakuru, Nyambene and Eldoret regions.
2. To have capacity for channel insertion, regional variation, and advertising substitution
3. The subheads are required to broadcast 17 channels from the National stream and a minimum of 3 (three) inserted locally.
4. A single 2.5 KW DVB-T2 transmitter exists at each of these regions.

LINKING

1. Provide linking of Headend output to the Limuru Transmitters through Microwave links
2. Microwave link:
 - Microwave terminal equipment
 - bidder to provide for carriage of all services from Broadcasting House to Limuru site
 - 5-7 GHz band
 - Towers available at both sites
 - Line of sight linkage
3. Provide a redundant path through fibre linking.
 - Fibre from several providers is available at both sites
 - Optical fibre lease is KBC's responsibility
 - Fibre terminal equipment – bidder to provide for carriage of all the services from Broadcasting House to Limuru site.

OPERATOR TRAINING

1. FACTORY-TRAINING

- An itemized costs proposal for Factory-training to KBC Engineers against this tender at relevant Manufacturer's works for installation, testing, commissioning & operation of the SYSTEM should be attached with the offer.
- The training should cover theoretical concepts, demonstration of features, Software, operational & maintenance instructions, fault finding, circuit tracing, component/module replacements, trouble shooting, preventive maintenance and other relevant topics etc. related to the transmitter and auxiliary equipment.

2. ON-SITE TRAINING

- ON-site training to KBC Engineers against this tender on installed systems including installation, testing, commissioning & operation of the SYSTEM should be attached with the offer.
 - The technical commissioning of the DVB-T2 System will include training on the operation of all the components installed, maintenance, troubleshooting, monitoring and operation of the entire System.
3. It will be verified that the operating personnel are adequately trained.

COMMISSIONING TEST

1. Complete commissioning of the DVB-T2 System, function tests, and trial service of the System.
2. All installations and equipment will be inspected and their functionality will be tested.
3. All components, electrical works and civil works will be visually checked for compliance with the technical specification, Guidelines/Manuals of delivered equipment, build plans, state of the art engineering works.
4. Commissioning tests will be carried out to demonstrate that the DVB-T2 System operates according to the technical specifications and under all available operating conditions.
5. At the end of the Commissioning test, the Contractor and KBC will sign a FINAL ACCEPTANCE certificate.

DELIVERY PERIOD/TIMELINES

1. Delivery period and timelines should be clearly demonstrated in a detailed Gantt Chart.

WARRANTY

1. The respective manufacturer(s) shall guarantee the satisfactory working of all the Headend equipment without any fault & defect for **two (2)** years from the date of completion of acceptance test of the System.
2. Any defect/ failure of component, module, assembly of any equipment and it's nonperformance during this period is to be set right by the bidder/manufacturer(s) free of cost including the delivery of the repaired/replaced item(s) at the premises of the KBC.

ESSENTIAL SPARE PARTS

1. For Transmitter System: The minimum recommended essential spares (modules, PCBs, Components etc.) required for maintaining continued service

- of transmitter system in a reliable manner shall be quoted separately by the supplier.
2. The minimum recommended essential spares may be based on predicted rate of failure and requirement for three years.
 3. For OTHER equipment: The minimum recommended essential spares required for maintaining continued service of the input chain in a reliable manner for three years shall be quoted separately by the supplier.
 4. Spares warranty: Must provide Guarantee of availability of spares for 10 years for the Transmitter and 5-7 years for all other equipment that use IT Hardware products (PCs, Servers) after product discontinuation

SPECTRUM ALLOCATION

1. The following frequency band has been allocated for use of digital terrestrial television broadcasting systems (DVB-T2)in Kenya:

UHF: 470 to 862 MHz

The KBC will be responsible for seeking any additional frequencies that may be required from the regulatory authority (CA).

DOCUMENTATION

1. The system documentation will include as built plans, schematic diagrams, wiring diagrams, datasheets, technical specifications, and installation and operation manuals for each component of the installed system.

BID SUBMISSIONS GUIDELINES

TECHNICAL PROPOSAL

Technical submission should contain the summary of the proposals in the following format:

PAST EXPERIENCE RECORD

Order no. with date reference	Description of systems/ works done	Quantity	Name of Signal Distributor with full address to whom system	Name, Telephone, email of contact person

KEY PERSONELL

Designation	Name	Nationality	Summary of Qualifications and Experience
E.g. Team Leader	A. N. Other	Kenyan	<i>Summarize and (attach detailed CVs)</i>

EQUIPMENT SCHEDULE

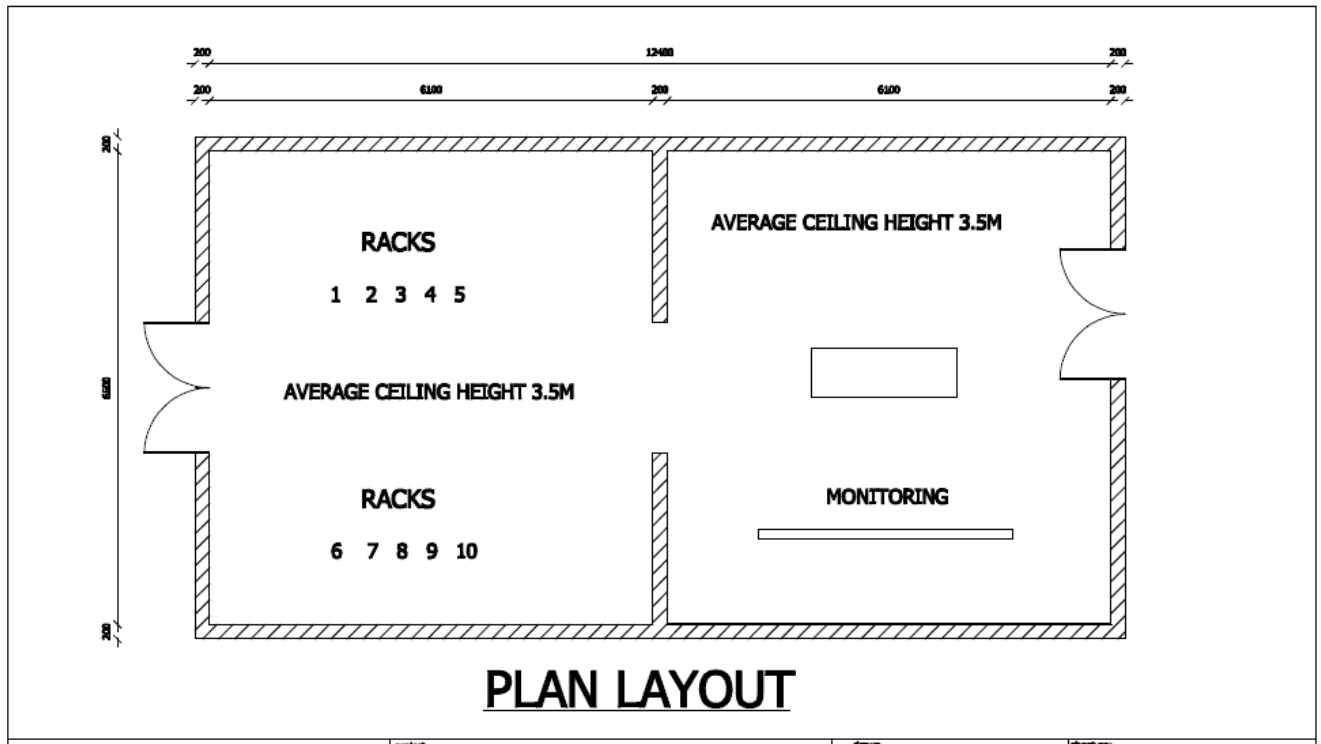
S. no.	Item Description	Specification	Quantity to be supplied

TRAINING

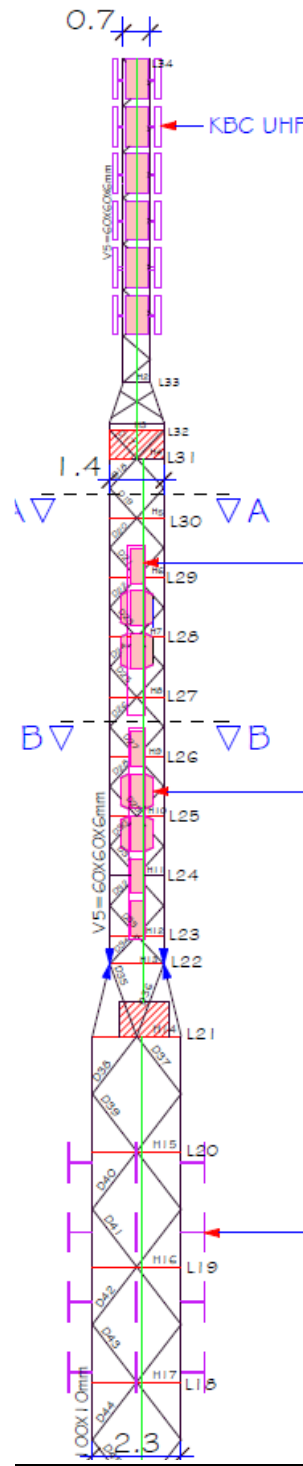
S. No.	Item Description	Duration/Training Program description	No. Persons
1.	E.g. Factory Training	Xxxxxxxx (attach detailed)	
2	TX site training		
	Headend		

Costs proposal for factory-training to KBC engineers at relevant manufacturer's for installation, testing, commissioning & operation of the System as submitted in the Financial Proposal should be unit costs i.e. Per person costs.

Annex1 : Existing Headend Floor Plan Diagram



Annex 2 : Limuru Tower (top section)



SECTION VII: EVALUATION CRITERIA

Evaluation shall be divided into three stages as follows

		SCORE
STAGE 1	PRELIMINARY	MANDATORY
STAGE 2	TECHNICAL	80
STAGE 3	FINANCIAL	20

STAGE 1 - PRELIMINARY EVALUATION.

Mandatory Requirements

1. Tenderers/Bidders Must Provide a Tender Security as indicated in the appendix to instructions to Tenderers.
2. Tenderers/Bidders Must Provide documentary evidence of the company's registration details / certificate of incorporation
3. Tenderers/Bidders Must Provide copy of the company Valid Tax Compliance certificate
4. Tenderers/Bidders Must submit the latest three years audited financial accounts.
5. Tenderers/Bidders Must submit Manufacturer's Authorization Letter

Only the Tenderers/Bidders that **MEET all** the Mandatory Requirements shall proceed to the Technical Evaluation

STAGE 2 - TECHNICAL EVALUATION

	DESCRIPTION	Score
	<ul style="list-style-type: none"> • Detailed system design / architecture • Comprehensive project proposal <ul style="list-style-type: none"> ○ Headend ○ Monitoring ○ Management ○ Microwave/fiber ○ Transmitters ○ Sub-headends ○ Schematic • Provision of brochures & supporting materials • Delivery period and equipment staging period • Completeness of the proposal • Manufacturers authorizations • Training 	55
	Competence & skills of relevant key personnel <ul style="list-style-type: none"> • Must include curriculum vitae (CVs) 	10
	Recent experience in the design of similar Headend systems <ul style="list-style-type: none"> • Details of projects undertaken, where, when and value 	10
	Detailed work plan and project management	5

	Total	80
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Only the Bids that get over 80 % in the Technical evaluation shall proceed to the Financial Evaluation stage.

STAGE 3 - FINANCIAL EVALUATION

	FINANCIAL ($P_c = L_p / P \times 20$ Where, P_c = percentage allocated to price P and L_p = lowest stage 2 price)	20
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MANUFACTURER'S AUTHORIZATION FORM

To: [Purchaser]

WHEREAS

WE [name of the Manufacturer] who are established and reputable manufacturers of [name and/or description of the goods] having factories at [address of factory]

Do hereby authorize [name and address of Agent] to submit a bid, and subsequently negotiate and sign the Contract with you against Tender No. [reference of the Tender] for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause of the Conditions of Contract for the goods offered for supply by the above firm against this Tender.

Signed:

Name: [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: [insert title]

Note: This letter of authority should be on the letterhead of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer.

7.1 **FORM OF TENDER**

Date **12th February 2019**

Tender No. **11/KBC/18-19**

To: _____

[name and address of KBC]

Gentlemen and/or Ladies:

1. Having examined the tender documents including Addenda Nos. *[insert numbers]*.the receipt of which is hereby duly acknowledged, we, the undersigned, offer to **DESIGN, SUPPLY, INSTALLATION, TRAINING, TESTING AND COMMISSIONING OF DIGITAL TV HEADEND**

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 install and commission the equipment in accordance with the delivery schedule specified in the Schedule of Requirements.

3. If our Tender is accepted, we will obtain the guarantee of a bank in a sum of equivalent to _____ percent of the Contract Price for the due performance of the Contract , in the form prescribed by(KBC).

4. We agree to abide by this Tender for a period of *[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.

5. 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.

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

Dated this _____ day of _____ 20 _____

[signature]

[in the capacity of]

Duly authorized to sign tender for an on behalf of _____

7.2 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
	<ul style="list-style-type: none"> • Citizenship details •
	Part 2 (b) Partnership
Given 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	Seal/Signature of Candidate

TENDER SECURITY FORM

Whereas[name of the tenderer] (hereinafter called “the tenderer”)has submitted its tender dated.....[date of submission of tender] for the provision of

[Name and/or description of the services] (Hereinafter called “the Tenderer”)..... KNOW ALL PEOPLE by these presents that WE.....

Of.....having registered office at..... [name of location](hereinafter called “the Bank”)are bound unto..... [name of KBC](hereinafter called “the KBC”) in the sum offor which payment well and truly to be made to the said KBC, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of 20 .

THE CONDITIONS of this obligation are:

- 1. If the tenderer withdraws its Tender during the period of tender validity specified by the tenderer on the Tender Form; or
- 2. If the tenderer, having been notified of the acceptance of its Tender by the KBC during the period of tender validity:

(a) fails or refuses to execute the Contract Form, if required; or (b) fails or refuses to furnish the performance security, in accordance with the instructions to tenderers;

we undertake to pay to the KBC up to the above amount upon receipt of its first written demand, without the KBC having to substantiate its demand, provided that in its demand the KBC will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the above date.

[signature of the bank] ((Amend accordingly if provided by Insurance Company) _____

PERFORMANCE SECURITY FORM

To:..... [namof the KBC]

WHEREAS..... [Name of tenderer] (hereinafter called “the tenderer”) has undertaken, in pursuance of Contract No. _____[reference number of the contract] dated _____ 20_____ to supply..... [Description services](Hereinafter called “the contract”)

AND WHEREAS it has been stipulated by you in the said Contract that the tenderer shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Tenderer’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the tenderer a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the tenderer, up to a total of [amount of the guarantee in words and figures],

and we undertake to pay you, upon your first written demand declaring the tenderer to be in default under the Contract and without cavil or argument, any sum or sums within the limits of [amount of guarantee] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the ____ day of 20

Signature and seal of the Guarantors _____

[name of bank or financial institution] _____

[address] _____

7.3 BANK GUARANTEE FOR ADVANCE PAYMENT

To Kenya Broadcasting Corporation
*TenderNo.11/KBC/18-19. DESIGN, SUPPLY, INSTALLATION, TRAINING,
TESTING AND COMMISSIONING OF DIGITAL TV HEADEND*

Gentlemen and/or Ladies:

In accordance with the payment provision included in the Special Conditions of Contract, which amends the General Conditions of Contract to provide for advance payment, [*name and address of tenderer*](hereinafter called “the tenderer”) shall deposit with KBC a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract an amount of [*amount of guarantee in figures and words*].

We, the [*bank or financial institutions*], as instructed by the tenderer, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to KBC on its first demand without whatsoever right of objection on our part and without its first claim to the tenderer, in the amount not exceeding [*amount of guarantee in figures and words*]

We further agree that no change or addition to or other modification of the terms of the Contract to be performed there-under or of any of the Contract documents which may be made between KBC and the tenderer, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid in full effect from the date of the advance payment received by the tenderer under the Contract until [*date*].

Yours truly,

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]