



Rural Electrification and Renewable Energy Corporation

TENDER REFERENCE NO: 100000631

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF GRID
CONNECTED STREET LIGHTS, HIGH MAST, SOLAR STREET LIGHTING
AND LOW MAST IN LIKONI, CHANGAMWE, JOMVU, NYALI AND
MWALA CONSTITUENCIES (RE-TENDER)**

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**REREC STANDARD TENDER DOCUMENT FOR ELECTROMECHANICAL
WORKS**

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SECTION 1: INVITATION FOR TENDERS

1. The Rural Electrification and Renewable Energy Corporation invites tenders from interested firms to bid for;

Rfx No.	Tender Description	Opening date & time
1000000631	Supply, Installation and Commissioning of Grid Connected Street Lighting, Highmast, Solar Street Lighting and Low mast in Likoni, Changamwe, Jomvu, Nyali and Mwala Constituencies	9 th July 2021 @10.00a.m.

2. Tender documents detailing the requirements may be viewed at REREC E-Procurement Web Portal and the website found on (www.rerec.co.ke) beginning on **16th June, 2021**
3. Bidders who are interested in this tender MUST ensure that they are registered in REREC SAP SRM system and have set up their page. Please ensure compliance to the following
 - a) Each company must have two user accounts; Admin Account and Employee Account. Ensure that the following roles are NOT ASSIGNED to the employee; Employee Administrator and Supplier Master Data manager
 - b) Ensure that the admin account and employee account does not share same email address
 - c) Ensure that the Employee user name is between 4 and 12 characters.
 - d) It is a Mandatory requirement that all Bid Documents/Responses shall be uploaded to the COLLABORATION ROOM in the link with “RFX Response Number: Company Name”. Bidders shall not attach their documents at any other Tab of the Portal. Attachments placed elsewhere in the portal shall be declared non-responsive and will not be evaluated.
 - e) Prices MUST be entered under item term of the RFX. The prices entered here shall be similar to the prices in the price/BoQ Schedule and shall form part of the evaluation criteria.
 - f) For the purpose of this tender bidding, the employee account shall be used to submit your RFX responses.
 - g) Interested bidders are advised to visit the Corporation’s website, homepage, Information Center, SAP SRM Document, SAP SRM Supplier User Guide for registration and creation of their portal and Supplier Bidding Quick Reference Guide for submitting their responses.
4. Prospective bidders requiring any clarification of the tender document may notify the Supply Chain Manager in writing via e-mail procurement@rea.co.ke at least 7 days before tender closing.
5. Completed Tenders are to be saved as PDF documents marked with RFX description to be submitted through the REREC E-Procurement Web Portal found on the REREC website (www.rea.co.ke) so as to be received on or before dates and time specified on the schedule above
6. Tenders will be opened electronically after closing in REREC Procurement Office at Kawi House and the results sent via mail to all bidders who will have submitted their responses.

**CHIEF EXECUTIVE OFFICER
RURAL ELECTRIFICATION AND RENEWABLE ENERGY CORPORATION**

TENDER SUBMISSION CHECKLIST

The following documents shall form part of documents to be uploaded. This is not a comprehensive list. Use the evaluation criteria to submit all the required documents.

No.	Item	Tick Where Provided
1.	Tender Security	
2.	Company or Firm's Registration Certificate	
3.	CR12 issued not more than 3 months from tender closing	
4.	PIN Certificate (With both VAT and Income Obligations)	
5.	Valid Tax Compliance Certificate	
6.	Price Schedule/ BOQ	
7.	Standard Forms (Letter of Application, Form of Tender, Tender Questionnaire, Declaration Form and Confidential Business Questionnaire)	
8.	Power of Attorney Commissioned by a Magistrate or Commissioner of Oath Indicating the Authorized signatory for the documents of the bidder.	
9.	Submission of catalogues and brochures containing technical data as provided in the technical specifications.	
10.	Submission of Professional Qualification and experience for key staff,	
11.	Manufacturer's Authorization and warranty letter for key equipment	
12.	Confirmation of workshops and service centre with relevant tools and equipment whether owned or leased with evidence of valid lease agreements.	
13.	Manufacture's ISO9001:2015 Certificates/KEBS Standardization/Diamond Mark for quality management for the Poles and LED lights should be valid.	
14.	Audited Financial Statements. The audited financial statements Required must be those that are reported within fifteen (15) Calendar months of the date of the tender document or certified six months Bank statements.	
15.	Detailed Mobilization Plan & Detailed Work Plan	
16.	Submission of CVs for the Key Personnel	
17.	Submission of valid NCA registration.	
18.	Equipment & Lighting Requirements as per the REREC Specifications	
19.	Names with full contact as well as physical addresses of previous customers of similar services, together with a letter from each of them confirming completion of the contracts on schedule.	
20.	Environmental Management Policy for manufacturers of key equipment	

SECTION II: INSTRUCTION TO TENDERERS

Note: The tenderer must comply with the following conditions and instructions and failure to do so is liable to result in rejection of the tender.

GENERAL

1. Definitions

- (a) **“Tenderer”** means any person or persons partnership firm or company submitting a sum or sums in the Bills of Quantities in accordance with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications, Drawings and Bills of Quantities for the work contemplated, acting directly or through a legally appointed representative.
- (b) **“Approved tenderer”** means the tenderer who is approved by the Employer.
- (c) Any noun or adjective derived from the word **“tender”** shall be read and construed to mean the corresponding form of the noun or adjective **“bid”**. Any conjugation of the verb “tender” shall be read and construed to mean the corresponding form of the verb “bid.”
- (d) **“Employer”** means **Rural Electrification and Renewable Energy Corporation**.

2. Eligibility and Qualification Requirements

- 2.1 This invitation to tender is open to all tenderers who are eligible as stated in the appendix.
- 2.2 The procuring entity’s employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.
- 2.3 To be qualified for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility under Sub clause 2.1 above and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to update the following information already submitted during prequalification:
 - (a) Details of experience and past performance of the tenderer on the works of a similar nature within the past five years and details of current work on hand and other contractual commitments.
 - (b) The qualifications and experience of key personnel proposed for administration and execution of the contract, both on and off site.
 - (c) Major items of construction plant and equipment proposed for use in carrying out the Contract. Only reliable plant in good working order and suitable for the work required of it shall be shown on this schedule. The tenderer will also indicate on this schedule when each item will be available on the Works. Included also should be a schedule of

plant, equipment and material to be imported for the purpose of the Contract, giving details of make, type, origin and CIF value as appropriate.

- (d) Details of subcontractors to whom it is proposed to sublet any portion of the Contract and for whom authority will be requested for such subletting in accordance with clause 4 of the Conditions of Contract.
- (e) A draft Program of Works in the form of a bar chart and Schedule of Payment which shall form part of the Contract if the tender is accepted. Any change in the Program or Schedule shall be subjected to the approval of the Engineer.
- (f) Details of any current litigation or arbitration proceedings in which the Tenderer is involved as one of the parties.

2.4 Joint Ventures

Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements:

- (a) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.
- (b) One of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
- (c) The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract including payment shall be done exclusively with the partner in charge.
- (d) All partners of the joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Form of Tender and the Form of Agreement (in case of a successful tender).
- (e) A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

2.5 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 o the foregoing.
- d) Shall not be debarred from participating in public procurement.

3. Cost of Tendering

- 3.1 The tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 3.2 The responses of the bids shall be submitted through the Authority's e-Procurement system. Any bid documents uploaded in the response shall be considered valid only if they are uploaded in the collaboration folder under Notes and Attachments tab and NOT in the Attachments
- 3.3 The Authority will not be held responsible or liable for any errors and omissions to the response emanating from nonattendance of the pre-bid meeting (physical or via any digital online platform) or any wrongly submitted response

4. Site Visit

- 4.1 The tenderer is advised to visit and examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility.
- 4.2 The tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.

5. Tender Documents

- 5.1 The Tender documents comprise the documents listed here below and should be read together with any Addenda issued in accordance with Clause 7 of these instructions to tenderers.
 - a. Form of Invitation for Tenders
 - b. Instructions to Tenderers
 - c. Form of Tender
 - d. Appendix to Form of Tender
 - e. Form of Tender Surety
 - f. Statement of Foreign Currency Requirements
 - g. Form of Performance Security
 - h. Form of Agreement
 - i. Form of Advance payment Bank Guarantee
 - j. Schedules of Supplementary Information
 - k. General Conditions of Contract – Part I

- l. Conditions of Particular Application – Part II
- m. Specifications
- n. Bills of Quantities
- o. Drawings
- p. Declaration Form

5.2 The tenderer is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the tender documents. Failure to comply with the requirements for tender submission will be at the tenderer's own risk. Pursuant to clause 22 of Instructions to Tenderers, tenders which are not substantially responsive to the requirements of the tender documents will be rejected.

5.3 All recipients of the documents for the proposed Contract for the purpose of submitting a tender (whether they submit a tender or not) shall treat the details of the documents as "private and confidential"

6. Clarification of Tenders

6.1 A tenderer making inquiries relating to the tender documents may notify the Employer in writing or by telex, cable or facsimile at the Employer's mailing address indicated in the Invitation to Tender. The Employer will respond in writing to any request for clarification, which he receives earlier than 7 days prior to the deadline for the submission of tenders. Written copies of the Employer's response (including the query but without identifying the source of the inquiry) will be sent to all prospective tenderers who have purchased the tender documents.

6.2 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders.

6.3 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.

7. Amendment of Tender Documents

7.1 At any time prior to the deadline for submission of tenders the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by issuing Addenda.

7.2 Any Addendum will be notified in writing or by cable, telex or facsimile to all prospective tenderers who have purchased the tender documents and will be binding upon them.

7.3 In order to allow prospective tenderers reasonable time in which to take the Addendum into account in preparing their tenders, the Employer may, at his discretion, extend the deadline for the submission of tenders.

8. Language of Tender

8.1 The tender and all correspondence and documents relating to the tender exchanged between the tenderer and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the tenderer with the tender may be in another language provided they are accompanied by an appropriate translation of pertinent passages in the above stated language. For the purpose of interpretation of the tender, the English language shall prevail.

9. Documents Comprising the Tender

9.1 The tender to be prepared by the tenderer shall comprise:

- a) The form of tender and appendix thereto.
- b) A tender security.
- c) The priced Bill of Quantity and Schedule.
- d) The information on eligibility and qualification.
- e) Detailed Compliance to The Technical Requirements
- f) Catalogues and Manufacturers Brochures
- g) Manufacturers Authorization for all items
- h) Manufacturer's Warranty for all items
- i) Financial Capability
- j) List of Previous Customers
- k) Any other materials required to be completed and submitted in accordance with the instructions to tenderers.

9.2 The Forms, Bills of Quantities and Schedules provided in the tender documents shall be used without exception (subject to extensions of the schedules in the same format and to the provisions of clause 13.2 regarding the alternative forms of Tender Surety).

10 Tender Prices

10.1 All the insertions made by the tenderer shall be made in INK and the tenderer shall clearly form the figures. The relevant space in the Form of Tender and Bills of Quantities shall be completed accordingly without interlineations or erasures except those necessary to correct errors made by the tenderer in which case the erasures and interlineations shall be initialed by the person or persons signing the tender.

10.2 A price or rate shall be inserted by the tenderer for every item in the Bills of Quantities whether the quantities are stated or not items against which no rate or price is entered by the tenderer will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

10.3 The prices and unit rates in the Bills of Quantities are to be the full [all-inclusive] value of the work described under the items, including all costs and expenses which may be necessary and all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based. All duties and taxes and other levies payable by the Contractor under the

Contract or for any other cause prior to the deadline for the submission of tenders, shall be included in the rates and prices and the total tender prices submitted by the Tenderer.

- 10.4 Each price or unit rate inserted in the Bills of Quantities should be a realistic estimate for completing the activity or activities described under that particular item and the tenderer is advised against inserting a price or rate against any item contrary to this instruction.
- 10.5 Every rate entered in the Bills of Quantities, whether or not such rate be associated with a quantity, shall form part of the Contract. The Employer shall have the right to call for any item of work contained in the Bills of Quantities, and such items of work to be paid for at the rate entered by the tenderer and it is the intention of the Employer to take full advantage of unbalanced low rates.
- 10.6 Unless otherwise specified the tenderer must enter the amounts representing 10% of the subtotal of the summary of the Bills of Quantities for Contingencies and Variation of Prices [V.O.P.] payments in the summary sheet and add them to the sub-total to arrive at the tender amount.
- 10.7 The tenderer shall furnish with his tender written confirmation from his suppliers or manufacturers of unit rates for the supply of items listed in the Conditions of Contract clause 47 where appropriate.
- 10.8 The rates and prices quoted by the tenderer are subject to adjustment during the performance of the Contract only in accordance with the provisions of the Conditions of Contract. The tenderer shall complete the schedule of basic rates and shall submit with his tender such other supporting information as required under clause 47 of the Conditions of Contract Part II.

11. Currencies of Tender and Payment

- 11.1 Tenders shall be priced in Kenya Shillings or any other convertible currency.
- 11.2 Tenderers are required to indicate in the Statement of Foreign Currency Requirements, which forms part of the tender, the foreign currency required by them. Such currency should generally be the currency of the country of the tenderer's main office. However, if a substantial portion of the tenderer's expenditure under the Contract is expected to be in countries other than his country of origin, then he may state a corresponding portion of the contract price in the currency of those other countries. However, the foreign currency element is to be limited to two (2) different currencies and a maximum of 30% (thirty percent) of the Contract Price.
- 11.3 The rate or rates of exchange used for pricing the tender shall be selling rate or rates of the Central Bank of Kenya ruling on the date closing of tenders.
- 11.4 Tenderers must enclose with their tenders, a brief justification of the foreign currency requirements stated in their tenders.

12. Tender Validity

- 12.1 The tender shall remain valid and open for acceptance for a period of One Hundred and Twenty (120) days from the specified date of tender opening or from the extended date of tender opening (in accordance with clause 7.4 here above) whichever is the later.
- 12.2 In exceptional circumstances prior to expiry of the original tender validity period, the Employer may request the tenderer for a specified extension of the period of validity. The request and the responses thereto shall be made in writing or by cable, telex or facsimile. A tenderer may refuse the request without forfeiting his Tender Surety. A tenderer agreeing to the request will not be required nor permitted to modify his tender, but will be required to extend the validity of his Tender Surety correspondingly.

13. Tender Security

- 13.1 The tenderer shall furnish, as part of its Tender, a tender security for the amount specified in the Appendix to Instructions to Tenderers.
Original bid security shall be deposited to the **TENDER BOX** situated at the main reception before closing date and time as specified in the invitation to tender.
- 13.2 The tender security shall be either one or a combination of the following:-
- a) An original Bank Guarantee that is strictly in the form and content as prescribed in the Tender Security Form (Bank Guarantee) in the Tender Document.
 - b) For Local bidders, Standby Letters of Credit (LC). All costs, expenses and charges levied by all banks party to the LC shall be prepaid by the Tenderer. The LC must contain all the mandatory conditions of payment to REREC as prescribed in the Tender Security (Letters of Credit) provided in the Tender Document.
- 13.3 The tender security shall be 2 percent of the tender price.
- 13.4 The tender security shall be valid for at least thirty (30) days beyond the tender validity period.
- 13.4 The format of the Surety shall be in accordance with the sample form of Tender Surety included in these tender documents; other formats may be permitted subject to the prior approval of the Employer. The Tender Surety shall be valid for thirty (30) days beyond the tender validity period.
- 13.5 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.
- 13.6 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible as but not later than fourteen (14) days after concluding the Contract execution and after a Performance Security has been furnished by the successful tenderer. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.
- 13.7 The Tender Surety may be forfeited:

- (a) if a tenderer withdraws his tender during the period of tender validity: or
- (b) in the case of a successful tenderer, if he fails
 - (i) to sign the Agreement, or
 - (ii) to furnish the necessary Performance Security
- (c) if a tenderer does not accept the correction of his tender price pursuant to clause 23.

14. No Alternative Offers

- 14.1 The tenderer shall submit an offer which complies fully with the requirements of the tender documents unless otherwise provided for in the appendix.
- 14.2 Only one tender may be submitted by each tenderer either by himself or as partner in a joint venture.
- 14.3 The tenderer shall not attach any conditions of his own to his tender. The tender price must be based on the tender documents. The tenderer is not required to present alternative construction options and he shall use without exception, the Bills of Quantities as provided, with the amendments as notified in tender notices, if any, for the calculation of his tender price.
- 14.4 Any tenderer who fails to comply with this clause will be disqualified.

15. Pre-Tender Meeting

- 15.1 If a pre tender meeting is convened the tenderer's designated representative is invited to attend a pre-tender meeting, which if convened, will take place at the venue and time stated in the Invitation to Tender. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 15.2 The tenderer is requested as far as possible to submit any questions in writing or by cable, to reach the Employer not later than seven days before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted in accordance with the following:
 - (a) Minutes of the meeting, including the text of the questions raised and the responses given together with any responses prepared after the meeting will be transmitted without delay to all purchasers of the tender documents. Any modification of the tender documents listed in Clause 9 which may become necessary as a result of the pre-tender meeting shall be made by the Employer exclusively through the issue of a tender notice pursuant to Clause 7 and not through the minutes of the pre-tender meeting.
 - (b) Non-attendance at the pre-tender meeting will not be cause for disqualification of a bidder.

16. Format and Signing of Bid

- 16.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITT 16.2 Bidders shall mark as "CONFIDENTIAL" information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.
- 16.3 The bid documents shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation notarized by a

Commissioner of Oath which shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

- 16.4. In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 16.5. Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.
- 16.6. The signed bid documents shall be scanned and uploaded to the collaboration folder in the response on **Rural Electrification and Renewable Energy Corporation's** e-Procurement System.
- 16.7. The Original bid security shall be submitted to the Authority on or before the date of tender opening specified in the ITT.

17. Creation and Submission of Bids.

17.1. The Bidder shall process and submit its Bid via the Authority's e-Procurement system as follows:

- (a) Login to REREC portal via url <https://suppliers.rea.co.ke:44300/irj/portal>
N/B: It is assumed that you have already completed the registration process and that your registration has been approved by REREC and you have created an employee user account to transact with REREC via url [https://suppliers.rea.co.ke:44200/supportal\(bD1lbiZjPTUwMCZkPW1pbg==\)/bspwdaapplication.do#VIEW_ANCHOR-ROS_TOP](https://suppliers.rea.co.ke:44200/supportal(bD1lbiZjPTUwMCZkPW1pbg==)/bspwdaapplication.do#VIEW_ANCHOR-ROS_TOP)

For the purpose of bidding, each firm must ensure the following

- Each company must have two user accounts; **Admin Account and Employee Account**. Ensure that the following roles are NOT ASSIGNED to the employee; Employee Administrator and Supplier Master Data manager.
 - Ensure that the admin account and employee account does not share same email address Ensure that the Employee user name is between 4 and 12 characters.
 - For the purpose of this tender bidding, **the employee account** shall be used to submit your RFX responses.
- (b) Choose RFX and Auction link in the navigation pane
 - (c) Click on the RFX number to open it
 - (d) Click Register and then Click Participate
 - (e) Click Create response; You will get a unique number for your response for the RFX
 - (f) Navigate to the Notes and Attachments tab and click on Collaboration link at the bottom of the screen (the link will be in the format "**RFX Response No: Company Name**"). If under your notes and attachment no link is formed in the collaboration room, you are advised to delete the response and create a new one until the link is formed, in this link all the documents of the tender shall be uploaded.

NB: All supplier bid documents/Responses shall be uploaded to the COLLABORATION ROOM in the link with "RFX Response Number: Company

Name” .Bidders shall not attach their documents at any other Tab of the Portal. Attachments placed elsewhere in the portal shall be declared non-responsive and the attachments shall not be evaluated.

You are to login to the collaboration link and upload all the required documents

- (g) Enter bid price in the item tab and fill in all required information for the response. This price shall be read out price during the opening.
- (h) **No value shall be entered under the RFX information “Target Value for RFX”**
- (i) Check for errors by clicking the Check button
- (j) Click on Save to review later or Submit to send the response to REREC

17.2 The tender shall be typed or written in indelible ink. They shall be signed by the Tenderer or a person or persons duly authorized to bind the Tenderer to the contract.

17.3 The authorization shall be indicated by a written Power of Attorney granted by the Tenderer to the authorized person before any of the following persons:-

- a) *For local Tenderers, a Commissioner of Oaths or a Notary Public or a Magistrate of the Kenyan Judiciary.*
- b) *For foreign Tenderers, a Notary Public in the country of the Tenderer.*

In either case above, the Power of Attorney shall accompany the Tender.

17.4 All pages of the Tender, including un-amended printed literature, shall be initialed by the person or persons signing the Tender and serially numbered.

17.5 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.

17.6 REREC will assume no responsibility whatsoever for the Tenderer’s failure to comply with or observe the entire contents of this paragraph 17.

17.7 Any Tender not prepared and signed in accordance with this paragraph may be rejected by REREC’s as non-responsive.

18. Modification, Withdrawal and deadline for submission of Tenders

18.1 **Modification:** A bidder may before tender closing edit their RFX response by clicking edit and resubmitting after editing the response.

18.2 **Withdrawal:** A Bidder may withdraw a Bid after it has been submitted by clicking withdraw if they are no longer interested in participating in the tender. A withdrawn bid shall not be evaluated

18.3 **Deadline for Submission of Tenders:** Tenders must be submitted online on or before the time specified in the Invitation to Tender.

REREC may, at its discretion, extend this deadline for submission of Tenders by amending the tender documents in accordance with paragraph 3.7, in which case all rights and obligations of REREC’s and the Tenderer previously subject to the initial deadline, will therefore be subject to the deadline as extended.

19. Tender Opening

- 19.1. The Employer will open the tenders electronically in the presence of the tenderers' representatives who choose to attend at the time and location indicated in the Letter of Invitation to Tender. The tenderers' representatives who are present shall sign a register evidencing their attendance.
- 19.2. At the tender opening, the Employer will announce the tenderer's names, total tender price, tender price modifications and tender withdrawals, if any, the presence of the requisite Tender Surety and such other details as the Employer, at his discretion, may consider appropriate. No tender shall be rejected at the tender opening except for late tenders.
- 19.3 The Employer shall prepare a tender opening register and minutes of the tender opening including the information disclosed to those present.
- 19.4. Tenders not opened and read out a tender opening shall not be considered further for evaluation, irrespective of the circumstances. A tender who for any reason was not available in the Tender opening platform of the Procuring Entity and whose price was not read will not be evaluated

20. Process to be Confidential

- 20.1. After the public opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process until the award of Contract is announced.
- 20.2 Any effort by a tenderer to influence the Employer in the process of examination, evaluation and comparison of tenders and decisions concerning award of Contract may result in the rejection of the tenderer's tender.

21. Clarification Tenders

- 21.1. To assist in the examination, evaluation and comparison of tenders, the Employer may ask tenderers individually for clarification of their tenders, including breakdown of unit prices. The request for clarification and the response shall be in writing or by cable, facsimile or telex, but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by the employer during the evaluation of the tenders in accordance with clause 24.
- 21.2. No Tenderer shall contact the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. If the tenderer wishes to bring additional information to the notice of the Employer, he shall do so in writing.

22. Determination of Responsiveness

22.1 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is substantially responsive to the requirements of the tender documents.

22.2 For the purpose of this clause, a substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, completion timing or administration of the Works to be undertaken by the tenderer under the Contract, or which limits in any substantial way, inconsistent with the tender documents, the Employer's rights or the tenderers obligations under the Contract and the rectification of which would affect unfairly the competitive position of other tenderers who have presented substantially responsive tenders.

22.3 Each price or unit rate inserted in the Bills of Quantities shall be a realistic estimate of the cost of completing the works described under the particular item including allowance for overheads, profits and the like. Should a tender be seriously unbalanced in relation to the Employer's estimate of the works to be performed under any item or groups of items, the tender shall be deemed not responsive.

22.4 A tender determined to be not substantially responsive will be rejected by the Employer and may not subsequently be made responsive by the tenderer by correction of the nonconforming deviation or reservation.

23. Correction of Errors

23.1 There shall be no correction of prices. Bid prices shall be the ones read out during opening and unless specified in the BDS shall be assumed to include all requisite taxes and levies

24. Conversion to Single Currency

24.1 For compensation of tenders, the tender price shall first be broken down into the respective amounts payable in various currencies by using the selling rate or rates of the Central Bank of Kenya ruling on the date on the date of tender closing.

24.2 The Employer will convert the amounts in various currencies in which the tender is payable (excluding provisional sums but including Day works where priced competitively) to Kenya Shillings at the selling rates stated in clause 24.1.

25. Evaluation and Comparison of Tenders

25.1 The Employer will evaluate and compare only tenders determined to be substantially responsive to the requirements of the tender documents in accordance with clause 23.

25.2. In evaluating tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:

- (a) Making any correction for errors pursuant to clause 24.
 - (b) Excluding Provisional Sums and provision, if any, for Contingencies in the Bills of Quantities, but including Day works where priced competitively.
- 25.2 The Employer reserves the right to accept any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.
- 25.3 Price adjustment provisions in the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in tender evaluation.
- 25.4 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in clause 29 be increased at the expense of the successful tenderer to a level sufficient to protect the Employer against financial loss in the event of subsequent default of the successful tenderer under the Contract.
- 25.5 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 15% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a nonindigenous sub-contractor.
- 25.6 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.
- 25.7 Persons not officially involved in the evaluation of tender shall not attempt in any way to influence the evaluation.

AWARD OF CONTRACT

26. Post – Qualification and Award

- 26.1 In the absence of pre-qualification, the employer 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.
- 26.2 The determination will take into account the tenderer financial, technical and production activities. It will be based on examination of the documentary evidence of the tenderers qualifications submitted by the tenderer, as well as such other information as the employer deems necessary and appropriate.
- 26.3 An affirmative determination will be a pre-requisite for award of the contract to the tenderer. A negative determination will result in rejection of the tenderer's tender, in which the

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

26.4 Subject to clause 26.2, the Employer will award the Contract to the tenderer whose tender is determined to be substantially responsive to the tender documents and who has offered the lowest evaluated tender price subject to possessing the capability and resources to effectively carry out the Contract Works.

27. Rejection of all tenders

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

27.2. The Employer reserves the right at the time of contract award to increase or decrease the number of projects originally specified in the schedule of projects without any change in unit price or other terms and conditions.

28. Notification of Award and signing of contract

28.1 Prior to the expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful tenderer by cable, telefax or telex and confirmed in writing by registered letter that his tender has been accepted. This letter (hereinafter and in all Contract documents called "Letter of Acceptance") shall name the sum (hereinafter and in all Contract documents called "the Contract Price") which the Employer will pay to the Contractor in consideration of the execution and completion of the Works as prescribed by the Contract.

28.2 Upon the furnishing of a Performance Security by the successful tenderer, the unsuccessful tenderers will promptly be notified that their tenders have been unsuccessful.

28.3 At the same time the employer notifies the successful tenderer that his tender has been accepted, the employer shall notify the other tenderers that their tenders have been unsuccessful.

28.4 Within fourteen [14] days of receipt of the form of Contract Agreement from the Employer, the successful tenderer shall sign the form and return it to the Employer together with the required Performance Security.

28.5 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.

28.6 A tenderer who gives false information in the tender document about his 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.

29. Performance Guarantee

- 29.1 Within twenty eight [28] days of receipt of the notification of award from the Employer, the successful tenderer shall furnish the Employer with a Performance Security in an amount stated in the Appendix to Instructions to Tenderers.
- 29.2 The Performance Security to be provided by the successful tenderer shall be an unconditional Bank Guarantee issued at the tenderer's option by an established and a reputable Bank approved by the Employer and located in the Republic of Kenya and shall be divided into two elements namely, a performance security payable in foreign currencies and performance security payable in Kenya Shillings. The value of the two securities shall be in the same proportions of foreign and local currencies as requested in the form of foreign currency requirements.
- 29.3 Failure of the successful tenderer to lodge the required Performance Security shall constitute a breach of Contract and sufficient grounds for the annulment of the award and forfeiture of the Tender Security and any other remedy under the Contract the Employer may award the Contract to the next ranked tenderer.

30. Advance Payment

- 30.1 An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with the Conditions of Contract. The Advance Payment Guarantee shall be denominated in the proportion and currencies named in the form of foreign currency requirements. For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer.

31. Corrupt and fraudulent practices

- 31.1 The procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contract. A tenderer shall sign a declaration that he has not and will not be involved in corrupt or fraudulent practices.

SECTION III: APPENDIX TO INSTRUCTIONS TO TENDERERS

The following information regarding the particulars of the tender shall complement and or amend the provisions of the Instructions to Tenderers *hereinafter abbreviated as ITT*. Wherever there is a conflict between the provisions of the ITT and the Appendix, the provisions of the Appendix herein shall prevail over those of the ITT.

No.	ITT Reference Clause	Particulars of Appendix
1	Eligible Tenderers	<i>Local Contractors Registered in Kenya with NCA 7 in Electrical OR Mechanical Engineering Services</i>
2	Origin of Eligible goods	<i>Any country is eligible</i>
3	Time for Completion of Works	<i>6months</i>
4	Attendance of site visit	<i>a) There will be no site visit arranged by the Employer. Bidders who wish to visit the site shall do so on their own and at their own cost.</i>
5	Documents Comprising the Tender – List of Previous Customers	<i>The Tenderer shall submit at least three (3) names with full contact as well as physical addresses of previous customers of similar works/services and letters from the Previous customers confirming completion of the contracts on schedule.</i>
6	Documentary evidence of financial capability	<i>Two years audited financial statements required must be those that are reported within Fifteen (15) calendar months of the date of the tender document</i>
7	Catalogues, Brochures, and Drawings	<i>All technical documents and specifications pertaining to the product MUST be provided</i>
8	Warranty	<i>Warranty or Manufacturer’s guarantee for all major equipment as outlined in the GTPs.</i>
9	Tender Currency	<i>For avoidance of doubt, the currency of the tender Shall be in Kenya Shillings or easily convertible currency at the tender opening exchange rates</i>
10	Tender Security	<i>2% of the bid value. The original tender security shall be dropped in the tender box situated in Ground Floor Kawi House South C. before closing date and time as per invitation to tender. A scanned copy of the Tender security shall be submitted electronically with the rest of the bid.</i>
11	Creation & Submission of Tenders	<i>There will be only one document submitted on the e- Procurement portal. Bidders shall view and download all documents pertaining to the tender from cFolders. All supplier bid documents/Responses shall be uploaded to the COLLABORATION ROOM in the link with “RFX Response Number: Company Name”. Bidders shall not attach their documents at any other Tab of the Portal. Attachments placed elsewhere in the portal shall be declared non-responsive and the attachments shall not be evaluated.</i>
12	Opening of Tenders	<i>The tender shall be opened electrically in Kawi House South C, Procurement Office – Ground Floor.</i>
13	Performance Security	<i>Performance bond shall be 10 % of the Total Contract value.</i>
14	Award Criteria	<i>The award of the contract shall be on Lot by Lot basis to the lowest evaluated bidder per lot. No one bidder shall be awarded more than one Lot.</i>

SECTION IV: CONDITIONS OF CONTRACT (Including erection on site)

PART I – GENERAL CONDITIONS

PART I – General Conditions, shall be those forming Part I of the “Conditions of Contract for Electrical and Mechanical Works – Including Erection on Site, Third Edition 1987, re-printed 1988 with Editorial

Amendments” prepared by the Federation Internationale des Ingenieurs – conseils (FIDIC). The Conditions are subject to variations and additions set out in Part II hereof entitled “Special Conditions”.

Note

- i. The standard text of the General Conditions of Contract must be retained intact to facilitate its reading and interpretation by tenderers. Any amendments and additions to the General Conditions, specific to a given Contract, should be introduced in the Special Conditions or in the Appendix to Form of Tender.
- ii. The Special Conditions take precedence over the General Conditions of Contract.

PREAMBLE TO GENERAL CONDITIONS

This Preamble must be completed in all cases referring to completed schedules where appropriate. When completed, this Preamble, the General Conditions, Specification, Employer’s and Contractor’s Drawings, Schedules and other documents can constitute a Contract on the basis of the General Conditions in Part II. If this is not what is required, Part II must also be completed.

Sub-Clause 1.1.1 – Commencement Date

The date for commencement of the Works is the issue date of the letter of award of the tender, and acceptance thereof, subject to the conditions precedent to commencement set out in Part II, Special Conditions, having been completed. Sub-sub- clauses ii), iii), iv) and v) of Part I- General Conditions are deleted.

Sub-Clause 1.1.11 – Defects Liability Period

The Defects liability period is twelve calendar months from the date of taking over in accordance with Sub-Clause 29.1

Sub-Clause 1.1.12 – The Employer

Rural Electrification and Renewable Energy Corporation (REREC) P. O. Box 34585, 00100, Nairobi, Kenya.

Sub-Clause 1.1.15 – The Engineer

The Engineer is Kenya Power & Lighting Company Limited/ **Rural Electrification and Renewable Energy Corporation**

Sub-Clause 1.1.35 – Time for Completion

The Time for Completion shall be the time for Completion entered by the Contractor in the Schedule of Delivery and in the Tender.

Sub-Clause 5.1 – Ruling Language

The Ruling Language for this Contract is English and the English language version shall prevail over any other language.

Sub-Clause 5.2 – Day to Day Communications

As per Sub-Clause 5.1 above

Clause 5.3 – Priority of Contract Documents Delete the documents list 1-5 and substitute: “The documents forming the Contract shall take precedence in the order in which they are set out in Section 4 – General Specifications herein.

Clause 6.6 – Operation and Maintenance Manuals

Operations and Maintenance Manuals shall be in the English Language.

Sub-Clause 6.7 – Employer’s Use of Contractor’s Drawings

The Contractor’s Drawings and Manuals may be used by Employer for the purpose of completing, operating, maintaining, adjusting and repairing the Works, for interconnecting the Works with other plant and for training of personnel.

Sub-Clause 8.1 – General Obligations

No facilities will be provided by Employer other than a limited amount of water and electrical supply as set out in the Specification.

Sub-Clause 10.1 – Performance Security

Within 28 days of issue of the Letter of Acceptance the Contractor shall at his own expense obtain a Performance Security in the Form of Performance Bond given in the Tender documents from a reputable Bank approved by Employer to be bound with the Contractor to Employer for a sum equivalent to ten per cent (10%) of the Contract Price for the due Performance of the Contract. The Security shall be payable in the currency of the Contract and shall be denominated in the types and proportions of the currencies in which the Contract is payable. Employer may require an additional security if the value of the Contract is increased appreciably. The Contractor shall ensure that the Performance Security Bond is kept valid up to the date of issue of the last Defect Liability Certificate.

Sub-Clause 12.1 – Programme to be furnished

The Programme must be submitted in the form and time as set out in here.

Sub-Clause 14.3 – Electricity, Water, Gas and Other Services

The Contractor shall make his own arrangement to supply water and electricity other services required at his own expense.

Sub-Clause 14.4 – Employer’s Equipment

None of the Employer’s equipment is available for use by the Contractor.

Clause 15.1 – Compliance with Statutes, Regulations

“Without limiting the generality of the foregoing the Contractor shall strictly abide by the Kenyan regulations concerning safety on the site of the Works”.

Clause 17.5 – Import Permits and Licenses

The Contractor shall be responsible and obtain all requirements pertaining to importation of the required goods and of his staff if work permits are required.

Clause 18.1-Engagement of Labor

“The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with the required qualifications and experience from sources within Kenya”.

Sub-Clause 18.3 – Working Hours

The normal working hours at the site are between 7:45 a.m. and 5:00 p.m. on weekdays. The Contractor may arrange to work any other periods he wishes between 7:00 a.m. and 7:00 p.m. to meet the contract programme. Work outside this period and weekend or public holiday working shall only be carried out where specifically approved by the Engineer. Where the Contractor chooses to work in excess of eight hours a day or to work at weekends there shall be no additional cost added to the contract price.

Sub-Clause 25.1 – Time for Completion

Time for Completion means the time for completing of the Works or any section or portion thereof as tendered by the Contractor in the Schedule of Deliveries and included in the Letter of Award. This period shall include up to the end of all Tests on Completion but it may exclude any subsequent period required for minor finishing works, demobilization of the Contractor's site establishment.

Sub-Clause 27.1 – Delay in completion

If the Contractor fails to comply with the Time for Completion in accordance with Clause 29.1, the whole of the works or, if applicable, any Section within the relevant time prescribed by Clause 25.1, then the Contractor shall pay to Employer the relevant sum stated in the Preamble as liquidated damages for such default and not as a penalty (which sum shall be the only monies due from the Contractor for such default) for everyday or part of a day which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the works or the relevant section, subject to the applicable limit stated in the Preamble. Employer may, without prejudice to any other method of recovery, deduct the amount of such damages shall not relieve the Contractor from his obligation to complete the works, or from any other of his obligations and liabilities under the contract. If, before the Time for Completion of the Works or, if applicable, any section, a Taking-Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the works or of that Section shall, for any period of delay after the date stated in such Taking Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub-Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

Sub-Clause 27.2 – Prolonged Delay

If there is a Prolonged Delay in Completion and the Employer has become entitled to the maximum reduction in Contract price under Sub-Clause 27.1 and Employer terminates the Contract under SubClause 27.2, then the additional amount recoverable from the Contractor by Employer shall be that part of the Contract Price which is attributable to that part of the works which cannot by reason of the Contractor's failure to put to the intended use.

Sub-Clause 28.1 - Tests on Completion

The tests on Completion shall include the 30-day Reliability Run at 100% load.

Sub-Clause 29.2 – Taking over Certificate

On satisfactory completion of the Tests on Completion, including the Reliability Test period Employer shall issue a Taking over Certificate. This shall show the effective date of Taking Over which shall be the date of Completion of reliability test period. This shall be the date of commencement of the Defects Liability Period.

Sub-Clause 29.3 – Use Before Taking Over

The Employer shall not use any part of the Works prior to the Completion of the Tests on Completion without the permission of the Tenderer. The Employer may use any part of the Works during its Tests to suit the Tests. Such use shall not imply Taking Over unless the Tests on that part of the Works are successful.

Clause 31.2 – Variation Order Procedure

Add the final sentence as follows:

“Where the Contract provides for the payment of the contract Price in more than one currency, and varied work is valued at, or on the basis of, the rates and prices set out in the contract, payment for such varied work shall be made in the currency specified in the Contract for payment of the Contract Price.

Sub-Clause 33.1 – Terms of Payment

In addition to the provisions under Clause 33, the Terms of Payment shall be made as follows: 40% within 60 days of delivery and inspection of all equipment to Site; 50% on Successful Installation and Commissioning; 10% after the defect liability period.

Sub-Clause 33.2 – Method of Application for Payment

The Contractor may make applications for Payment to Employer as set out in the Contract.

Sub-Clause 33.5 – Payment

Second line, delete “28 days” and substitute “60 days”.

Sub-Clause 33.6 – Delayed Payment

There shall be no interest on delayed payment.

Sub-Clause 35.1 – Payment in Foreign Currency

Payment for all Works will be made in the amounts and currency specified in the Contract.

Method of Application

Application by the Contractor for Payment shall be made to the **Project Manager** as set out in the Terms of Payment of the Contract.

Sub-Clause 35.3 – Rates of Exchange

The rates of exchange for the purpose of the Contract are fixed at the mean selling rates of exchange established by the Central Bank of Kenya on the date of opening of Tenders.

Sub-Clause 37.2 – Employer’s Risks

The following amendments are to be made to Sub-Clause 37.2. After “Employer’s Risks are: “insert a new sub heading as follows: “(1) Insofar as they relate to Kenya:” In (b), delete all words after “Civil War” After item (e) and before item (f) insert another new sub heading as follows: “(2) Under all circumstances” At the end of item (g) delete the semi colon and add:

“Provided that the Contractor has disclaimed responsibility in writing within a reasonable time after receipt of such design.” Delete the last paragraph and substitute the following: “(3) (1) all risks (insofar as they occur on Site) which an experienced Contractor: Could not have foreseen, or Could reasonably have foreseen, but Against which he could either not reasonably take measures to prevent loss or damage to physical property or death or personnel injury occurring, or Which he could not reasonably insure against”

Sub-Clause 40.1 – Contractor’s Liability

In the first paragraph of Sub-Clause 40.1 delete the following words: “occurring before the issue of the last Defects Liability Certificate”

Sub-Clause 42.2 – Maximum Liability

The maximum liability of the Contractor to the Employer shall be the Contract Price.

Sub-Clause 43.1

Delete the first paragraph and substitute:

“The Contractor shall, prior to commencement of the Works, insure the Works in the joint names of the Contractor and Employer to their full replacement value thereof plus 10% thereon to allow for any additional costs and professional fees resulting from loss or damage with deductible limits not exceeding those stated in the Preamble.”

Add the following Sub-Clause:

“(c) It shall be the responsibility of the Contractor to notify the insurer of any change in the nature and extent of the works and to ensure the adequacy of the insurance cover at all times in accordance with the provisions of this Clause.”

Add the following sub-clause:

“(d) Such insurance shall provide for compensation to be payable in the types and proportions of currencies needed to cover the loss or damage incurred.”

Sub-Clause 43.3 – Third Party Liability

In the second line after “personal injury” add the words “to any person including any employee of the Employer.”

Add the following paragraph:

“The third party liability insurance should be in the joint names of the Employer and the Contractor with an extension of a cross liability cover so that the insurance shall apply to the Contractor and to the Employer as separate insured. The cover shall include the property of the Employer other than the Works.”

The amount of Insurance against third party liability taken out by the contractor shall not be less than KShs.5, 000,000.00 from a reputable and accepted Insurance company.

Sub-Clause 47.1 – Labour, Materials and Transport

The Contract is on a lump sum fixed price basis.

Sub-Clause 48.1 – Customs and Import Duties

This clause is replaced by clauses 53.1 and 53.2.

Sub-Clause 49.2 – Notices to Employer

The address of the Employer for notices is:-

Sub-Clause 50.2 – Arbitration

Delete from lines 4 and 5 the words “Rules of Conciliation and Arbitration of the International Chamber of Commerce” and replace with “Provisions of the Arbitration Act, Chapter 49 of the Laws of Kenya”.

The address of the Client for notices is:-

**The Chief Executive Officer, Rural Electrification and Renewable Energy Corporation,
Kawi House, South C,
P. O. Box 34585,
00100 Nairobi,
Kenya.**

Sub-Clause 51.1 – Applicable Law

The applicable law for this Contract shall be the law of the Republic of Kenya.

Sub-Clause 51.2 – Procedural Law for Arbitration

The procedural rules for arbitration for this Contract shall be the law of the Republic of Kenya.

Sub-Clause 51.3 – Language and Place of Arbitration

The language of arbitration is the English language. The place of arbitration shall be Nairobi, Kenya.

Clause 53.1 – Foreign Taxation

The prices tendered by the Contractor shall include all taxes, duties and other charges imposed outside the Employer’s country on the production, manufacture, sale and transport of the Constructional Plant, materials and supplies to be used on or furnished under the Contract, and on the services performed under the Contract.

Clause 53.2 – Local Taxation

The prices tendered by the Contractor for materials imported by him shall include all customs duties, and Value Added Tax and other charges imposed by the Republic of Kenya. Nothing in the contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in the Employer’s country on profits made by him in respect of the Contract.

Clause 53.3 – Income Taxes on Staff

The Contractor’s staff, personnel and labour will be liable to pay personal income taxes in Kenya in respect of such of their salaries and wages as are chargeable under the laws and regulations for the time in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

Clause 54.1 – Joint Venture

If the Contractor is a joint venture, all partners of the joint venture shall be jointly and severally liable to the Employer for the execution of the entire Contract in accordance with its terms. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

Clause 55.1 – Import License

The Contractor will be responsible for obtaining the necessary Import Declaration Form (IDF) required under Kenyan regulations for the import into Kenya of all the Goods being supplied from outside of the country, and for all the administrative work associated therewith.

Clause 55.2 – Temporary Import Bond

An import bond is required for equipment brought into Kenya duty free and which will be returned after the contract completion. The bond is discharged when the equipment is re-exported. The Contractor shall meet the cost of this bond.

Clause 56.1 – Pre-Shipment Inspection

Kenyan regulations require that all imported goods be inspected prior to shipment to verify quality and quantity. The names of the Inspection Agencies appointed by the Kenyan authorities to act under this Contract will be notified to the Contractor on the Import License, which is obtained by the Contractor. The pre-shipment inspection authorizes the Contractor to ship the goods.

The Contractor should establish contact and liaise with the Inspection Agencies, unpacking, handling etc. shall be paid for by the Contractor. The Contractor shall give at least 21 days' notice before shipment to the Inspection Agency indicating the place where the goods may be inspected and the expected time of shipment. When requesting pre-shipment inspection the Contractor shall provide the Inspection Agency with a copy of the pro-forma invoice, Contract and any other document relevant to the execution of the inspection. On Completion of inspection the Inspecting Agency will issue a report of finding which will be either. i) A Clean Report of Findings if the inspection yields a satisfactory result, or ii) A Non –negotiable Report of Findings if the inspection reveals deficiencies. In the case of a Clean Report the Contractor shall provide the Inspection Agency immediately after shipment with a non-negotiable copy of the Bill of Lading or Air Waybill and a copy of the final invoice covering the Goods. When these documents have been received the Clean Report of findings will be issued. The Contractor is warned against the shipment of Goods, which have not been inspected, or goods for which a Non-negotiable Report of Findings has been issued by the Inspection Agency.

The Inspection of goods does not relieve the Contractor of its contractual obligations to the Employer, and items may be rejected by the Engineer if they fail to meet the requirements of the Contract even though they have been cleared by the Inspection Agency for shipment.

Clause 57.1 – Bribery and Corruption

If the Contractor or any of its sub-contractors, agents or and servants shall offer or give or agree to person any bribe, gift, gratuity or commission as an inducement or regard for doing or forbearing to do any action in relation to the Contract or any other Contract with the Employer or for showing or forbearing to show favor or disfavor to any person in relation to the Contract or any other contract with the employer then the Employer may enter upon the Site and expel the contractor therefrom and the provisions of Clause 45 shall apply as if such entry and expulsion had been made pursuant to that Clause.

Clause 58.1 – Advertising

Any advertising mentioning the subject of this Contract must be approved by the Employer prior to publication which approval will not be unreasonably withheld.

Clause 59.1 – Individuals not Personally Liable

No member or officer of the Employer nor any one of the respective staffs or the employees of the Employer shall be in any way personally liable for the acts or obligations of the Employer under the Contract or answerable for any default of omission of the Employer in the observance or performance of any of the acts, matters or things which are herein contained.

Clause 61.1 – Progress Reports and Meetings

The Contractor will submit to **Project Manager** written detailed progress reports on monthly basis, indicating, the stage reached in the delivery and site works.

The Contractor will be required to attend monthly progress meeting at Employer’s site office.

Clause 62.1 – Details to be Confidential

The Contractor shall treat the details of the Contract as confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the contract the same shall be referred to the decision of the Employer whose award shall be final.

PART II – SPECIAL CONDITIONS

(The Clauses referred to in Part II – Section A are those where the provision in the General Conditions (Part I) refer to an alternative solution to be stated in Part II. The provisions in the General Conditions will apply unless an alternative solution is given in Part II – Section A. The clauses in this section need therefore not be completed, but must be completed if alternative solutions to the relevant Part I provisions are necessary.)

1.0 Conditions Precedent to Commencement (Sub-clause 1.1.1.)

The following financial and administrative requirements are conditions precedent to commencement: Submission of performance bond.

2.0 Defects Liability Period (Sub-clause 1.1.11.)

The Defects Liability Period is **Twelve Months**.

3.0 Operation and Maintenance Manuals (Sub-clause 6.6.)

Operation and Maintenance Manuals shall be in **English language**.

4.0 General Obligations (Sub-clause 8.1.)

6.1 The following facilities will be provided by the Employer: **NONE**.

6.2 The facilities will be provided at the following rates: **N/A**

5.0 Performance Security (Sub-clause 10.1)

The Contractor shall obtain a Performance Security of **10% of the contract price**.

6.0 Contractor Equipment (Sub-clause 14.1) The following items of Contractor's Equipment will be provided free of charge by the Employer for the Contractor's use: **None**.

7.0 Price Variation

Contract price variation **shall not be allowed**.

8.0 Delayed Payment (Sub-clause 33.6.)

There shall be no interest on delayed payment.

9.0 Customs and Import Duties (Sub-clause 48.1.)

The Contractor shall pay for customs, import duties and taxes in consequence of the importation of the Plant.

10.0 Arbitration (Sub-clause 50.2)

The rules of arbitration shall be those contained in the Arbitration Act of the Laws of Kenya.

SECTION V: SUMMARY OF EVALUATION PROCESS

1. PRELIMINARY EVALUATION

The following are the **MANDATORY Requirements** that **SHALL** constitute the evaluation criteria at the Preliminary Evaluation Stage:

1. Confirmation that bidder documents/Attachments have been submitted in the Collaboration folder of the SAP SRM System.
2. Confirmation that the bidder's prices appear during tender opening. The entered prices in the Items Tab of the SRM Portal must be same as the prices in the Tender form/price schedules and the same prices are read out during opening. (award shall be based on the read out prices)
3. Confirmation of submission of Tender Security from a local Bank inform of either; inform of Bank guarantee or Bankers' cheese or Insurance Guarantee (Insurance issuing the guarantee must be part of the Public Procurement Regulatory Authority (PPRA) approved list, which validity shall be at least 150 days from the date of tender opening. Tender security value. Tender security value SHALL be at least 2% (percent) of the tender price.
4. The tenderer SHALL attach copies of: Certificate of Incorporation of Business, Copy of E-PIN Certificate with both VAT and Income Tax Obligations.
5. Valid Tax Compliance Certificate at the time of tender submission, CR 12 Certificate issued not more than 3 months from the date of Tender closing
6. Copy of Business Permit in the County of Operation
7. Power of Attorney Notarized by a Magistrate or Commissioner of Oath Indicating the Authorized signatory for the documents of the bidder.
8. The tenderer **SHALL** dully fill the Standard Forms (Letter of Application, Form of Tender, Tender Questionnaire, Declaration Form and Confidential Business Questionnaire) in the format provided. Confirmation of tender validity period. Tenders **SHALL** be valid for at least 120 days from the date of tender opening.
9. The tenderers SHALL submit drawings and specifications of the Concrete poles, High Masts, Lowmast and solar street lights components installation. Including all foundation details drawings
10. The tenderer **SHALL** submit catalogues and brochures in manufacturers letterhead containing technical data as provided in the technical specifications. (Concrete poles, Batteries, Highmast, LED lamps, PV modules etc)
11. Submission of Detailed Mobilization Plan & Detailed Construction Schedule. This should be clear and demonstrate/indicate for each activity for a period not exceeding 24 weeks.
12. Verification of submission of Professional Qualification and experience for key staff, which key staff shall be the Project Supervisor and two (2) Technicians. At least one staff member with EPRA license minimum C1 and T3 for lots with solar.
13. The tenderer **SHALL** provide latest Audited financial reports for the last 15 Months.
14. The tenderer SHALL submit Manufacturers Authorizations & Warranty form on manufacturer's letterhead signed and stamped. – Concrete poles, High masts, Low masts, solar lamps, Solar PV modules, LED lights should be valid.
15. Submission of manufacturers contact details including a valid official email address (gmail or yahoo email address will not be accepted) and secure website for international companies.
16. The tenderer **SHALL** provide details of experience and past performance on works of a similar nature within the past five years and details of current work on hand and other contractual commitments. The tenderer to attach at least 3 completion certificates from the owner of the works undertaken. The Applicants should have at least 2 years past experience in relevant works
17. Confirmation of business Premise, workshops and service center with relevant tools and equipment whether owned or leased with evidence of valid lease agreements and OSHA registration of workplace certificate.

18. Submission of valid EPRA License (Company's Valid EPRA license C1 – electrical or mechanical services and C1 or V1 solar for lots with solar street lights.)
19. Submission of valid NCA 7 and above – electrical services or Mechanical services registration
20. Manufacturers ISO14001 certification OR NEMA license for key equipment – Concrete poles, LED Lights, High masts, Solar PV modules, Batteries. **The bidder is required to provide mode of verification**
21. Manufacture's ISO9001:2015 certification for quality management OR KEBS certification for the key equipment i.e Concrete poles LED Lights, High masts, Solar PV modules, Batteries. **The bidder is required to provide mode of verification**
22. Submission of evidence of an established up to date safety program, policies and work practices. Bidder to provide a written occupational health and safety policy.

NB: Tenders which do not satisfy any of the requirements set out above shall be rejected as per public procurement and disposal Act, 2015 and will not proceed to technical evaluation stage.

TECHNICAL EVALUATION

The following SHALL constitute the evaluation criteria at the Technical Evaluation stage:

1. Full compliance to Technical specifications for key equipment. This is a mandatory fulfillment and a bidder who fails on any of the critical parameters shall be deemed non responsive. Only one brochure / technical specification per equipment should be offered, bids with more than one brochure / technical specifications per equipment will be considered non-responsive. The Corporation may at its own discretion verify manufacturers authorizations and warranty.
2. Verification of Professional Qualification and experience for key staff, which key staff shall be the Project Supervisor, two (2) Technicians. The Project Supervisor shall have at least a degree in Electrical, Mechanical or Civil Engineering and Registered with EBK as a graduate engineer and with at least five (5) years of experience. The technicians shall have at least a Diploma in Engineering with a minimum of two (2) years of experience. Signed CV's by the technicians and the owner/director and Certified copies of Certificates MUST be submitted.
3. Verification of submitted Drawings meet the required standard. The Drawings should be legible and the dimensions should be clearly marked.
4. Verification of previous works undertaken. The tenderer to attach at least 3 completion certificates from the owner of the works undertaken

NB: Tenders which do not satisfy any of the requirements set out above shall be rejected as per public procurement and disposal Act, 2015 and SHALL not proceed to financial evaluation stage.

FINANCIAL EVALUATION

The following constituted the evaluation criteria at the Financial Evaluation stage:-

1. The Procuring Entity SHALL apply the prevailing mean exchange rate at the time of tender opening for purposes of conversion of tender currencies into one common currency for comparison of unit prices. The source of the prevailing exchange rate shall be the Central Bank of Kenya
2. Authentication of the tender security from the issuing bank.
3. Confirmation of and considering BOQ/Price Schedule duly completed and signed.
4. Tenderer's conformance with REREC delivery schedule in the tender document.
5. Compliance with the stated REREC terms of payments

NB: Tenders which do not satisfy any of the requirements set out above shall be rejected as per public procurement and disposal Act, 2015

SECTION VI: SPECIFICATIONS AND BILL OF QUANTITIES

LOT-1 – Likoni, Changamwe, Jomvu, Nyali

SITE LOCATIONS AND NAMES

Table 1.1: Coast projects list

ITEM	CONSTITUENCY	VILLAGE/MRKT	MAST/SOLAR STREET LIGHT	NO
1	LIKONI	Dimwini	15M	1
		Buffalo	15M	1
		Maweni	15M	1
		Midodoni	15M	1
		Shelly Mnazi	15M	1
2	CHANGAMWE	Msikiti Nuru	30M	1
		Chicago	30M	1
		Bokole acces road and Nuru acces road	SOLAR STREET LIGHTS	6
3	JOMVU	Kwa mwanzia	20M	1
4	NYALI	BOMBOLULU-KISIMANI STREE	SOLAR STREET LIGHTS	22
		Kipasho area	30m	1

LOT 2 - Mwala

SITE LOCATIONS AND NAMES

Table 3.1: Mwala high masts

ITEM	CONSTITUENCY	NAME OF MARKET	MAST HIGHT	NO
1	Mwala	Kona market	30	1
2	Mwala	Miseleni Market	30	1
3	Mwala	Mumbuni Market	30	1
4	Mwala	Kituneni Market	30	1
5	Mwala	Wetaa Market	30	1
6	Mwala	Wamunyu Market	30	1
7	Mwala	kavumbu Market	30	1
8	Mwala	Tulila Market	30	1
9	Mwala	Mbaani Market	30	1
	TOTAL			9

SECTION II: SPECIFICATIONS

A. 30M HIGH MAST

1.0 SCOPE

The scope of this specification covers the supply, installation, testing and commissioning of the complete lighting system, using Raising and Lowering type of High Mast Towers, including the Civil Foundation Works. The tenderer to connect the mast to grid power if the mast is within an existing low voltage network. However, if the mast is far from a low voltage network, the owner will provide the supply point and the feeder cable of the required size, up to the bottom of the high mast. However, all items required for the safe and efficient operation and maintenance of the lighting system, including the high mast, whether explicitly stated in the following pages or not, shall be included by the contractor.

It is the responsibility of the bidder to supply and erect all items and all labour that are included and necessary for the completion of the work whether specifically mentioned or not.

1.01 Structure

The High mast shall be of continuously tapered, polygonal cross section, at least 12 sided, presenting a good and pleasing appearance and shall be based on proven In-Tension design conforming to SABS 0225 code of practice, to give an assured performance, and reliable service. The structure shall be suitable for wind loading of 144km/hr. Where

1.02 Construction

The mast shall be manufactured using special steel plates, conforming to BS-EN10-025(High tensile steel sheets) and shall be delivered in multiple sections of effective length 10 metres. Thus a 30m mast shall be delivered in three sections to site. Each section shall be fabricated out of single plate duly folded and welded. ***There shall be only one longitudinal seam weld per section.*** Section with more than one weld, circumferential or longitudinal, shall not be accepted. At site the sections shall be joined together by slip-stressed-fit method. No site welding or bolted joint shall be done on the mast. The minimum overlap distance shall be 1.5 times the diameter at penetration. The minimum top diameter shall be 150mm. Bottom diameter and plate thickness shall be as per the structural requirements. Detailed design calculation of the mast shall be submitted for verification.

The mast shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength of the entire section. The base flange shall be provided with supplementary gussets between the blowholes to ensure of helical stress concentration. For the environmental protection of the mast, the entire fabricated mast shall be hot dip galvanized, internally and externally, having a uniform average thickness of 86 microns for plate more than 5 mm and 70 microns for less than 5 mm. Galvanizing shall be done in single dipping method for better adhesion and life.

3.02. 1. Door Opening

An adequate door opening shall be provided at the base of the mast and the opening shall be such that it permits clear access to equipment like winches, cables, plug and socket, etc. and also facilitate easy removal of the winch. The door opening shall be complete with a close fitting, vandal resistant, weatherproof door, provided with a heavy-duty double internal lock with special paddle key.

The door opening shall be carefully designed and reinforced with welded steel section, so that the mast section at the base shall be unaffected and undue buckling of the cut portion is prevented. Size of door

opening shall not be more than 1200 X 250 mm. to avoid buckling of the mast section under heavy wind conditions.

3.03 Dynamic Loading for the Mast:

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed of 144km/hr as per and shall be measured at a height of 10 metres above ground level.

3.04 Lantern Carriage

3.04.1 Fabrication

A fabricated Lantern Carriage shall be provided for fixing and holding the flood light fittings and control gear boxes. The Lantern Carriage shall be of special design and shall be steel tube construction, the tubes acting as conduits for wires, with holes fully protected by grommets. The Lantern Carriage shall be so designed and fabricated to hold the required number of flood light fittings and the control gear boxes and also have a perfect self-balance. The Lantern Carriage shall be fabricated in two halves and joined by bolted flanges with stainless steel bolts and nylon type stainless steel nuts to enable easy installation or removal from the erected mast. The inner lining of the carriage shall be provided with protective PVC arrangement, so that no damage is caused to the surface of the mast during the raising and lowering operation of the carriage. The entire Lantern Carriage shall be hot dip galvanized after fabrication.

3.04. 2 Junction Box

Weather proof junction box, made of Cast Aluminum shall be provided on the Carriage Assembly as required, from which the inter-connections to the designed number of the flood light luminaries and associated control gears fixed on the carriage shall be made.

3.05.1 Raising and lowering mechanism

For the installation and maintenance of the luminaries and lamps, it will be necessary to lower and raise the Lantern Carriage Assembly. To enable this, a suitable Winch Arrangement shall be provided, with the winch fixed at the base of the mast and the specially designed head frame assembly at the top. The lantern carriage assembly shall reach 1 M from the base of the mast for easy access. There shall be provision to disconnect the main towing cable going to Lantern carriage before starting to lowering mechanism.

3.05. 2 Winch

The winch shall be of completely self-sustaining type, without the need for brake shoe, springs or clutches. Individual drum also should be operated for fine adjustment of lantern carriage. The capacity, operating speed, safe working load, recommended lubrication and serial number of the winch shall be clearly marked on each winch.

The gear ratio of the winch shall be 53: 1. However the minimum working load shall be not less than 750 kg. The winch shall be self-lubricating type by means of an oil bath and the oil shall be readily available grades of reputed producers.

The winch drums shall be grooved to ensure perfect seat for stable and tidy rope lay, with no chances of rope slippage. The rope termination in the winch shall be such that distortion or twisting is eliminated and at least 5 to 6 turns or rope remains on the drum even when the lantern carriage is fully lowered and rested on the rest pads. It should be possible to operate the winch manually by a suitable handle or by an integral power tool. It shall be possible to remove the double drum after dismantling, through the door opening provided at the base of the mast. A test certificate shall be furnished by the Contractor from

the original equipment manufacturer, for each winch in support of the maximum load operated by the winch.

3.05.3. Head Frame

The head frame which is to be designed as a capping unit of the mast, shall be of welded steel construction, galvanized both internally and externally after assembly. The top pulley shall be of appropriate diameter, large enough to accommodate the stainless steel wire ropes and the multi-core electric cable. The pulley block shall be made of non-corrodible material, and shall be of die cast Aluminum Alloy (LM-6). Pulley made of synthetic materials such as **Plastic or PVC are not acceptable**. Self-lubricating bearings and stainless steel shaft shall be provided to facilitate smooth and maintenance free operation for a long period. The pulley assembly shall be fully protected by a canopy galvanized internally and externally.

Close fitting guides and sleeves shall be provided to ensure that the ropes and cables do not get dislodged from their respective positions in the grooves. The head frame shall be provided with guides and stops with PVC buffer for docking the lantern carriage.

3.05.4. Stainless Steel Wire Ropes.

The suspension system shall essentially be without any intermediate joint and shall consist of only non-corrodible stainless steel of grade 316.

The stainless wire ropes shall be of 7/19 construction, the central core being of the same material. The overall diameter of the rope shall not be less than 6 mm. The breaking load of each rope shall not be less than 2350 kg giving a factor of safety of over 5 for the system at full load. The end constructions of ropes to the winch drum shall be fitted with talurit. The thimbles shall be secured on ropes by compression splices. Two continuous lengths of stainless wire ropes shall be used in the system and no intermediate joints are acceptable in view of the required safety. No Intermediate joints/terminations, either bolted or else, shall be provided on the wire ropes between winch and lantern carriage.

3.06 Electrical System, Cable and Cable Connections

A suitable terminal box shall be provided as part of the contract at the base compartment of the high mast for terminating the incoming cable. The electrical connections from the bottom to the top shall be made by special trailing cable. The cable shall however be of the flexible, unarmored type, with "Nital" insulation. Size of the cable shall be minimum 5 core 4 sq mm copper. There shall be two cables per mast, one for essential supply and the other for non-essential supply. The cable shall be of reputed make. At the top there shall be two weather proof junction boxes to terminate the trailing cable. Connections from the top junction box to the individual luminaires shall be made by using 3 core 2.5 sq. mm. flexible PVC cables of required make. Also, suitable provision shall be made at the base compartment of the mast to facilitate the operation of internally mounted, electrically operated power tool for raising and lowering of the lantern carriage assembly. The trailing cables of the lantern carriage shall be terminated by means of specially designed, metal clad, multi pin plug and socket provided in the base compartment to enable easy disconnection when required.

3.07 Power Tool for the winch

A suitable, high-powered, electrically driven, internally mounted power tool, with manual over ride shall be supplied for the raising and lowering of the lantern carriage maintenance purposes. The speed of the power tool shall be to suit the system. The power tool shall be single speed, provided with a motor of the required rating. The power tool shall be supplied complete with suitable control. The capacity and speed of the electric motor used in the power tool shall be suitable for the lifting of the design load installed on the lantern carriage.

The power tool mounting shall be so designed that it will be not only self-supporting but also aligns the power tool perfectly with respect to the winch spindle during the operations. Also, a handle for the manual operation of the winches in case of problems with the electrically operated tool, shall be provided and shall incorporate a torque limiting device.

The power tool operation shall always be through a separate torque-limiting device to protect the wire ropes from over stretching. It shall be mechanical with suitable load adjusting device. The torque limiter shall trip the load when it exceeds the adjusted limits. There shall be suitable provision for warning the operator once the load is tripped off. The torque limiter is a requirement as per the relevant standards in view of the overall safety of the system. Each mast shall have its own power tool motor. The motor shall have over load relay and fuse protection

3.08 Lightning Finial

One number heavy duty hot dip galvanized lightning finial shall be provided for each mast. The lightning finial shall be minimum 1.2 M in length and shall be provided at the Centre of the head frame. It shall be bolted solidly to the head frame to get a direct conducting path to the earth through the mast. The lightning finial shall not be provided on the lantern carriage under any circumstances in view of safety of the system.

3.09 Aviation Obstruction Lights, lightning Arrester and Marking

Suitable Aviation Obstruction Lights & lightning arrester of reliable design and reputed manufacturer shall be provided on top of mast.

The masts shall also be marked with the required colors as per the requirements of the Kenya Civil Aviation Authority.

3.10 Earthing Terminals:

Suitable earth terminal using 12mm diameter stainless steel bolts shall be provided at a convenient location on the base of the Mast, for lightning and electrical earthing of the mast.

3.11 Feeder Pillar

Each mast shall be provided with a feeder pillar fabricated and finished with two coats of red oxide primer and gray enamel paint of shade 631 of IS-5. The feeder pillar shall comprise of two compartments, one for essential supply and the other for non-essential supply. Switchgears shall be to suit the power loading. The motor shall also house control contractors for the power tool motor.

3.12. Incoming Power Cable.

A cable of size 4 X 16 sq.mm. Aluminum conductor, armoured cable for power supply and 4 X 1.5 sq.mm. Copper conductor Armoured cable for motor supply shall be provided to the base compartment of the highmast. Cable shall be taken to the base compartment of the highmast through the provision made in the foundation.

Power cable of suitable size upto the supply point shall be provided by purchaser.

3.13 Luminaires.

Luminaries shall be specially designed with cast aluminium housing suitable lamp housing and control gears for 280 W LED lamps. The luminaries shall be tested and test reports shall be submitted along with the materials. The luminaries shall be suitable for installation on high masts.

3.14 Height and type of mast.

30M Railow HD Galvanized masts of symmetrical orientation.

3.15 Foundation for high mast

The scope also includes supplying all materials and casting of RCC foundation along with necessary Anchor bolts etc. **The detailed drawing for the foundation should be submitted for approval by REREC before starting of the work.**

3.16 Photocell/Timer control: The mast shall be fitted with suitable photocell/timer to switch the floodlights on and off.

30M HIGH MAST

HIGHMAST SYSTEM – 30m		
	SPECIFICATIONS	Bidders response
a) Height of mast	30 meters	
b) No. of Sections	3	
Warranty	Minimum 10 yrs	
c) Make of high mast	Railow H.D. Galvanized masts	
d) Material construction	BS4360	
e) Thickness of sections	8mm, 6mm, 6mm	
f) No. of longitudinal welds /section	1	
g) Make of luminaire/lamp	LED	
h) Minimum Cross section of Mast	Minimum 12-sided polygon	
i) Base dia. & top diameter A/F	520/200mm	
j) Metal protection treatment	Hot dip galvanization	
k) Method of hot dipping	Single Dipping	
l) Average thickness of galvanization	85 nm	
m) Size of opening and door at base	949mm x 375mm	
n) Diameter of base plate	800mm	
o) Thickness of base plate	25mm thick	
p) Lightning Protection finial	1.2m spike	
2. DYNAMIC LOADING AS PREVAILING AT SITE		
a) Max. wind speed	144 KM / HR	
b) Factor of safety for wind load	1.5	
3. FOUNDATION DETAILS		
a) Type of foundation	Chimney & Pad Reinforced concrete	
b) Size of foundation	3m x 3m x 1.5m	
c) Soil bearing capacity at site	150 KPA	
d) Depth of foundation	1.5M	
e) Number of foundation bolts	10	
f) PCD of foundation bolts	680mm	
g) Type of foundation bolts	Mild Steel	

HIGHMAST SYSTEM – 30m		
	SPECIFICATIONS	Bidders response
h) Bolt diameter	36mm	
4. LANTERN CARRIAGE		
a) Material of construction	Hot dipped galvanized	
5. CABLE		
a) Type	Trailing cable	
b) Material	Unarmored with nitral insulation	
c) Conductor size	4 - 7mm sq copper	
d) No. of cores	*5-7	
6. WINCH		
a) Number of drums/winch	Pymot double drum	
b) Gear Ratio	50:01:00	
c) Capacity	800 kgs	
d) Method of operation	Remote via Motor	
e) Lubrication arrangement	oil bath	
f) Type of lubricant	oil bath	
7. STAINLESS STEEL WIRE ROPE		
a) Grade	316	
b) Number of ropes	3	
c) Construction	*6/9	
d) Diameter (mm)	6mm	
e) Braking load capacity	2270	
f) Factor of Safety	5	

REREC LED LIGHTING SPECIFICATIONS-30M

	SPECIFICATIONS	BIDDERS OFFER
a) Number of LED Lights	9	
b) Manufacturer/ Model		
c) Originality verification	State	
d) Light Source	LED	
e) Power Requirement	240V	
d) Power factor	0.95	
e) Power consumption	280W	
f) System Lumen Output	28,000 lm	
g) CRI (Color Rendering Index)	75	
h) Color Temperature	5700K±500K (cool white)/ 4000K±500K (neutral white)/ 3000K±500K (warm white)	
i) Materials and Finishing	Glass: Tempered Glass Gasket: Heat Resistant Silicon Rubber Housing: Die-cast Aluminium	

	SPECIFICATIONS	BIDDERS OFFER
j) Lifetime	50,000 Hours (70% Lumen Maintenance @ Ta 35°)	
k) Installation	Use of a Universal Bracket	
l) Certifications	RoHS, CQC, CB & CE	
m) Surge protection	10kV	
n) Warranty period	Minimum 3years	
o) Operating Temperatures	-40° - 45°C (Minimum and maximum acceptable values for outdoor applications)	
P) Classification	IK07; IP65; Class 1	
a) Optics	AWB	

B. 20M HIGH MAST

2.0 SCOPE

The scope of this specification covers the supply, installation, testing and commissioning of the complete lighting system, using Raising and Lowering type of High Mast Towers, including the Civil Foundation Works. The tenderer to connect the mast to grid power if the mast is within an existing low voltage network. However, if the mast is far from a low voltage network, the owner will provide the supply point and the feeder cable of the required size, up to the bottom of the high mast. However, all items required for the safe and efficient operation and maintenance of the lighting system, including the high mast, whether explicitly stated in the following pages or not, shall be included by the contractor.

It is the responsibility of the bidder to supply and erect all items and all labour that are included and necessary for the completion of the work whether specifically mentioned or not.

2.01 Structure

The High mast shall be of continuously tapered, polygonal cross section, at least 12 sided, presenting a good and pleasing appearance and shall be based on proven In-Tension design conforming to SABS 0225 code of practice, to give an assured performance, and reliable service. The structure shall be suitable for wind loading of 144km/hr. Where

2.02 Construction

The mast shall be manufactured using special steel plates, conforming to BS-EN10-025(High tensile steel sheets) and shall be delivered in multiple sections of effective length 10metres. Thus a 20m mast shall be delivered in two sections to site. Each section shall be fabricated out of single plate duly folded and welded. ***There shall be only one longitudinal seam weld per section.*** Section with more than one weld, circumferential or longitudinal, shall not be accepted. At site the sections shall be joined together by slip-stressed-fit method. No site welding or bolted joint shall be done on the mast. The minimum overlap distance shall be 1.5 times the diameter at penetration. The minimum top diameter shall be 200mm. Bottom diameter and plate thickness shall be as per the structural requirements. Detailed design calculation of the mast shall be submitted for verification.

The mast shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength of the entire

section. The base flange shall be provided with supplementary gussets between the blowholes to ensure of helical stress concentration. For the environmental protection of the mast, the entire fabricated mast shall be hot dip galvanized, internally and externally, having a uniform average thickness of 86 microns for plate more than 5 mm and 70 microns for less than 5 mm. Galvanizing shall be done in single dipping method for better adhesion and life.

3.02. 1. Door Opening

An adequate door opening shall be provided at the base of the mast and the opening shall be such that it permits clear access to equipment like winches, cables, plug and socket, etc. and also facilitate easy removal of the winch. The door opening shall be complete with a close fitting, vandal resistant, weatherproof door, provided with a heavy-duty double internal lock with special paddle key.

The door opening shall be carefully designed and reinforced with welded steel section, so that the mast section at the base shall be unaffected and undue buckling of the cut portion is prevented. Size of door opening shall not be more than 1200 X 250 mm. to avoid buckling of the mast section under heavy wind conditions.

3.05 Dynamic Loading for the Mast:

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed of 144km/hr as per and shall be measured at a height of 10 metres above ground level.

3.06 Lantern Carriage

3.06.1 Fabrication

A fabricated Lantern Carriage shall be provided for fixing and holding the flood light fittings and control gear boxes. The Lantern Carriage shall be of special design and shall be steel tube construction, the tubes acting as conduits for wires, with holes fully protected by grommets. The Lantern Carriage shall be so designed and fabricated to hold the required number of flood light fittings and the control gear boxes and also have a perfect self-balance. The Lantern Carriage shall be fabricated in two halves and joined by bolted flanges with stainless steel bolts and nylon type stainless steel nuts to enable easy installation or removal from the erected mast. The inner lining of the carriage shall be provided with protective PVC arrangement, so that no damage is caused to the surface of the mast during the raising and lowering operation of the carriage. The entire Lantern Carriage shall be hot dip galvanized after fabrication.

3.04. 2 Junction Box

Weather proof junction box, made of Cast Aluminum shall be provided on the Carriage Assembly as required, from which the inter-connections to the designed number of the flood light luminaries and associated control gears fixed on the carriage shall be made.

3.05.1 Raising and lowering mechanism

For the installation and maintenance of the luminaries and lamps, it will be necessary to lower and raise the Lantern Carriage Assembly. To enable this, a suitable Winch Arrangement shall be provided, with the winch fixed at the base of the mast and the specially designed head frame assembly at the top. The lantern carriage assembly shall reach 1 M from the base of the mast for easy access. There shall be provision to disconnect the main towing cable going to Lantern carriage before starting to lowering mechanism.

3.05. 2 Winch

The winch shall be of completely self-sustaining type, without the need for brake shoe, springs or clutches. Individual drum also should be operated for fine adjustment of lantern carriage. The capacity, operating speed, safe working load, recommended lubrication and serial number of the winch shall be clearly marked on each winch.

The gear ratio of the winch shall be 53: 1. However the minimum working load shall be not less than 750 kg. The winch shall be self-lubricating type by means of an oil bath and the oil shall be readily available grades of reputed producers.

The winch drums shall be grooved to ensure perfect seat for stable and tidy rope lay, with no chances of rope slippage. The rope termination in the winch shall be such that distortion or twisting is eliminated and at least 5 to 6 turns or rope remains on the drum even when the lantern carriage is fully lowered and rested on the rest pads. It should be possible to operate the winch manually by a suitable handle or by an integral power tool. It shall be possible to remove the double drum after dismantling, through the door opening provided at the base of the mast. A test certificate shall be furnished by the Contractor from the original equipment manufacturer, for each winch in support of the maximum load operated by the winch.

3.05. 3. Head Frame

The head frame which is to be designed as a capping unit of the mast, shall be of welded steel construction, galvanized both internally and externally after assembly. The top pulley shall be of appropriate diameter, large enough to accommodate the stainless steel wire ropes and the multi-core electric cable. The pulley block shall be made of non-corrodible material, and shall be of die cast Aluminum Alloy (LM-6). Pulley made of synthetic materials such as **Plastic or PVC are not acceptable**. Self-lubricating bearings and stainless steel shaft shall be provided to facilitate smooth and maintenance free operation for a long period. The pulley assembly shall be fully protected by a canopy galvanized internally and externally.

Close fitting guides and sleeves shall be provided to ensure that the ropes and cables do not get dislodged from their respective positions in the grooves. The head frame shall be provided with guides and stops with PVC buffer for docking the lantern carriage.

3.05.4. Stainless Steel Wire Ropes.

The suspension system shall essentially be without any intermediate joint and shall consist of only non-corrodible stainless steel of grade 316.

The stainless wire ropes shall be of 7/19 construction, the central core being of the same material. The overall diameter of the rope shall not be less than 6 mm. The breaking load of each rope shall not be less than 2270 kg giving a factor of safety of over 5 for the system at full load. The end constructions of ropes to the winch drum shall be fitted with talurit. The thimbles shall be secured on ropes by compression splices. Two continuous lengths of stainless wire ropes shall be used in the system and no intermediate joints are acceptable in view of the required safety. No Intermediate joints/terminations, either bolted or else, shall be provided on the wire ropes between winch and lantern carriage.

3.12 Electrical System, Cable and Cable Connections

A suitable terminal box shall be provided as part of the contract at the base compartment of the high mast for terminating the incoming cable. The electrical connections from the bottom to the top shall be made by special trailing cable. The cable shall however be of the flexible, unarmored type, with "Nital" insulation. Size of the cable shall be minimum 5 core 4 sq mm copper. There shall be two cables per mast, one for essential supply and the other for non-essential supply. The cable shall be of reputed make.

At the top there shall be two weather proof junction boxes to terminate the trailing cable. Connections from the top junction box to the individual luminaires shall be made by using 3 core 2.5 sq. mm. flexible PVC cables of required make. Also, suitable provision shall be made at the base compartment of the mast to facilitate the operation of internally mounted, electrically operated power tool for raising and lowering of the lantern carriage assembly. The trailing cables of the lantern carriage shall be terminated by means of specially designed, metal clad, multi pin plug and socket provided in the base compartment to enable easy disconnection when required.

3.13 Power Tool for the winch

A suitable, high-powered, electrically driven, internally mounted power tool, with manual over ride shall be supplied for the raising and lowering of the lantern carriage maintenance purposes. The speed of the power tool shall be to suit the system. The power tool shall be single speed, provided with a motor of the required rating. The power tool shall be supplied complete with suitable control. The capacity and speed of the electric motor used in the power tool shall be suitable for the lifting of the design load installed on the lantern carriage.

The power tool mounting shall be so designed that it will be not only self-supporting but also aligns the power tool perfectly with respect to the winch spindle during the operations. Also, a handle for the manual operation of the winches in case of problems with the electrically operated tool, shall be provided and shall incorporate a torque limiting device.

The power tool operation shall always be through a separate torque-limiting device to protect the wire ropes from over stretching. It shall be mechanical with suitable load adjusting device. The torque limiter shall trip the load when it exceeds the adjusted limits. There shall be suitable provision for warning the operator once the load is tripped off. The torque limiter is a requirement as per the relevant standards in view of the overall safety of the system. Each mast shall have its own power tool motor. The motor shall have over load relay and fuse protection

3.14 Lightning Finial

One number heavy duty hot dip galvanized lightning finial shall be provided for each mast. The lightning finial shall be minimum 1.2 M in length and shall be provided at the Centre of the head frame. It shall be bolted solidly to the head frame to get a direct conducting path to the earth through the mast. The lightning finial shall not be provided on the lantern carriage under any circumstances in view of safety of the system.

3.15 Aviation Obstruction Lights, lightning Arrester and Marking

Suitable Aviation Obstruction Lights & lightning arrester of reliable design and reputed manufacturer shall be provided on top of mast.

The masts shall also be marked with the required colors as per the requirements of the Kenya Civil Aviation Authority.

3.16 Earthing Terminals:

Suitable earth terminal using 12mm diameter stainless steel bolts shall be provided at a convenient location on the base of the Mast, for lightning and electrical earthing of the mast.

3.17 Feeder Pillar

Each mast shall be provided with a feeder pillar fabricated and finished with two coats of red oxide primer and gray enamel paint of shade 631 of IS-5. The feeder pillar shall comprise of two compartments, one for essential supply and the other for non-essential supply. Switchgears shall be to suit the power loading. The motor shall also house control contractors for the power tool motor.

3.12. Incoming Power Cable.

A cable of size 4 X 16 sq.mm. Aluminum conductor, armoured cable for power supply and 4 X 1.5 sq.mm. Copper conductor Armoured cable for motor supply shall be provided to the base compartment of the highmast. Cable shall be taken to the base compartment of the highmast through the provision made in the foundation.

Power cable of suitable size upto the supply point shall be provided by purchaser.

3.13 Luminaires.

Luminaries shall be specially designed with cast aluminium housing suitable lamp housing and control gears for 280 W LED lamps. The luminaries shall be tested and test reports shall be submitted along with the materials. The luminaries shall be suitable for installation on high masts.

3.14 Height and type of mast.

20M Railow HD Galvanized masts of symmetrical orientation.

3.15 Foundation for high mast

The scope also includes supplying all materials and casting of RCC foundation along with necessary Anchor bolts etc. **The detailed drawing for the foundation should be submitted for approval by REREC before starting of the work.**

3.16 Photocell/Timer control: The mast shall be fitted with suitable photocell/timer to switch the floodlights on and off.

HIGH MAST SYSTEM - 20M		
REREC'S REQUIREMENTS	SPECIFICATIONS	BIDDERS RESPONSE
a) Manufacturer / Brand name		
b) Model No.		
c) Warranty period	Minimum 10years	
d) Height of mast	20 meters	
e) No. of Sections	2	
f) Make of high mast	Railow H.D. Galvanized masts	
g) Material construction	BS4360	
h) Thickness of sections	6mm, 5mm	
i) No. of longitudinal welds /section	1	
j) Make of luminaire/lamp	LED Lighting	
k) Cross section of Mast	Minimum 8 sided polygon	

HIGH MAST SYSTEM - 20M		
REREC'S REQUIREMENTS	SPECIFICATIONS	BIDDERS RESPONSE
l) Base dia. & top diameter A/F	420/200mm	
m) Metal protection treatment	Hot dip galvanization	
n) Method of hot dipping	Single Dipping	
o) Average thickness of galvanization	85 nm	
p) Size of opening and door	949mm x 280mm	
q) Distance of opening and door from base	350mm	
r) Diameter of base plate	800mm	
s) Thickness of base plate	22mm thick	
t) Lightning Protection finial	1.2m spike	
2. DYNAMIC LOADING AS PREVAILING AT SITE		
a) Max. wind speed	144 KM / HR	
b) Factor of safety for wind load	1.5	
3. FOUNDATION DETAILS		
a) Type of foundation	Chimney & Pad Reinforced concrete	
b) Size of foundation	2.5x 2.5 x 0.8	
c) Soil bearing capacity at site	150 KPA	
f) Depth of foundation	1.5M	
g) Number of foundation bolts	8	
h) PCD of foundation bolts	680mm	
i) Type of foundation bolts	Mild Steel	
j) Bolt diameter	36mm	
4. LANTERN CARRIAGE		
a) Material of construction	hot dip galvanized	
5. CABLE		
a) Type	Trailing cable	
b) Material	Unarmored with nitral insulation	
c) Conductor size	4 - 7mm sq copper	
d) No. of cores	*5-7	
6. WINCH		
a) Number of drums/winch	Pymot double drum	
b) Gear Ratio	50:01:00	
c) Capacity	800 kgs	
d) Method of operation	Remote via Motor	
e) Lubrication arrangement	oil bath	
f) Type of lubricant	oil bath	

HIGH MAST SYSTEM - 20M		
REREC'S REQUIREMENTS	SPECIFICATIONS	BIDDERS RESPONSE
7. STAINLESS STEEL WIRE ROPE		
a) Grade	316	
b) Number of ropes	3	
c) Construction	*6/9	
d) Diameter (mm)	6mm	
e) Braking load capacity	2270	
f) Factor of Safety	5	

REREC LED LIGHTING SPECIFICATIONS-20M

REREC'S REQUIREMENTS	SPECIFICATIONS	Bidders response
a) Manufacturer / Brand name		
b) Model No.		
c) Originality Verification system	State	
d) No of LED lights	6	
e) Light Source	LED	
f) Power Requirement	220-240V/50HZ	
g) Power factor	0.95	
h) Power consumption	280W	
i) Luminous Efficacy(lm/W)	100	
j) CRI (Color Rendering Index)	75	
k) Color Temperature	5700K±500K (cool white)/ 4000K±500K (neutral white)/ 3000K±500K (warm white)	
l) Materials and Finishing	Glass: Tempered Glass Gasket: Heat Resistant Silicon Rubber Housing: Die-cast Aluminum	
a) Lifetime	50,000 Hours (70% Lumen Maintenance @ Ta 35°)	
b) Installation	Use of a Universal Bracket	
c) Certifications	RoHS, CQC, CB & CE	
d) Surge protection	10Kv	
e) Warranty period	Minimum 3years	
f) Operating Temperatures	-40° - 45°C (Minimum and maximum acceptable values for outdoor applications)	
g) Classification	IK07; IP65; Class 1	
h) Optics	AWB	

C. 15M MAST

3.0 SCOPE

The scope of this specification covers the supply, installation, testing and commissioning of the complete lighting system, including the Civil Foundation Works. The tenderer to connect the mast to grid power if the mast is within an existing low voltage network. However, if the mast is far from a low voltage network, the owner will provide the supply point and the feeder cable of the required size, up to the bottom of the high mast. However, all items required for the safe and efficient operation and maintenance of the lighting system, including the Low mast, whether explicitly stated in the following pages or not, shall be included by the contractor.

It is the responsibility of the bidder to supply and erect all items and all labour that are included and necessary for the completion of the work whether specifically mentioned or not.

3.01 Structure

The mast shall be of continuously tapered, polygonal cross section, at least 6 sided, presenting a good and pleasing appearance and shall be based on proven In-Tension design conforming to SABS 0225 code of practice, to give an assured performance, and reliable service. The structure shall be suitable for wind loading of 144km/hr.

3.02 Construction

The mast shall be manufactured using special steel plates, conforming to BS-EN10-025(High tensile steel sheets) and shall be delivered in multiple sections of effective length 10metres. Thus a 15m mast shall be delivered in two sections to site. Each section shall be fabricated out of single plate duly folded and welded. ***There shall be only one longitudinal seam weld per section.*** Section with more than one weld, circumferential or longitudinal, shall not be accepted. The minimum overlap distance shall be 1.5 times the diameter at penetration. The minimum top diameter shall be 200mm. Bottom diameter and plate thickness shall be as per the structural requirements. Detailed design calculation of the mast shall be submitted for verification.

The mast shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength of the entire section. The base flange shall be provided with supplementary gussets between the blowholes to ensure of helical stress concentration. For the environmental protection of the mast, the entire fabricated mast shall be hot dip galvanized, internally and externally, having a uniform average thickness of 86 microns for plate more than 5 mm and 70 microns for less than 5 mm. Galvanizing shall be done in single dipping method for better adhesion and life.

3.02. 1. Door Opening

An adequate door opening shall be provided at the base of the mast and the opening shall be such that it permits clear access to equipment like winches, cables, plug and socket, etc. and also facilitate easy removal of the winch. The door opening shall be complete with a close fitting, vandal resistant, weatherproof door, provided with a heavy-duty double internal lock with special paddle key.

The door opening shall be carefully designed and reinforced with welded steel section, so that the mast section at the base shall be unaffected and undue buckling of the cut portion is prevented. Size of door opening shall not be more than 1200 X 250 mm. to avoid buckling of the mast section under heavy wind conditions.

3.07 Dynamic Loading for the Mast:

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed of 144km/hr as per and shall be measured at a height of 10 metres above ground level.

3.08 Lantern Carriage

3.08.1 Fabrication

A fabricated Lantern Carriage shall be provided for fixing and holding the flood light fittings and control gear boxes. The Lantern Carriage shall be of special design and shall be steel tube construction, the tubes acting as conduits for wires, with holes fully protected by grommets. The Lantern Carriage shall be so designed and fabricated to hold the required number of flood light fittings and the control gear boxes and also have a perfect self-balance. The Lantern Carriage shall be fabricated in two halves and joined by bolted flanges with stainless steel bolts and nylon type stainless steel nuts to enable easy installation or removal from the erected mast. The inner lining of the carriage shall be provided with protective PVC arrangement, so that no damage is caused to the surface of the mast during the raising and lowering operation of the carriage. The entire Lantern Carriage shall be hot dip galvanized after fabrication.

3.04. 2 Junction Box

Weather proof junction box, made of Cast Aluminum shall be provided on the Carriage Assembly as required, from which the inter-connections to the designed number of the flood light luminaries and associated control gears fixed on the carriage shall be made.

3.18 Electrical System, Cable and Cable Connections

A suitable terminal box shall be provided as part of the contract at the feeder pillar of the mast for terminating the incoming cable. The cable shall however be of the flexible, unarmored type, with "Nitril" insulation. Size of the cable shall be minimum 5 core 4 sq mm copper. The cable shall be of reputed make. At the top there shall be one weather proof junction boxes to terminate the cable Connections from the top junction box to the individual luminaires and shall be made by using 3 core 2.5 sq. mm. flexible PVC cables of required make

3.19 Lightning Finial

One number heavy duty hot dip galvanized lightning finial shall be provided for each mast. The lightning finial shall be minimum 1 M in length and shall be provided at the Centre of the head frame. It shall be bolted solidly to the head frame to get a direct conducting path to the earth through the mast. The lightning finial shall not be provided on the lantern carriage under any circumstances in view of safety of the system.

3.20 Earthing Terminals:

Suitable earth terminal using 12mm diameter stainless steel bolts shall be provided at a convenient location on the base of the Mast, for lightning and electrical earthing of the mast.

3.21 Feeder Pillar

Each mast shall be provided with a feeder pillar fabricated and finished with two coats of red oxide primer and gray enamel paint of shade 631 of IS-5. Switchgears shall be to suit the power loading, and mounded at 6m above the ground.

3.12. Incoming Power Cable.

A cable of size 4 X 16 sq.mm. Aluminum conductor, armoured cable for power supply should be provided, Cable shall be taken to the base compartment of the highmast through the provision made in the foundation.

Power cable of suitable size upto the supply point shall be provided by purchaser.

3.13 Luminaires.

Luminaries shall be specially designed with cast aluminium housing suitable lamp housing and control gears for 200 W LED lamps. The luminaries shall be tested and test reports shall be submitted along with the materials. The luminaries shall be suitable for installation on high masts.

3.14 Height and type of mast.

15M Railow HD Galvanized masts of symmetrical orientation.

3.15 Foundation for high mast

The scope also includes supplying all materials and casting of RCC foundation along with necessary Anchor bolts etc. **The detailed drawing for the foundation should be submitted for approval by REREC before starting of the work.**

3.16 Photocell control: The mast shall be fitted with suitable photocell to switch the floodlights on and off.

15M MAST		
	SPECIFICATIONS	Bidders response
Manufacturer / Brand name		
Model No.		
Warranty period	Minimum 10years	
a) Height of mast	15m	
b) No. of Sections	3 – 7.5m, 7.5m	
c) Make of high mast	Railow H.D. Galvanized masts	
d) Material construction	BS4360	
e) Thickness of sections	5mm, 5mm	
f) No. of longitudinal welds /section		1
g) Make of luminaire/lamp	LED	
h) Cross section of Mast	Minimum 6 sided polygon	
i) Base dia. & top diameter A/F	150/75mm	
j) Metal protection treatment	Hot dip galvanization	
k) Method of hot dipping	Single Dipping	

15M MAST		
	SPECIFICATIONS	Bidders response
l) Average thickness of galvanization	85 nm	
m) Inspection door	2m from base plate	
n) Diameter of base plate	450mm	
o) Thickness of base plate	22mm thick	
2. DYNAMIC LOADING AS PREVAILING AT SITE		
a) Max. wind speed	144 KM / HR	
b) Factor of safety for wind load		1.5
3. FOUNDATION DETAILS		
a) Type of foundation	Chimney & Pad Reinforced concrete	
b) Size of foundation	1.5m x 1.5m x 1.0m	
c) Soil bearing capacity at site	150 KPA	
d) Depth of foundation	1.5M	
e) Number of foundation bolts		6
f) PCD of foundation bolts	350mm	
g) Type of foundation bolts	Mild Steel	
h) Bolt diameter	25mm	
i) Anchor bolt pitch	75mm	
4. LANTERN CARRIAGE		
a) Material of construction	Hot dipped galvanized	
5. CABLE		
a) Type	Trailing cable	
b) Material	Unarmoured with nitral insulation	
c) Conductor size	4 - 7mm sq copper	
d) No. of cores	5-7#	

ii). LED light

REREC'S LED REQUIREMENTS - 15M		
	SPECIFICATIONS	Bidders response
Manufacturer / Brad name		
Model No.		
Originality Verification system	Barcode or Serial number with batch number	
a) Number of LED Lights	4	
b) Light Source	LED	
c) Voltage Range/Frequency	220-240V/50Hz	
d) Power factor	0.95	
e) Power consumption	200W	
f) Luminous Efficacy(lm/W)	100	
g) CRI (Color Rendering Index)	75	

REREC'S LED REQUIREMENTS - 15M		
	SPECIFICATIONS	Bidders response
h) Color Temperature	5700K±500K (cool white)/ 4000K±500K (neutral white)	
i) Materials and Finishing	Glass: Tempered Glass Gasket: Heat Resistant Silicon Rubber Housing: Die-cast Aluminium	
j) Lifetime	50,000 Hours (70% Lumen Maintenance @ Ta 35°)	
k) Installation	Use of a Universal Bracket	
l) Certifications	RoHS, CQC, CB & CE	
m) Surge protection	10kV	
n) Warranty period	Minimum 3years	
o) Operating Temperatures	-40° to 45°C (Minimum and maximum acceptable values for outdoor applications)	
p) Classification	IK07; IP65; Class 1	
q) Optics	AWB	

D. SOLAR STREET LIGHT

The scope of this specification covers the supply, installation, testing and commissioning of the semi integrated Solar street lighting consisting of 60 watts solar LED street light IP65 rated with Aluminium casing, and 260W Polycrystalline panel fully integrated with charge controller, lithium phosphate battery and smart energy management system mounted on a 8m steel pole.

Street light pole

The tenderer should provide 8 Meter MS/Galvanized pole with pedestal/mounting accessories. The pole should be 8m high (above ground), steel pole, and single arm/double armed, hot dip galvanized. It should have Round Section, thickness of 5mm with top and bottom diameters 75mm and 125mm respectively. It should have base plate with hold-down provision, Nominal size 400 mm. The luminaire shall be secured to the spigot by means of at least two stainless steel screws. This shall be done from the inside of the luminaire to minimise the risk of vandalism and theft. An additional safety screw, with a special coded screw head, shall protect the luminaire against pilferage.

SOLAR LIGHT,		
	SPECIFICATION FOR LED LIGHT	Bidders response
	Name of manufacturer, Brand Name,	
	Model No.	
	Originality Verification system	State
	Number of lights	1
	Power rating	60 -100 watts
	Power Efficiency	>95%
	Correlated colour temperature (CCT)	4000-5000 Kelvin
	Working Life	> 80,000 hrs

	Luminous Efficacy (lumens/watt)	Min 180Lm/W	
	Minimum Luminous flux	1,100 Lumens	
	Warranty	Min 8 year	
	Illumination Angle	180 degress	
	Minimum CRI	76	
	Working TEMP(°C)	-30~+60	

ii). INTERGRATED - PANEL, BATTERY & CONTROLLER

1	SPECIFICATION OF PV MODULES		Bidders response
1.1	Name of Manufacturer, Brand Name,		
1.11	Model No.		
1.12	Originality Verification system	State	
1.13	Type	3 in 1 Integrated Solar panel, Battery & controller	
1.14	Cell type	Polycrystalline	
1.15	Solar cells encapsulated in EVA (ethylene-vinyl acetate); anti-reflection coating; Module on the front side protected by tempered, highly translucent glass.		
1.16	Maximum power output	Min 260W	
1.17	Number of modules	1	
1.18	Frame	Anodized aluminium-frame	
1.19	Glass-	Self cleaning tempered glass	
1.2	Weather resistant Junction box with 3 Bypass-diodes on the backside of the modules with protection class min. IP 54		
1.21	Wiring of the modules with pin-and-socket connector according to EN 50521		
1.22	Quantity of cells	<=60	
1.23	Temperature coefficient Pmpp:	<=-0.41%/C	
1.24	Temperature coefficient Voc:	<=-0.32%/C	
1.25	Temperature coefficient Isc:	<=0.03%/C	
1.26	Operating temperature range:	-15°C < =T< =45 °C	
1.27	Module efficiency	at STC-conditions > 17.0%	
1.28	Current at maximum power point - Imp (A) (maximum)	8.5A	
1.29	Voltage at maximum Power Point - Vmp (V) (minimum)	30.8 V	
1.3	Positive power sorting		
1.31	Warranty	Min 10 years	
1.32	25 years linear performance guarantee (90% up to 10 years and 80% up to 25 years)		
1.33	CE- conformity, DVE GS, TUV quality certified for product		
1.34	Horizontal and vertical assembly possible		
1.35	High Mechanical load (acc. IEC 61215 (5400Pa superimposed load and 2400Pa suction load))		
1.36	Pre-cabled with MC4 Plug –connectors (IP 65)		

1.37	Nominal power at IEC-Conditions (radiation 1000W/m ² , Air-Mass 1.5 25°C)		
1.38	Product certification	IEC 61215 (Ed.2)	
1.39		II/ IEC 61730	
1.4	Salt mist corrosion test	IEC 61701 (Ed. 2)	
1.41	Nominal operating cell temperature (NOCT)	45 °C +-2 °C	
1.42	Documentation: English	Please indicate:	
1.43	Power Tolerance		
1.44	Cell dimension (length x width) in mm		
1.45	Module dimension (length x width x height) in mm		
1.46	Module weight in kg		
2	SPECIFICATION FOR SOLAR BATTERIES	SPECIFICATIONS	Bidders response
2.11	Rated capacity	Min 1,000Wh	
2.12	Battery Type	Lithium iron phosphate / Nickel Alloy battery	
2.13	Nominal cell voltage?	3.2V	
2.14	Nominal voltage	24V	
2.15	Rated Operating current	< 10A	
2.16	Self-discharge per month	6% maximum	
2.17	Cycle Life	Min 3,500 cycles or 10 years	
2.18	Maximum DoD	100%	
2.19	Charge efficiency	100% at 0.2C	
2.2	Discharge efficiency	90% at 0.2C	
2.21	Operating temperature	0C - 50C	
2.22	Self-Discharge	<3% at 25C	
2.23	IP protection rating	IP65	
2.24	Warranty	5 years	
2.25	Battert Box	Polypropylene (PP)	
2.26	Certification	CE, RoHS, CCC, ISO9001, UL, Ies, IEC, BV, LVD; EN 550 14-1; EN 55014-2; EN 61000-6-2; EN 61000-6-3	
3	SPECIFICATION FOR SOLAR CHARGE CONTROLLERS	SPECIFICATIONS	Bidders response
3.11	Main features	All series use MPPT controller	
3.12	Operating temperature	*-30 to 60° C	
3.13	Charge efficiency	Min 20%	
3.14	Self-consumption	0.5% (Maximum) of rated current	
3.15	Status Indicators (minimum)	Charging and low battery visual indicators	
3.16	Guarantee	5 years	
4	SMART ENERGY MANAGEMENT SYSTEM	SPECIFICATIONS	Bidders response

4.11	Technology	Battery management system with Pulse width modulation (PWM) current management	
4.12	Main features	Electronic switching , LED driver MTBF	
4.13	Principal Function	Programmable shutdowns and light reduction during the night	
4.14		Lighting management according to state of charge of the battery	
4.15		Automatic lighting controller (day/night)	
4.16		Feedback option	
4.17		Running time counter	
4.18		Battery SOC calculation	
4.19	Protection	Deep discharge	
4.2		Overload	
4.21		Temperature	
4.22		Short circuit	
4.23		Polarity - Inverter, battery and PV panel	

iii). Steel pole

1	SPECIFICATION OF STEEL POLE		Bidders response
1.1	Name of Manufacturer, Brand Name,		
1.2	Model No.		
1.3	Number of poles	1	
1.4	Material	galvanised steel	
1.5	Pole height	8m	
1.6	Pole construction	Cylindrical	
1.7	Thickness of sections	5 mm class B	
1.8	Base diameter	min 125 mm	
1.9	Top diameter	Min 75 mm	
2	Base plate diameter	400mm	
2.1	Thickness of base plate	Min 20mm	
2.2	Number of Foundation Bolts	4	
2.3	Thickness of anchor bolt	25mm	
2.4	Length of anchor bolt	800mm	
2.4	Metal protection treatment	Galvanization and powder coating	
2.5	Average thickness of galvanization and powder coating	Min 2mm	
2.6	Pole standard	EN 40	
2.7	Warranty	Min. 5 years	

SECTION III: BILL OF QUANTITIES

BILLS OF QUANTITIES & PRICE SCHEDULE

LOT 1. COAST PROJECTS

a) **LIKONI CONSTITUENCY 15 M MASTS (5no)**

15M Low Mast					
A	DISTRIBUTION, ELECTRICAL WORKS FOR 5 NO. 15M MONOPOLES FOR LOW MAST LIGHTING IN LIKONI CONSTITUENCY				
Item	Description	Qty	Unit	Rate	AMOUNT
1	Provide and mount publicity sign plagues on the mast as directed by the Engineer.	5	No		
1.1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning of 15Metres Monopoles for high mast lighting system complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items, H.G Galvanized steel pole structure fabricated from 6 metres and 150mm diameter, 5.5 metres 100mm diameter and 5 metres 75mm diameter all overlapped at the joints by 300mm and welded firmly and installed appropriately to the satisfaction of the Project Engineer.	5	No		
1.2	Supply and install a Standard steel lockable control pillar incorporating wiring in 4.0 sq mm Copper PVC 4-Core flex with 100A 4-way consumer unit, 6.0mm ² 2 core PVC Copper Cable, 40A Double Pole Contactor, 20A MCB, 63A MCB, 40A Current Operated earth leakage CB with rated leakage current of 0.5A and all other necessary accessories mounted at 2.8m above ground and a set of identical key to the boxes	5			
1.3	Supply and install complete as specified 4 lights per mast, 200Watts LED Luminaire for the Monopoles Lighting	20	No		
2	Excavate foundation to the level as required	5	Item		
	Prepare fare face formwork for the foundation ready to cast inside re- reinforced concrete for all monopoles to BSEN 206				
3	Earthing comprising of 6.0mm ² earth lead cable and 1800mm long x 15mm diameter copper earth electrode with a driving tip and clamp in a 300mm by 300mm concrete manhole with removable cover.	5	No.		
4	Trenching, cable laying, tilting ,backfilling and carting away any surplus from site	25	Lm		
A	<i>Sub Total</i>				
B	KPLC Connection Fees	5	Item		
C	ADD 16% VAT				
	GRAND TOTAL (A+B+C)				-

b) **CHANGAMWE CONSTITUENCY 30M MAST(2ND) AND SOLAR STREET LIGHTS(6ND)**

i) **CHANGAMWE CONSTITUENCY 30M HIGH MAST**

A DISTRIBUTION, ELECTRICAL WORKS FOR 2 NO. 30M MONOPOLES FOR HIGH MAST LIGHTING					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning of 30Metres Monopoles for high mast lighting system complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Lighting Protection System comprising of: I. Air termination spike complete with base and clamp II. 25X4mm copper tape III. Earth Electrode complete with test clamps	2	No		
1.2	Supply and install complete as specified 9 lights per mast, 280Watts LED Luminaire for the Monopoles Lighting	18	No		
1.3	Supply and Installation of 30A TPN MCCB as Merlin Gerin or equivalent for the supply of power to the Monopoles.	2	No.		
1.4	Supply, installation, testing and commissioning of complete new circuits for the 30A TPN MCCB to sub-panel boards of the New masts in 6mm square copper armoured cable in concealed 1x150mm diameter Heavy Gauge PVC conduits in 750mm deep trench as described below.(150 meters per mast)	300	Mtr		
Subtotal(A)					
B CIVIL AND STRUCTURAL WORKS FOR 2ND 30M MASTS					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2.1	Excavate foundation to the level as required Prepare fare face formwork for the foundation ready to cast inside re-enforced concrete for all monopoles to BSEN 206	2	No		
2.2	Install along the Heavy gauge PVC conduits 300mm Concrete Danger slabs for electrical route marking.(50 no per mast)	100	No		
2.3	Construct Bollards and guard rails with proper drainage for all the Monopoles and paint to approved standard	2	No		
2.4	Cart away from site(s) surplus excavation material(Per site)	2	Sum		
SUBTOTAL (B)					
C	KPLC Power Connection	2	Sum		
Total (A+B+C)					
D	ADD VAT 16% OF (A+B+C)				
E KCAA Approvals @ Kshs.15,000 per mast					
GRAND TOTAL (A+B+C+D +E)					

ii) **Changamwe Constituency solar street lights (6 No)**

ITEM	DESCRIPTION	QTY	Unit	RATE	Total Amount in Kshs.
1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning 8m High, 125mm and 75mm bottom and top diameters respectively, 5mm thickness (above ground level) street lighting pole c/w foundation, support brackets for PV module, controls and Battery Housing complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Provide overcharge, discharge, short circuit, open load and surge protection c. Provide software to automatically control illumination levels (dimming to last the whole night), remotely switch on and off the system automatically c/w notifying system.	6			
2	Supply and Installation of 260W Solar Crystalline PV Module intergrated with 24V Lithium iron phosphate / Nickel Alloy (LiFePO4) Battery with not less than 950WH and 4000 plus life cycle and mppt Charge Controller 12V/24/15A with smart energy management system with its technology	6	No.		
3	Supply and Installation of LED Solar Powered Streetlight Lamp (Auto dim mode after 4 hours)	6	No.		
4	10A Isolator double pole	6	No.		
5	15A Isolator double pole	6	No.		
6	Supply and Installation of 4 sq. m PVC Twin Cable with earth	12	M		
7	Supply and Installation of 2.5 sq. m PVC Twin Cable with earth	12	M		
8	Miscellaneous Items (bolts, nuts crimps and lugs)	6	Lot		
9	Testing , commissioning & Training	1	No.		
A	<i>Sub Total</i>				
B	ADD 16% VAT				
	TOTAL (A+B)				

CHANGAMWE CONSTITUENCY SUMMARY

ITEM NO	DESCRIPTION	AMOUNT
1	CHANGAMWE 2 No 30M Highmast	
2	6 no Solar street lights	
	Total	

c) **JOMVU CONSTITUENCY 20M MAST**

A DISTRIBUTION, ELECTRICAL WORKS FOR 1 NO. 20M MONOPOLES FOR HIGH MAST LIGHTING					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning of 20Metres Monopoles for high mast lighting system complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Lighting Protection System comprising of: I. Air termination spike complete with base and clamp II. 25X4mm copper tape III. Earth Electrode complete with test clamps	1	No		
1.2	Supply and install complete as specified 6 lights per mast, 280Watts LED Luminaire for the Monopoles Lighting	6	No		
1.3	Supply and Installation of 30A TPN MCCB as Merlin Gerin or equivalent for the supply of power to the Monopoles.	1	No.		
1.4	Cabling - Supply, installation, testing and commissioning of 6mm square copper armoured cable in concealed 1x150mm diameter Heavy Gauge PVC conduits in 750mm deep trench as described below.(150 meters permast)	150	Mtr		
	Subtotal(A)				
B CIVIL AND STRUCTURAL WORKS FOR 1 NO 20M MASTS					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2.1	Excavate foundation to the level as required Prepare fare face formwork for the foundation ready to cast inside re-enforced concrete for all monopoles to BSEN 206	1	No		
2.2	Install along the Heavy gauge PVC conduits 300mm Concrete Danger slabs for electrical route marking.(50 no per mast)	50	No		
2.3	Construct Bollards and guard rails with proper drainage for all the Monopoles and paint to approved standard	1	No		
2.4	Cart away from site(s) surplus excavation material(Per site)	1	Sum		
	SUBTOTAL (B)				
C	KPLC Power Connection	1	Sum		
	Total (A+B+C)				
D	ADD VAT 16% OF (A+B+C)				
E	KCAA Approvals @ Kshs.15,000 per mast				
	GRAND TOTAL (A+B+C+D +E)				

d) NYALI CONSTITUENCY 30M MAST (1 NO) AND SOLAR STREET LIGHTS(22NO)

i) NYALI CONSTITUENCY 30M MAST

A DISTRIBUTION, ELECTRICAL WORKS FOR 1 NO. 30M MONOPOLES FOR HIGH MAST LIGHTING					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning of 30Metres Monopoles for high mast lighting system complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Lighting Protection System comprising of: I. Air termination spike complete with base and clamp II. 25X4mm copper tape III. Earth Electrode complete with test clamps	1	No		
1.2	Supply and install complete as specified 9 lights per mast, 280Watts LED Luminaire for the Monopoles Lighting	9	No		
1.3	Supply and Installation of 30A TPN MCCB as Merlin Gerin or equivalent for the supply of power to the Monopoles.	1	No.		
1.4	Cabling Supply, installation, testing and commissioning of 6mm square copper armoured cable in concealed 1x150mm diameter Heavy Gauge PVC conduits in 750mm deep trench as described below.(150 meters permast)	150	Mtr		
Subtotal(A)					
B CIVIL AND STRUCTURAL WORKS FOR 1 NO 30M MASTS					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2.1	Excavate foundation to the level as required Prepare fare face formwork for the foundation ready to cast inside re-enforced concrete for all monopoles to BSEN 206	1	No		
2.2	Install along the Heavy gauge PVC conduits 300mm Concrete Danger slabs for electrical route marking.(50 no per mast)	50	No		
2.3	Construct Bollards and guard rails with proper drainage for all the Monopoles and paint to approved standard	1	No		
2.4	Cart away from site(s) surplus excavation material(Per site)	1	Sum		
SUBTOTAL (B)					
C	KPLC Power Connection	1	Sum		
Total (A+B+C)					
D	ADD VAT 16% OF (A+B+C)				
E	KCAA Approvals @ Kshs.15,000 per mast				
GRAND TOTAL (A+B+C+D +E)					

ii) NYALI CONSTITUENCY SOLAR STREET LIGHTS

ITEM	DESCRIPTION	QTY	Unit	RATE	Total Amount in Kshs.
1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning 8m High, 125mm and 75mm bottom and top diameters respectively, 3mm thickness (above ground level) street lighting pole c/w foundation, support brackets for PV module, controls and Battery Housing complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Provide overcharge, discharge, short circuit, open load and surge protection c. Provide software to automatically control illumination levels (dimming to last the whole night), remotely switch on and off the system automatically c/w notifying system.	22			
2	Supply and Installation of 260W Solar Crystalline PV Module intergrated with 24V Lithium iron phosphate / Nickel Alloy (LiFePO4) Battery with not less than 950WH and 4000 plus life cycle and mppt Charge Controller 12V/24/15A with smart energy management system with its technology	22	No.		
3	Supply and Installation of LED Solar Powered Streetlight Lamp (Auto dim mode after 4 hours)	22	No.		
4	10A Isolator double pole	22	No.		
5	15A Isolator double pole	22	No.		
6	Supply and Installation of 4 sq. m PVC Twin Cable with earth	44	M		
7	Supply and Installation of 2.5 sq. m PVC Twin Cable with earth	44	M		
8	Miscellaneous Items (bolts, nuts crimps and lugs)	22	Lot		
9	Testing , commissioning & Training	1	No.		
A	<i>Sub Total</i>				
B	ADD 16% VAT				
	TOTAL (A+B)				

Nyali summary

ITEM NO	DESCRIPTION	AMOUNT
1	Nyali 1 No 30M Highmast	
2	22 no Solar street lights	
	Total	

SUMMARY FOR LOT 1-COAST PROJECTS

ITEM	DESCRIPTION	QUOTED AMOUNT
1	Likoni constituency 15 m masts (5no)	
2	Changamwe Constituency Highmast -30M(2No) and Solar street lights(6 No)	
3	Jamvu Constituency Highmast -20M(1No)	
4	Nyali Constituency Highmast - 30M (1No) and Solar street lights(22No)	
	Total Lot I	

BILLS OF QUANTITIES & PRICE SCHEDULE

LOT 2-MWALA CONSTITUENCY 30M HIGH MAST

MWALA CONSTITUENCY 30M HIGH MASTS					
A DISTRIBUTION, ELECTRICAL WORKS FOR 9 NO. 30M MONOPOLES FOR HIGH MAST LIGHTING					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Design, testing, inspection packing, supply and delivery, installation, erection and commissioning of 30Metres Monopoles for high mast lighting system complete in all respects, including the Civil Works and Electrical Works, foundations for installation of High Mast and all its associated items a. Allow for earthing and bonding of structure b. Lighting Protection System comprising of: I. Air termination spike complete with base and clamp II. 25X4mm copper tape III. Earth Electrode complete with test clamps	9	No		
1.2	Supply and install complete as specified 9 lights per mast, 280Watts LED Luminaire for the Monopoles Lighting	81	No		
1.3	Supply and Installation of 30A TPN MCCB as Merlin Gerin or equivalent for the supply of power to the Monopoles.	9	No.		
1.4	Cabling - Supply, installation, testing and 6mm square copper armoured cable in concealed 1x150mm diameter Heavy Gauge PVC conduits in 750mm deep trench as described below.(150 meters permast)	900	Mtr		
Subtotal(A)					
B CIVIL AND STRUCTURAL WORKS FOR 9 NO 30M MASTS					
ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2.1	Excavate foundation to the level as required Prepare fare face formwork for the foundation ready to cast inside re-enforced concrete for all monopoles to BSEN 206	9	No		

2.2	Install along the Heavy gauge PVC conduits 300mm Concrete Danger slabs for electrical route marking.(50 no per mast)	450	No		
2.3	Construct Bollards and guard rails with proper drainage for all the Monopoles and paint to approved standard	9	No		
2.4	Cart away from site(s) surplus excavation material(Per site)	9	Sum		
	SUBTOTAL (B)				
C	KPLC Power Connection	9	Sum		
	Total (A+B+C)				
	ADD VAT 14% OF (A+B)				
D	KCAA Approvals @ Kshs.15,000 per mast				
	GRAND TOTAL (A+B+C+D +E)				

SUMMARY FOR LOT 2

ITEM	DESCRIPTION	QUOTED AMOUNT
1	Mwala highmast - 30M (9.no)	
	Total Lot 3	

OVERALL SUMMARY.

ITEM NO.	LOT NO.	DESCRIPTION	QUOTED AMOUNT
1	Lot 1	Coast projects	
3	Lot 2	Mwala constituency 8No Highmast	
		Grand total(to be forwarded to form of tender)	

NOTE:

1. In case of discrepancy between unit price and total price, the unit price shall prevail
2. Bidders shall be required to charge uniform/same prices per Mast/street light.
3. Bidders can quote for all the lots but a bidder can only be awarded one lot.

SECTION VIII: STANDARD FORMS

Letter of Application

- Tender Questionnaire
- Declaration Form
- Confidential Business Questionnaire
- Statement of Foreign Currency Requirement
- Form of Tender
- Appendix to Form of Tender
- Manufacturer Warranty
- Manufacturer Authorization
- Letter of Acceptance
- Form of Agreement
- Form of Tender Security
- Performance Bank Guarantee (unconditional)
- Bank Guarantee for Advance Payment
- Letter of Notification of Award

LETTER OF APPLICATION

RFX No.

Date:

Rural Electrification and Renewable Energy Corporation,
Kawi House, South C,
Behind Boma Hotel,
P.O. Box 34585 – 00100,
Nairobi, Kenya

Ladies and Gentlemen,

1. Having read, examined and understood all of the tender information provided in the tender document, the receipt of which is hereby duly acknowledged, we, the undersigned Candidate, hereby apply for a tender for..... (**RFX Description in full**)
2. We agree to abide by this Tender including all the terms for a **period of..... days (Candidate please indicate validity of your tender)** from the date fixed for tender opening as per the tender Document, it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. *We declare that we have read and understood requirements of Clause 17 and 18 on Creation, Submission, modifications and withdrawal of Bids, and shall abide by this requirement and any deviation from this section shall lead to disqualification and REREC is not to blame*
3. This application, together with your written appointment thereof, shall not constitute a contract between us nor commit REREC to any actual tender or amount of contract.
4. We understand that you are not bound to accept any application you may receive.
5. We declare that the statements made and the information provided in our prequalification tender document are complete, true, and correct in every detail.

Yours sincerely,

Name of Candidate _____

Name and Capacity of authorized person signing the Application _____

Signature of authorized person signing the Tender _____ Stamp
or Seal of Candidate

NOTES:-

REREC requires a validity period of at least One Twenty (120) days.

TENDER QUESTIONNAIRE

Please fill in block letters.

Full names of tenderer

.....

Full address of tenderer to which tender correspondence is to be sent (unless an agent has been appointed below).....

Telephone number (s) of tenderer.....

Telex address of tenderer.....

Name of tenderer's representative to be contacted on matters of the tender during the tender period.....

Details of tenderer's nominated agent (if any) to receive tender notices. This is essential if the tenderer does not have his registered address in Kenya (name, address, telephone, telex)

.....

.....

Signature of Tenderer

Make copy and deliver to: _____(Name of Employer)

DECLARATION FORM

Date _____

To: Rural Electrification and Renewable Energy Corporation

Ground Floor: Kawi House, South C

P.O. 34585 – 00100

NAIROBI,

KENYA

Ladies and Gentlemen,

The Tenderer i.e. (full name and complete physical and postal address)_____

_____ declare the following: -

- a) That I/ We have not been debarred from participating in public procurement by anybody, institution or person.
- b) That I/ We have not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement anywhere.
- c) That I/We or any director of the firm or company is not a person within the meaning of paragraph 3.2 of ITT (Eligible Tenderers) of the Instruction to Bidders.

Yours sincerely,

Name of Tenderer

Signature of duly authorized person signing the Tender

Name and Capacity of duly authorized person signing the Tender

Stamp or Seal of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2 (c) and 2 (d) whichever applies 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; Country/Town

Plot No..... Street/Road

Postal Address..... Tel No.....

Nature of Business.....

Current Trade License No..... Expiring date.....

Maximum value of business which you can handle at any time: K. pound
.....

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 in full Nationality Citizenship Details Shares

1.....

2.....

3.....

Part 2(c) – Registered Company:

Private or public.....

State the nominal and issued capital of the Company-

Nominal Kshs.....

Issued Kshs.....

Give details of all directors as follows:

Name in full .	Nationality.	Citizenship Details*.	Shares.
----------------	--------------	-----------------------	---------

1.....

2.....

3.....

4.....

Part 2(d) – Interest in the Firm:

Is there any person(s) in (Name of Employer) who has interest in this firm?
Yes/No..... (Delete as necessary)

I certify that the information given above is correct.

..... (Title)
(Signature)	(Date)	

* Attach proof of citizenship

STATEMENT OF FOREIGN CURRENCY REQUIREMENTS

(See Clause 60[5] of the Conditions of Contract)

In the event of our Tender for the execution of _____ (*name of Contract*) being accepted, we would require in accordance with Clause 21 of the Conditions of Contract, which is attached hereto, the following percentage:

(Figures)..... (Words).....

of the Contract Sum, (Less Fluctuations) to be paid in foreign currency.

Currency in which foreign exchange element is required:

.....

Date: The Day of 20.....

Enter 0% (zero percent) if no payment will be made in foreign currency.

Maximum foreign currency requirement shall be _____ (percent) of the Contract Sum, less Fluctuations.

(Signature of Tenderer)

FORM OF TENDER

TO: _____ [Name of Employer) _____ [Date]
_____ [Name of Contract]

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to Supply, Construct, Install and Complete such Works and remedy any defects therein for the sum of
Kshs. _____ [Amount in figures] Kenya Shillings ____
_____ [Amount in words]
2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
3. We agree to abide by this tender until _____ [Insert date], and it shall remain binding upon us and may be accepted at any time before that date.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
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 tenders for and on behalf of _____ [Name of Employer] of
_____ [Address of Employer]

Witness; Name _____

Address _____

Signature _____

Date _____

APPENDIX TO FORM OF TENDER

(This appendix forms part of the tender)

CONDITIONS OF CONTRACT	CLAUSE	AMOUNT
Tender Security (Both Bank and PPOA Approved Insurance and Micro-Finances)		2% of bid price
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	Ten percent of Tender Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than 28 days after issuance of Order to Commence
Cash flow estimate to be submitted	14.3	Not later than 28 days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	Kshs. 5,000,000.00
Time for completion	43.1	To be found in the Contract
Amount of liquidated damages	47.1	0.05% of the Contract Price per day
Limit of liquidated damages	47.1	10% of Contract Value
Defect Liability period	49.1	Twelve Months
Percentage of Retention	60.5	10% of Interim Payment Certificate
Limit of Retention Money	60.5	10 % of Contract Price
Minimum amount of interim certificates	60.2	Contract value/Time for completion in months
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.8	60 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	60.8	60 days
Appointer of Arbitrator	67(3)	Chief Justice of The Republic of Kenya
Notice to Employer and Engineer	68.2	<p>The Employers address is: The Authority Secretary, Rural Electrification and Renewable Energy Corporation P. O. Box 34585-00100 Nairobi, Kenya.</p> <p>The Engineer's address is: Rural Electrification and Renewable Energy Corporation, P.O. Box 34585-00100 Nairobi, Kenya</p>

Signature of Tender.....Date.....

MANUFACTURER’S WARRANTY FORM

To Be Submitted On Manufacturer’s Letterhead)

To:

Rural Electrification and Renewable Energy Corporation
Kawi House, South C; Off Red Cross Road, Behind Boma Hotel
P.O. 34585 – 00100
NAIROBI,
KENYA

RE: MANUFACTURER’S WARRANTY FOR GOODS REQUIRED UNDER TENDER NO
..... TO BE SUPPLIED BY

(Indicate your name or the supplier you have authorized)

WE HEREBY WARRANT THAT:

- a) The goods to be supplied under the contract are new, unused, of the most recent or current specification and incorporate all recent improvements in design and materials unless provided otherwise in the Tender.
- b) The goods in the Tenderer’s bid have no defect arising from manufacture, materials or workmanship or from any act or omission of the Tenderer that may develop under normal use of the goods under the conditions obtaining in Kenya.

The Warranty will remain valid for one (1) year after the goods, or any portion thereof as the case may be, have been delivered to the final destination indicated in the contract.

DATED THIS..... DAY OF.....20.....

Signature of duly authorized person for and on behalf of the Manufacturer.

Name and Capacity of duly authorized person signing on behalf of the Manufacturer

NOTES TO TENDERERS AND MANUFACTURERS

1. *Only a competent person in the service of the Manufacturer should sign this letter of authority.*
2. *Provide full contact details including physical address, e-mail, telephone numbers and the website on the Warranty.*

MANUFACTURER’S AUTHORIZATION FORM

(To Be Submitted On Manufacturer’s Letterhead)

Rural Electrification and Renewable Energy Corporation

Ground Floor: Kawi House, South C; Off Red Cross Road, Behind Boma Hotel
P.O. 34585 – 00100
NAIROBI,
KENYA

WHEREAS WE (*Name of the manufacturer*) who are established and reputable manufacturers of (*name and description of the goods*) having factories at (*full address and physical location of factory(ies) where goods to be supplied are manufactured*) do hereby confirm that (*name and address of Supplier*) is authorized by us to transact in the goods required against your Tender (*Insert reference number and name of the Tender*) in respect of the above goods manufactured by us.

WE HEREBY extend our full guarantee and warranty as per the Conditions of Contract for the goods offered for supply by the above firm against the Invitation to Tender.

DATED THIS..... DAY OF..... 20.....

Signature of duly authorized person for and on behalf of the Manufacturer.

Name and Capacity of duly authorized person signing on behalf of the Manufacturer

NOTES TO TENDERERS AND MANUFACTURERS

- *Only authorized person in the service of the Manufacturer should sign this letter of authority.*
- *Manufacturers Shall stamp/seal the manufacturer’s authorization*

LETTER OF ACCEPTANCE

To: _____ [date]

 [*name of the Contractor*]

 [*address of the Contractor*]

Dear Sir,

This is to notify you that your Tender dated _____ for the execution of _____ [name of the Contract and identification number, as given in the Tender documents] for the Contract Price of Kshs. _____ [amount in figures][Kenya Shillings _____ (amount in words)] in accordance with the Instructions to Tenderers is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

Authorized Signature.....

Name and Title of Signatory.....

Attachment: Agreement

FORM OF AGREEMENT

THIS AGREEMENT, made the _____ day of _____ 20 _____ between _____ of [or whose registered office is situated at] _____

(hereinafter called “the Employer”) of the one part AND

_____ of [or whose registered office is situated at] _____

(hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes

_____ (*name and identification number of Contract*) (hereinafter called “the Works”) located at _____ [*Place/location of the Works*] and the Employer has accepted the tender submitted by the Contractor for the execution and completion of such Works and the remedying of any defects therein for the Contract Price of Kshs _____ [*Amount in figures*], Kenya Shillings _____ [*Amount in words*].

NOW THIS AGREEMENT WITNESSETH as follows:

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

The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e.

Letter of Acceptance

Form of Tender

Conditions of Contract Part I

Conditions of Contract Part II and Appendix to Conditions of Contract

Specifications

Drawings

Priced Bills of Quantities

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works 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 thereto have caused this Agreement to be executed the day and year first before written.

The common Seal of _____

Was hereunto affixed in the presence of _____

Signed Sealed, and Delivered by the said _____

Binding Signature of Employer _____

Binding Signature of Contractor _____

In the presence of (i) Name _____

Address _____

Signature _____

[ii] Name _____

Address _____

Signature _____

FORM OF TENDER SECURITY

WHEREAS (hereinafter called “the Tenderer”) has submitted his tender dated for the construction of (*name of Contract*)

KNOW ALL PEOPLE by these presents that WE having our registered office at(hereinafter called “the Bank”), are bound unto(hereinafter called “the Employer”) in the sum of Kshs..... for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this Day of20..... THE

CONDITIONS of this obligation are:

a) If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers

Or

b) If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:

- I. Fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
- II. Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;
- III. Rejects a correction of an arithmetic error in the tender.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him, 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 said date.

[date]

[signature of the Bank]

[witness]

[seal]

(Amend accordingly if provided by Insurance Company)

PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To: _____(Name of Employer) _____(Date)
_____(Address of Employer)

Dear Sir,

WHEREAS _____(hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. _____ date _____ to execute _____ (hereinafter called “the Works”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Kshs. _____ (amount of Guarantee in figures) Kenya Shillings _____ (amount of Guarantee in words), and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings _____ (amount of Guarantee in words) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any change, addition, or modification.

This guarantee shall be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR _____

Name of Bank _____

Address _____

Date _____

(Amend accordingly if provided by Insurance Company)

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ [name of Employer] _____ (Date)
_____ [address of Employer]

Gentlemen,

Ref: _____ [name of Contract]

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We, _____ [name and Address of Contractor] (hereinafter called “the Contractor”) shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs. _____ [amount of Guarantee in figures] Kenya Shillings _____ [amount of Guarantee in words].

We, _____ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Kshs _____ [amount of Guarantee in figures] Kenya Shillings _____ [amount of Guarantee in words], such amount to be reduced periodically by the amounts recovered by you from the proceeds of the Contract.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between _____ [name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the Contractor pursuant to the Contract.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ (name of Employer) receives full payment of the same amount from the Contract.

Yours faithfully,
Signature and Seal _____
Name of the Bank or financial institution _____
Address _____
Date _____

Witness: Name: _____
Address: _____
Signature: _____
Date: _____

LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To: _____

RE: Tender No. _____

Tender Name _____

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

Please acknowledge receipt of this letter of notification signifying your acceptance.

The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.

You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS)

SIGNED FOR ACCOUNTING OFFICER