REPUBLIC OF KENYA

COUNTY ASSEMBLY OF TURKANA

STANDARD TENDER DOCUMENT
FOR
PROPOSED SUPPLY, DELIVERY, INSTALLATION, TESTING, AND COMMISSIONING OF 50KWp SOLAR SYSTEM AT NEW ASSEMBLY BUILDING,
TURKANA COUNTY

TENDER NO: CAT/ONT/001/2026-2027
NEGOTIATION NO: 2677967

OPENING DATE: 25/11/2026 AT 1030AM EAT

CLOSING DATE: : 25/11/2026 AT 1030AM EAT

Client:
COUNTY ASSEMBLY OF TURKANA
P.O Box 25-30500
Lodwar

Prepared by:

COUNTY ARCHITECT
Department of Public Works
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NOV, 2026

REPUBLIC OF KENYA

TURKANA COUNTY GOVERNMENT: BILLS OF QUANTITIES

SUPPLIED AS PART OF THE CONTRACT

PROPOSED SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISIONING OF 50KWp SOLAR POWER PLANT AT THE NEW ASSEMBLY BUILDING, TURKANA COUNTY

ISSUED BY: PUBLIC WORKS, TURKANA COUNTY
P. O. BOX 11, LODWAR.

The contract for the above mentioned works, entered into on the ..... day of .....2021, by the undersigned parties, refer to these Bills of Quantities consisting of pages numbers as shown on index page and the General Specification dated 1976, together with any amendments thereto issued since the date of publication, both of which shall be read and construed as part of the said contract.

.....	.....
CONTRACTOR	CHIEF OFFICER, [MITPW]
Date	Date .....

SPECIAL NOTES

The contractor is required to check the numbers of the pages of the Bills of Quantities together with all collections and summaries and should be find any missing or in duplicate or the figures indistinct, he must inform the Project Manager, Turkana County Government, P. O. Box 11, LODWAR.

Should the contractor be in doubt about the precise meaning of any items or figure, for any reason whatsoever, he must inform the Project Manager, Turkana County Government, Lodwar in order that the correct meaning may be decided before the date for submission of Tenders.

No liability will be admitted, no claim allowed, in respect of errors in the contractor's Tender due to mistakes in the Bills of Quantities which should have been rectified in the manner described above.

STANDARD TENDER DOCUMENT

FOR

PROCUREMENT OF WORKS

(BUILDING WORKS)

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SECTION I - 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 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 a Central Government Ministry, Local Authority, State Corporation or any other Public Institution.

2. Eligibility and Qualification Requirements

2.1 Eligibility requirements

This invitation to tender is open to all tenderers who are qualified as stated in the appendix.

2.2 Qualification Requirements

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 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 plaint 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 plaint, 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 sub-contractors 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 Condition 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.

2.3 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 an 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.

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 price to be charged for the tender document shall not exceed Kshs. 1,000/=

3.3 The procuring entity shall allow the tenderer to view the tender document free of charge before purchase.

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 r e s p o n s i b i l i t y

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.

4.3. The Employer shall organize a site visit at a date to be notified. A representative of the Employer will be available to meet the intending tenderers at the Site.
Tenderers must provide their own transport. The representative will not be available at any other time for site inspection visits.

Each tenderer shall complete the Certificate of Tenderer's Visit to the Site, whether he in fact visits the Site at the time of the organized site visit or by himself at some other time.

TENDER DOCUMENTS

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. Tender and Confidential Business Questionnaires
h. Details of Sub contractors
i. Schedules of Supplementary Information
j. General Conditions of Contract - Part I
k. Conditions of Particular Application - Part II
l. Specifications
m. Bills of Quantities
n. Drawings
o. 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 Inquiries by tenderers

6.1 A tenderer making an inquiry relating to the tender document 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 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.

PREPARATION 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 WILL BE SUBMITTED ONLINE and shall comprise:

i. the Form of Tender and Appendix thereto,
ii. a Tender Security
iii. the Priced Bills of Quantities and Schedules
iv. The information on eligibility and qualification
v. Any other materials required to be completed and submitted in accordance with the Instructions to Tenderers.

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.

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, taxes and other levies payable by the Contractor under the Contract, or for any other cause prior to the deadline for submission of tenders, shall be included in the rates and prices and the total Tender Price submitted by the tenderer.

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.

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.

10.3 Unless otherwise specified the tenderer must enter the amounts representing 10% of the sub-total 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.

10.4 The tenderer shall furnish with his tender written confirmation from his suppliers or manufacturers of basic unit rates for the supply of items listed in the Conditions of Contract clause 70 where appropriate. The Employer may require the tenderer to justify such rates so obtained from the suppliers or manufacturers.

10.5 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 70 of the Conditions of Contract Part II.

10.6 Contract price variations shall not be allowed within the first 12 months of the contract.

10.7 Where quantity contract variation is allowed, the variation shall not exceed 15% of the original contract quantity.

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

11 Currencies of Tender and Payment

11.1 Tenders shall be priced in Kenya Shillings and the tender sum shall be in Kenya Shillings.

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 the rates of exchange used for pricing the tender shall be the selling rate or rates of the Central Bank ruling on the date thirty (30) days before the final date for the submission 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 sixty (60) 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 his tender, a Tender Security in the amount and form stated in the Appendix to Instructions to Tenderers.

13.2 The tender security shall not exceed 2 percent of the tender price.

13.3 The Tender Security shall be valid at least thirty (30) days beyond the tender validity period.

13.4 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.

13.5 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible as but not later than twenty eight (28) days after expiration of the tender validity period. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.

13.6 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, within the specified time limit
    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.

Only one tender may be submitted by each tenderer either by himself or as partner in a joint venture. A tenderer who submits or participates in more than one tender will be disqualified.

14.2 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. 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 at the venue and time 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 (7) 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-bid meeting will not be cause for disqualification of a bidder.

16 Format and Signing of Tenders

16.1 The tenderer shall prepare his tender as outlined in clause 9 above and submit online.

16.2 The copy of the tender and Bills of Quantities shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the tenderer. All pages of the tender where amendments have been made shall be initialed by the person or persons signing the tender.

16.3 The complete tender shall be without alterations, interlineations or erasures, except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person of persons signing the tender.

SUBMISSION OF TENDERS

17 Sealing and Marking of Tenders

17.1 The tenderer shall submit there bids online as described in clause 9 above

17.2 Appendix to Instructions to Tenderers and bear the name and identification of the Contract stated in the said Appendix with a warning not to open before the date and time for opening of tenders stated in the said Appendix.

17.3 Late submission will not be accepted.

17.4 A tender opened prematurely for this cause will be rejected by the Employer and returned to the tenderer.

18 Deadline for Submission of Tenders

18.1 Tenders must be received by the Employer at the address specified in clause 17.2 and on the date and time specified in the Letter of Invitation, subject to the provisions of clause 7.4, 18.2 and 18.3.

Tenders delivered by hand must be placed in the "tender box" provided in the office of the Employer.

Proof of posting will not be accepted as proof of delivery and any tender delivered after the above stipulated time, from whatever cause arising will not be considered.

18.2 The Employer may, at his discretion, extend the deadline for the submission of tenders through the issue of an Addendum in accordance with clause 7, in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

18.3 Any tender received by the Employer after the prescribed deadline for submission of tender will be returned unopened to the tenderer.

19 Modification and Withdrawal of Tenders

19.1 The tenderer may modify or withdraw his tender after tender submission, provided that written notice of the modification or withdrawal is received by the Employer prior to prescribe deadline for submission of tenders.

19.2 The tenderer's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions for the submission of tenders, with the inner and outer envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.

19.3 No tender may be modified subsequent to the deadline for submission of tenders.

19.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the period of tender validity specified on the tender form. Withdrawal of a tender during this interval will result in the forfeiture of the Tender Surety.

19.5 Subsequent to the expiration of the period of tender validity prescribed by the Employer, and the tenderer having not been notified by the Employer of the award of the Contract or the tenderer does not Intend to conform with the request of the Employer to extend the period of tender validity, the tenderer may withdraw his tender without risk of forfeiture of the Tender Surety.

TENDER OPENING AND EVALUATION

20 Tender Opening

20.1 The Employer will open the tenders 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.

20.2 Tenders for which an acceptable notice of withdrawal has been submitted, pursuant to clause 19, will not be opened. The Employer will examine the tenders to determine whether they are complete, whether the requisite Tender Sureties have been furnished, whether the documents have been properly signed and whether the tenders are generally in order.

20.3 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.

20.4 The Employer shall prepare minutes of the tender opening including the information disclosed to those present.

20.5 Tenders not opened and read out at the tender opening shall not be considered further for evaluation, irrespective of the circumstances.

21 Process to be Confidential

21.1 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.

21.2 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.

22 Clarification of Tenders

22.1 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.

22.2 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.

23 Determination of Responsiveness

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

23.2 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.

23.3 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.

23.4 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 non-conforming deviation or reservation.

24 Correction of Errors

Tenders determined to be substantially responsive shall be checked by the Employer for any arithmetic errors in the computations and summations. Errors will be corrected by the Employer as follows:

(a) Where there is a discrepancy between the amount in figures and the amount in words, the amount in words will govern.

(b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case adjustment will be made to the entry containing that error.

(c) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bills of Quantities, the amount as stated in the Form of Tender shall prevail.

(d) The Error Correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the corrected builder's work (i.e. corrected tender sum less Prime Cost and Provisional Sums.

(e) The Error Correction Factor shall be applied to all builder's work (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuations of variations.

(f) The amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and, with concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 13.

25 Conversion to Single Currency

25.1 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 twenty one (21) days before the final date for the submission of tenders.

25.2 The Employer will convert the amounts in various currencies in which the tender is payable (excluding provisional sums but including Dayworks where priced competitively) to Kenya Shillings at the selling rates stated in clause 25.1.

26 Evaluation and Comparison of Tenders

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

26.2 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.

EVALUATION CRITERIA

Evaluation of tenders shall be carried out in accordance with the criteria set out in this tender document. The evaluation shall be as follows:

a) Preliminary Evaluation
b) Technical and
c) Financial Evaluation

PRELIMINARY EVALUATION

NO	1. MANDATORY REQUIREMENTS	YES/NO
1.	UPLOAD TENDER DELARATION FORM AS PWD TENDERER.	
2.	FORM OF TENDER DULY COMPLETED, SIGNED AND STAMPED.	
3.	BUSINESS QUESTIONNAIRE DULY COMPLETED, SIGNED AND STAMPED.	
4.	COPY OF CERTIFICATE OF INCORPORATION/REGISTRATION	
5.	SUBMIT SELF WRITTEN SIGNED AND STAMPED DECLARATION THAT THEY WILL NOT ENGAGE IN CORRUPTION PRACTICE IN THE FORMAT PROVIDED	
6.	SUBMIT SELF-WRITTEN, SIGNED AND STAMPED DECLARATION THAT THE BIDDER OR HIS/HER SUB-CONTRACTORS ARE NOT DEBARED FROM PARTICIPATING IN PUBLIC PROCUREMENT IN THE FORMAT PROVIDENT	
7.	COPY OF KRA PIN CERTIFICATE	
8.	COPY OF VALID TAX COMPLIANCE CERTIFICATE/EXEMPTION CERTIFICATE	
9.	COPY OF CERTIFIED BANK STATEMENT FROM YOUR BANKER FOR THE LAST THREE YEARS. ANY STATEMENT INVOLVING GOVERNMENT STAFF WILL BE DISQUALIFIED.	
10.	PRE-TENDER SITE MEETING ATTENDANCE CERTIFICATE	

11.	SUBMITCERTIFIEDCOPY OF NCA 6 AND ABOVE FOR ELECTRICAL WORKS.	
12.	VALID SINGLE BUSINESS PERMIT FROM THE RELEVANT COUNTY GOVERNMENT	
13.	COPY OF CURRENT CR12 CERTIFICATE	
14.	DULLY FILLED, SIGNED AND STAMPED BILL OF QUANTITIES, ALL PAGES MUST BE **SEQUENTIALLY SERIALIZED**	

EVALUATION AND COMPARISON OF TENDERS- DOCUMENTARY EVIDENCE IN FORM OF COPIES AT THIS STAGE, THE TENDERER'S SUBMISSION WILL E I T H E R BE RESPONSIVE OR NON-RESPONSIVE. FAILURE TO PROVIDE ANY OF THE ABOVE MANDATORY REQUIREMENTS WILL LEAD TO DISQUALIFICATION

NB:BIDDERS MUST MEET ALL THE MANDATORY REQUIREMENTS TO QUALIFY FOR TECHNICAL EVALUATION. CERTIFICATION BY COMMISSIONER OF OATH.

TECHNICAL EVALUATION CRITERIA

THE PROPOSALS WILL BE REVIEWED BY THE TCG EVALUATION COMMITTEE. THE FOLLOWING QUALITATIVE MERIT CRITERIA WILL BE USED TO DETERMINE THE TECHNICAL VALUE OF THE OFFER IN MEETING THE OBJECTIVES OF THE SOLUTION.

NO	REQUIREMENTS	REQUIREMENTS	MAX. SCORE	SCORE AWARDED
1.	EXPERIENCE	1. PREVIOUS EXPERIENCE DETAILING SIMILAR PROJECTS UNDERTAKEN SUCCESSFULLY EVIDENCED BY LETTERS OF REFERENCE FROM CLIENTS COMPLETION CERTIFICATES FOR THE RESPECTIVE PROJECTS TO THE PROPOSED WORKS IN TERMS OF THE PHYSICAL SIZE AND COMPLEXITY (10 MARKS EACH CLIENT 2 MARK) OVER 5 CLIENTS – 10 MARKS **(EVIDENCE SHOULD BE LPO ACCOMPANIED BY A PRACTICAL COMPLETION CERTIFICATE)**	**10**	
		2. ONE OF THE CONTRACTS SHOULD BE VALUED AT LEAST 15 MILLION AND ABOVE. (5MARKS). **(EVIDENCED BY COMPLETION CERTIFICATE AND LPO)**	**5**	
		3. EXPERIENCE UNDER THE SOLAR INSTALLATION CONTRACTS IN THE ROLE AS A MAIN CONTRACTOR OR SUB-CONTRACTOR FOR AT LEAST 3 YEARS (5MARKS)	**5**	

2	QUALIFIED PERSONNEL	**SUPERVISOR MUST HAVE THE FOLLOWING;**		
		1. AT LEAST HAVE BACHELOR'S DEGREE IN ELECTRICAL AND ELECTRONIC ENGINEERING OR ANY RELATED FIELD	**10**	
		2. AT LEAST REGISTERED BY EBK AS THE GRADUATE ENGINEER AND ABOVE	**5**	
		3. AT LEAST SUPERVISED RELATED PROJECTS FOR NOT LESS THAN 2 YEARS	**5**	
		TECHNICIANS MUST HAVE THE FOLLOWING (PROVIDE CV, LICENSES FOR PROOF OF POSSESSION)		
		1. AT LEAST ONE TECHNICIAN HAS T3 SOLAR PV TECHNICIAN LICENSE FROM EPRA	**5**	
		2. AT LEAST ONE TECHNICIAN HAS C1 ELECTRICIAN LICENSE FROM EPRA AND HAS A PROOF WORKING IN ELECTRICAL RELATED FIELD AS A TECHNICIAN FOR NOT LESS THAN TWO YEARS	**5**	
3	EQUIPMENT	GIVE A LIST AND TYPE OF RELEVANT EQUIPMENT (RELATED TO THIS TENDER) OWNED BY FIRM EVIDENCED BY OWNERSHIP DOCUMENTS. WHERE NOT OWNED BY COMPANY, PROVIDE DOCUMENTARY EVIDENCE OF LEASED EQUIPMENT AS REQUIRED. AT LEAST 2 MKS EACH	**10**	
4	FINANCIAL STANDINGS	**FINANCIAL REPORTS**		

		1. AUDITED STATEMENTS FOR THE LAST TWO YEARS	5	
		EVIDENCE OF FINANCIAL RESOURCES		
		TOTAL	**70**	

ONLY BIDDERS WHO SCORE 60 MARKS AND ABOVE WILL PROCEED TO FINANCIAL EVALUATION STAGE.

FINANCIAL EVALUATION

ONLY THE TENDER THAT HAS CONFORMED TO THE TECHNICAL REQUIREMENTS AND IS THE LOWEST BIDDER WILL BE CONSIDERED

26.3 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.

26.4 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.

26.5 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.

26.6 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding provisional sums to a non-indigenous sub-contractor.

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

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

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

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

26.11 Poor past performance shall not be used as an evaluation criterion unless specifically provided for in the appendix.

27 AWARD OF CONTRACT

Award Criteria

27.1 Subject to Sub-clause 27.2, 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 as required in Sub-clause 2.1 and 2.2 here above.

27.2 The Employer reserves the right to accept or reject any tender, and to annual 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.

28 Notification of Award

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

28.3 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.

28.4 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.

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 the amount stated in the Appendix to Instructions to Tenderers and in the format stipulated in the Conditions of Contract.

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 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 (based upon the exchange rates determined in accordance with clause 60(5) of the Conditions of Contract) and a 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

An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with clause 60(1) of 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 or fraudulent practices

31.1 The procuring entity requires that tenderers observe the highest standard of

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

APPENDIX TO INSTRUCTIONS TO TENDERERS

Notes on the Appendix to Instructions to Tenderers

The following appendix to instructions to tenderers shall complement or amend the provisions of the instructions to tenderers (Section II). Wherever there is a conflict between the provisions of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers.

CLAUSE

13 Tender Security

Amount of Tender Security is Kshs **AS STATED IN TENDER NOTICE**

16 (i) The name and address of the Employer for the purposes of submission of tenders is **AS STATED IN TENDER NOTICE**

(ii) The name of the proposed Works and where available the Contract Number is **AS STATED IN TENDER NOTICE**

(iii) The tender opening date and time **AS STATED IN TENDER NOTICE**

28 Performance Guarantee

The amount of Performance Security is **5% OF CONTRACT SUM**

SECTION II

CONDITIONS OF CONTRACT, PART I - GENERAL CONDITIONS

The Conditions of Contract, Part I - General Conditions, shall be those forming Part I of the "Conditions of Contract for works of Civil Engineering Construction, Fourth Edition 1987, re-printed in 1992 with further 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 "Conditions of Contract, Part II - Conditions of Particular Application".

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CONDITIONS OF CONTRACT
PART II
(CONDITIONS OF PARTICULAR

APPLICATION) TABLE OF

CLAUSES

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SECTION I11

CONDITIONS OF CONTRACT PART II -
CONDITIONS OF PARTICULAR APPLICATION

GENERAL

The Conditions of Contract Part II - Conditions of Particular Application, modify and compliment like-numbered clauses in the Conditions of Contract Part I - General Conditions. Both Parts shall be read together, with the Conditions of Particular Application prevailing in case of conflict or discrepancy. Clauses of the General Conditions not specifically modified and supplemented shall remain in effect.

Clause No.

Definitions and Interpretation

1.1 (a)(i) The said "Employer" shall be **COUNTY ASSEMBLY OF TURKANA** represented by **CLERK TO THE COUNTY ASSEMBLY**

(iv) The said "Engineer" shall be **CHIEF OFFICER, PUBLIC WORKS or** any other competent person appointed by the Employer, and notified to the Contractor, to act in replacement of the Engineer.

(b)(i) Insert in line 2 after "the Bills of Quantities", the following, "the rates entered by the Contractor (whether or not such rate be employed in computation of the Contract Price)".

Add the following sub-clause; SECTION C – APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: **COUNTY ASSEMBLY OF TURKANA**

Address: **P.O.BOX 25-30500, LODWAR**

Name of Authorised Representative: **CLERK-COUNTY ASSEMBLY OF TURKANA**
Address; P.O.BOX 11-30500, LODWAR

Telephone: _____

Facsimile: _____

The Project Manager is

Name: **CHIEF OFFICER, PUBLIC WORKS**

Address: **P.O.BOX 11-30500, LODWAR**

Telephone: _____

Facsimile: _____

The name (and identification number) of the Contract is PROPOSED 50KWp HYBRID SOLAR SYSTEM INSTALLATION AT THE NEW ASSEMBLY CHAMBERS BUILDING, TURKANA COUNTY

The Works consist of **supply, delivery, installation, testing and commissioning of the said works.**

The Start Date shall be **SHALL BE AGREED WITH THE PROJECT MANAGER**

The Intended Completion Date for the whole of the Works shall be
12 WEEKS FROM THE DATE OF POSSESSION

The following documents also form part of the Contract:
AS LISTED IN CLAUSE 2.3 OF THE CONDITION TO CONTRACT

The Contractor shall submit a revised program for the Works within [**SEVEN**] **7**days of delivery of the Letter of Acceptance.

The Site Possession Date shall be **AGREED WITH THE PROJECT MANAGER**

The Site is located at **TURKANA COUNTY** and is defined in drawings nos._____

_____

The Defects Liability period is **180days.[SIX MONTH FROM THE DATE OF ISSUARANCE OF PRACTICAL COMPLETION CERTIFICATE TO THE CONTRACTOR]**

Other Contractors, utilities etc., to be engaged by the Employer on the Site
Include those for the execution of;

1. DRAINAGE WORK

2. CIVIL WORKS

The minimum insurance covers shall be;

- **CONTRACTORS ALL RISKS INSURANCE**

The following events shall also be Compensation Events:

1. NONE [ONLY AS LISTED IN CLAUSE 24 OF THE CONDITIONS OF CONTRACT]

2. _____

3. _____

4. _____

The period between Program updates is 14 **DAYS**.

The amount to be withheld for late submission of an updated Program is 3**% OF THE**

CONTRACT SUM

The proportion of payments retained for defect liability period is **10% OF THE CONTRACT SUM** percent.

The Price Adjustment Clause **SHALL NOT** apply

The liquidated damages for the whole of the Works is Kshs. **100,000** (per day)

The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price **5 percent** (%)

The Completion Period for the Works is **12[Weeks]**

The rate of exchange for calculation of foreign currency payments is **NOT APPLICABLE**

The schedule of basic rates used in pricing by the Contractor is as attached *[Contractor to attach].*

Advance Payment **shall not be granted.**

The prices for VAT should be **included** in the unit's prices of billed items but should not be given as **a percentage at the grand summary page.**

The bidder should submit **ONLY ONE ORIGINAL COPY** of the bills of quantities and not two as indicated in clause 4.1 of the instruction to tender.

Withholding Tax of three percentages shall be deducted from the every payment due to the contractor

Engineer's Duties and Authority

2.1 (b) The Engineer shall obtain specific approval of the Employer before taking any of the following actions specified in Part I:

(i) Consenting to the sub-letting of any part of the Works under clause 4.

(ii) Certifying additional cost determined under Clause 12

(iii) Determining an extension of time under Clause 44

(iv) Issuing a variation under Clause 51 except in an emergency situation as reasonably determined by the Engineer.

(v) Fixing rates or prices under clause 52

4 Assignment and Subcontracting

4.1 Delete the second and third sentence and substitute:

No single subcontract may be for more than 10 percent of the Contract Price nor shall the sum of all subcontracts exceed 25 percent of the Contract price. No one subcontractor may be awarded subcontracts to a total value greater than 10 percent of the Contract Price. All subcontracts greater than 2 percent of the Contract Price are to have the prior consent of the Engineer. The Contractor shall however, not required such consent for purchases of materials or to place contracts for minor details or for any part of the Works of which the manufacturer of supplier is named in the Contract. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

5 Contract Documents

5.1 (a) The language governing this Contract shall be English.

The "Ruling Language" which shall be used to interpret this Contract shall be English. Communication between the Contractor and Engineer or Engineer's representative shall be in English.

(b) The law applicable to this Contract shall be the laws of the Republic of Kenya. Except to the extent otherwise provided by the Contract, the Kenyan courts shall have exclusive jurisdiction to hear and to determine all actions and proceedings in connection with and arising out of the Contract, and the Contractor shall submit to the jurisdiction of Kenyan courts for the purpose of any such actions and proceedings.

5.2 Delete the documents listed 1-6 and substitute:

(1) The Contract Agreement;
(2) The Notification of Award;
(3) Tender and Appendix to Form of Tender;
(4) The Conditions of Contract Part II;
(5) The Conditions of Contract Part I (FIDIC);
(6) The Special Specifications;
(7) The Standard Specifications for Road and Bridge

Construction, MOTC - 1986;

(8) Clarifications and rectifications accepted by the Employer; and

(9) The Drawings;

(10) The priced Bills of Quantities; and

(11) Schedules and other documents forming part of the Contract.

8.1 Add to sub clause 8.1 the following:

(a) Within 28 days after receipt of the Engineer's order to commence the Works, the Contractor shall establish an office at the Site duly equipped for the Contractor's representative and his supervisory personnel.

The Contractor shall maintain this office throughout the Contract period. The said office shall be the legal domicile of the Contractor, and all correspondence sent to this office shall be deemed to have been sent to the Contractor's head office.

(b) A foreign Contractor or a Kenya-foreign joint venture, if not registered in Kenya under the applicable laws of Kenya, shall undertake registration upon receipt of the letter of acceptance and prior to signing of the Contract.

10.1 <u>Performance Security</u>

In lines 1,2 and 3 delete the words "If the Contract... within 28 days" and substitute "The Contractor shall obtain a Performance Security within 28 days ....."

Add the following at the end of this Sub-Clause:-

The Performance Security shall be issued by a Bank incorporated in Kenya. The amount of guarantee shall be as stated in the Appendix to Form of Tender.

The bank guarantee, shall be issued either (a) by an established and reputable bank approved by the Employer and located in Kenya or a foreign bank through a correspondent established and reputable bank located in Kenya and approved by the Employer or (b) directly by a foreign bank acceptable to the Employer. The performance security shall normally be in the currency or currencies requested for payment by the Contractor and in the same proportions as those requested for payment in the Contract.

The performance security may, subject to the approval of the Engineer, be adjusted at the end of each period of 12 months to reflect the residual value of the

Contract Works.

10.2 The performance guarantee shall be valid until a date 28 days after the date of issue of the Taking-Over Certificate. The security shall be returned to the Contractor within 28

days of the expiration.

10.3 Delete sub-clause 10.3

11.1 Inspection of Site

Add the words "and the Contractor shall be deemed to have based his tender on all the aforementioned" after the words "affect his tender".

Delete the last paragraph completely and replace with the following:

"The Employer in no way guarantees completeness nor accuracy of the soil, materials, subsurface and hydrological information made available to the Contractor at the time of tendering or at any other time during the period of the Contract, and the Contractor shall be responsible for ascertaining for himself all information as aforesaid for the execution of Works and his tender shall be deemed to have been priced accordingly.

14.1 **Programme to be Submitted**

The time within which the Programme shall be submitted shall be twenty eight (28) days. This detailed Programme shall be based upon the programme submitted by the Contractor as part of his tender and shall, in no material manner, deviate from the said programme.

The Contractor shall allow in his Programme for the following 11 public holidays per calendar year in Kenya upon which the Contractor shall not be permitted to work

New Year's Day (1st January) Good Friday
Easter Monday
Labour Day (1st May)
Madaraka Day (1st June) Idd-Ul-Fitr

29

Moi Day (10th October)
Kenyatta Day (20th October)
Jamhuri Day (12th December) Christmas Day (25th

December) Boxing Day (26th December)

The Contractor should also allow per calendar year for a further 2 unspecified public holidays which may be announced by the Government of Kenya with no prior notification, and upon which he shall not be permitted to work.

14.2 Add the following at the end of this sub clause:-

The Employer shall have the right to withhold payment at any time if the Contractor fails to submit the contractual construction programmes in accordance with sub clause 14.1 above or revise construction programmes due to his negligence, failure or omission.

14.3 **Cash Flow Estimate to be Submitted**

The time limit within which a detailed cash flow estimate is to be submitted shall be twenty eight (28) days.

In preparing the estimates, the Contractor shall make provision for Advance payment, repayment of advance, retention, payment for services provided by the Employer and timing implications of sub clause 60 - Certificates and Payments.

15 Contractor's Superintendence

Add the following at the end of the first paragraph of sub-clause 15.1:

15.1 The Contractor shall, within seven (7) days of receipt of the Engineer's order to commence the Works, inform the Engineer in writing, the name of the Contractor's representative and the anticipated date of his arrival on Site.

Add the following sub-clause 15.2:

15.2 The Contractor's agent or representative on the Site shall be an Engineer registered by the Engineer's Registration Board of Kenya in accordance with the Laws of Kenya cap. 530 or have equivalent status approved by the Engineer and shall be able to read, write and speak English fluently.

16.2 **Engineer at Liberty to object**

At the end of this clause add "by a competent substitute approved by the Engineer at the Contractor's own expense".

The Contractor is encouraged to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications who are Kenyan citizens.

19.1 Add at the end of sub clause 19.1 the following: -

The formulation and enforcement of an adequate safety program shall be the obligation of the Contractor with respect to all the Works under this Contract, regardless of whether performed by the Contractor or his subcontractors. The Contractor shall, within 14 days after commencement of the Works, meet the Engineer to present and discuss his plan for the establishment of such safety measures as may be necessary to provide against accidents, unsafe acts and so forth. Within 28 days after commencement of the Works, the Contractor shall submit a written safety program to the Engineer covering the overall Works and based on the laws and regulations of Kenya. In addition, he shall prepare special safety programs for blasting and handling of explosives as stipulated in the General and Special Specifications.

Notwithstanding the foregoing, the Contractor shall observe the following measures with a view to reducing or eliminating adverse environmental effects by the Site Works:

(i) All queries and borrow pits shall be filled and landscaped to their original state after extraction of construction material

(ii) Soil erosion due to surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures that shall include, but not limited to grassing , planting of trees, gabions etc.

(iii) Long traffic diversion roads shall be avoided so as to minimize the effect of dust on the surrounding environment. In any case all diversions shall be kept damp and dust free at the Contractor's expense.

(iv) Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed off in such a way as not to adversely affect the environment.

(v) Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Government so as to minimize noise pollution and community interference.

(vi) Dumping shall be done only at designated dumping areas and not haphazardly on surroundings.

Insurance of Works & Contractor's Equipment

21.1 (a) Delete the first sentence of this clause and replace with the following:

"Prior to commencement of the Works the Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure to the satisfaction of the Employer."

(b) Add the following words at the end of sub - paragraph (a) and immediately before the last word in (b)

"it being understood the insurance shall provide for compensation to be payable in the types and proportions of the currencies required to rectify the loss or damage incurred."

In sub clause 21.1(b), delete the words "or as may be specified in Part II of these Conditions".

21.2 (a) Delete the words "from the start of Work at the Site" and substitute with the words "from the first working day after the commencement date"

(c) Add the following sub-clause: "It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract".

23.1 Third Party Insurance

Add the following at the beginning of this sub-clause:-

"Prior to commencement of the Works ....."

23.2 Minimum Amount of Insurance

Add the following at the end of this sub-clause:-
" ..... with no limits to the number of occurrences."

25.1 Insert the words "as soon as practicable after the respective insurances have been taken out but in any case" before the words "Prior to the start of Work at the Site"

Add the following sub-clauses 25.5 to 25.7

25.5 **Insurance Notices**

Each policy of insurance effected by the Contractor for the purpose of the Contract shall include a provision to the effect that the Insurer shall have a duty to give notice in writing to the Contractor and Employer of the date when a premium becomes payable not more than thirty (30) days after the giving of such notice.

25.6 **Re-insurance in Kenya**

The risks against which the Contractor is obliged to insure under the Contract shall be insured through established and reputable companies approved by the Employer and located in Kenya and any cover against risks which the Contractor may enjoy shall be reinsured in Kenya by an approved Kenyan Insurance Company In respect of the Contractor's obligations under the Contract.

It shall be the responsibility of the Contractor to notify the insurers under any of the insurances referred or event which by the terms of such insurances are required to be so notified and the Contractor shall indemnify and keep indemnified the Employer against all losses, claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in consequence of any default by the Contractor in complying with the requirements of this sub clause whether as a result of avoidance of such insurance or otherwise.

26. **Compliance with Statutes, Regulations**

Add the following sub-clause 26.2;-

The Employer will repay or allow to the Contractor all such sums as the Engineer shall certify to have been properly payable and paid by the Contractor in respect of such fees. Provided always that, without prejudice to sub clause, nothing contained in this clause shall be deemed to render the Employer liable to all claims which may be considered to fall within the provisions of clause 22.1.

Royalties

28.2 Add the following at the end of this sub-clause;

"The Contractor shall also be liable for all payments or compensation, if any, that are levied in connection with the dumping of part or all of any such material."

Interference with Traffic and Adjoining Properties

29.2 Add new sub-clause 29.2;

The Contractor shall reinstate all properties whether public or private which are damaged in consequence of the construction and maintenance of the Works to a condition at least equal to that prevailing before his first entry on them.

If in the opinion of the Engineer the Contractor shall have failed to take reasonable and prompt action to discharge his obligations in the matter of reinstatement, the Engineer will inform the Contractor in writing of his opinion, in which circumstances the Employer reserves the right to employ

others to do the necessary work of reinstatement and to deduct the cost thereof from any money due or to become due to the Contractor.

The Contractor shall promptly refer to the Employer all claims, which may be considered to fall within the provisions of Clause 22.1.

LABOUR

34.2 Conditions of Employment of Labour

The Contractor shall be responsible for making all arrangements for and shall bear all costs relating to recruitment, obtaining of all necessary visas, permits or other official permission for movements of staff and labour.

34.3 Fair Wages

The Contractor shall, in respect of all persons employed anywhere by him in the execution of the Contract, observe and fulfill the following conditions:

(a) The Contractor shall pay the rates of wages, observe hours of labour and provide conditions, housing amenities and facilities not less favorable than those required by the Regulation of wages (Building and Construction Industry) Order 1998, and any subsequent amendments thereto, or in any ministry of labour or other government department in consultation with the district whose general circumstances in the trade or industry in which the Contractor is engaged are similar. The Contractor shall at all times during the continuation of the Contract display, for the information of his employees, a notice setting out the general rates of wages, hours and conditions of labour of his employees and a copy of this clause.

(b) In the absence of any rates for wages, hours or conditions of labour so established, the Contractor shall pay rates or wages and observe hours and conditions for labour which are not less favourable than the general circumstances in the trade or industry in which the Contractor isengaged.

(c) Where the absence of established rates of wages, hours and conditions of labour or the dissimilarity of the general circumstances in the trade or industry in which the Contractor is engaged prevent the Contractor from observing rates of wages, hours and conditions of labour ascertained under sub-paragraph (a) or (b) above, the Contractor in fixing the rates of wages, hours and conditions of labour of his employees shall be guided by the advise of the labour department.

(d) The Contractor shall recognize the freedom of his employees to be members of trade unions.

(e) The Contractor shall maintain records of the times worked by, and the wages paid to his employees. The Contractor shall furnish to the

Employer, if called upon so to do, particulars of the rates of wages, hours and conditions of labour as the employer may direct.

(f) The Contractor shall be responsible for observance by his sub-Contractors of the foregoing provisions.

34.4 **Breach of Fair Wages Clause**

Should a claim be made to the Employer alleging the Contractor's default in payment of fair wages to any workman employed on the Contract and if proof thereof satisfactory to the Employer is furnished by the labour department, the Employer may, failing payment by the Contractor, pay the claims out of any monies due or which may become due to the Contractor under the Contract.

34.5 **Recruitment of Unskilled Labour**

Any additional unskilled labour which may be required by the Contractor for the Works and which is not in his employ at the time of the acceptance of the tender shall be recruited by the Contractor from the labour office nearest to the Site of the Works.

34.6 **Compensation for injury**

The Contractor shall, in accordance with the Workman's Compensation Act Chapter 236 of the laws of Kenya and any other regulations in force from time to time in Kenya ,pay compensation for loss or damage suffered in consequence of any accident or injury or disease resulting from his work to any workman or other person in the employment of the Contractor or any sub-contractor.

34.7 **Labour Standards**

a) The Contractor shall comply with the existing local labour laws, regulations and labour standards.

b) The Contractor shall formulate and enforce an adequate safety program with respect to all Work under this Contract, whether

performed by the Contractor or his sub-contractors. The Contractor has assurance from the Employer of cooperation where the implementation of these safety measures requires joint cooperation.

c) Upon written request of the Employer the Contractor will remove or replace any of his employees employed under this Contract.

34.8 **Recruitment**

The Contractor shall not induce personnel of the employer or the Engineer to leave their regular employment and shall not, without the prior consent in writing of the Employer, employ personnel who have resigned from such service within the preceding twelve months.

35 Add the following subclauses 35.2 and 35.3:-

35.2 The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

35.3 The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means. The Contractor shall also notify the relevant authority(s) whenever such report is required by the law.

41.1 **Commencement and Delays**

Insert immediately after the word Works------ "on Site within 28 days" and before the word ----------after

41.2 **Definition of Commencement**

For the purposes of this clause, the Works shall be deemed to have commenced when all of the following conditions are satisfied;

a) The approved competent and authorized agent or representative of the Contractor is resident in the project area and is giving his whole time to the superintendence of the Works.

b) The provision by the Contractor of evidence that all insurances required by the Contract are in force.

c) The Contractor has an established office in the project area with postal address for receipt of correspondence.

d) The principal items of constructional plant have been brought to Site and put to work in the execution of the permanent Works.

42.4 **Possession of Site and Access Thereto**

Add the following to this clause 42.4;

The Contractor shall not enter any part of the Site until he has requested and received permission to do so from the Employer or the Engineer.

The Contractor shall not use any portion of the Site for any purpose not connected with the Works.

44.1 Add at the end of sub-clause 44.1 the following:

Neither rains falling between 1st November and 31st December (inclusive) and between 1st February and 31st May (inclusive) nor floods caused by such rains shall be deemed exceptional weather conditions such as may fairly entitle the Contractor to an extension of time for the completion of the Work.

45 Working Hours

Delete sub-clause 45.1 and substitute:

"subject to any provision to the contrary contained in the Contract, the Contractor shall have the option to work continuously by day and by night and on locally recognized days of rest.

If the Contractor requests for permission to work by day and night and if the Engineer shall grant such permission, the Contractor shall not be entitled to any additional payment for so doing. All such work at night shall be carried out without unreasonable noise or other disturbance and the Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out night work and from and against all claims, demands, proceedings, costs, charges and expenses whatsoever in regard or in relation to such liability. In addition, the Contractor shall be required to provide, for any work carried out by night or recognized days of rest, adequate lighting and other facilities so that the Work is carried out safely and properly. In the event of the Engineer granting permission to the Contractor to work double or rotary shifts or on Sundays, the Contractor shall be required to meet any additional costs to the Employer in the administration and supervision of the Contract arising from the granting of this permission.

47.2 **Reduction of Liquidated Damages**

There shall be no reduction in the amount of liquidated damages in the event that a part or a section of the Works within the Contract is certified as completed before the whole of the Works comprising that Contract.
No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

The sum stated in the Appendix to Form of Tender as liquidated

damages shall be increased by a sum equivalent to any amount payable by the Employer to the Contractor under clause 70.1 in respect of an increase in costs in such period that would not have been incurred by the Contractor if the Works had been completed by the due date for completion prescribed by clause 43.

Defects Liability

49.3 Add at the end of this sub-clause the following sentence:-

Any work ordered to be executed under this clause shall be done at a time and in a manner as directed by the Engineer so as to interfere as little as possible with the operations of the Employer or of other contractors and no extension(s) of the defects liability period will be allowed for the execution of this Work.

Add the following sub-clause 49.5 to this Clause:-

52 **Variations**

52.1 Add the following final sentence to this subclause:-

The agreement, fixing or determination of any rates or prices as aforesaid shall include any foreign currency and the proportion thereof.

52.2 **Daywork**

Add the following at the end of this sub-clause:

The Work so ordered shall immediately become part of the Works under the Contract. The Contractor shall, as soon as practicable after receiving the Daywork Order from the Engineer undertake the necessary steps for due execution of such Work. Prior to commencement of any work to be done on a Daywork basis, the Contractor shall give a notice to the Engineer stating the exact time of such commencement.

54 **Plant, Temporary Works and Materials**

Delete Sub-Clauses 54.3 to 54.4 entirely.

For the purpose of these Clauses, the term "Equipment" shall be read as "Contractor's Equipment" where the context so requires.

54.1 Line 5: - Add "written" between "the" and "consent".

Quantities

55.1 Delete sub-clause 55.1 and substitute with the following;

The quality and quantity of the Work included in the Contract Price shall be deemed to be that which is set out in the Contract Bills. The Bills, unless otherwise expressly stated therein, shall be deemed to have been prepared in accordance with the principles of the latest edition of the Civil Engineering Standard Method of Measurement.

Any error in description or in quantity or any omission of items from the Contract Bills or Specifications shall not vitiate this Contract but shall be corrected and deemed to be a variation required by the Engineer. Subject to the foregoing, any error whether arithmetical or not in the computation of

the Contract Price shall be deemed to have been accepted by the parties hereto.

The Contract Price shall not be adjusted or altered in any way whatsoever otherwise than in accordance with the express provisions of these Conditions.

55.2 Add as a new sub-clause:

"Items of Work described in the Bills of Quantities for which no rate or price has been entered in the Contract shall be considered as included in other rates and prices in the Contract and will not be paid for separately by the Employer.

Measurement

56.1 Delete sub clause 56.1 and replace with the following:-

The Contractor shall prepare and submit to the Engineer all necessary field notes and other records taken and computations made for the purpose of quantity measurements, of which the forms shall be approved by the Engineer, for the monthly progress payment under clause 60. The measurement of work quantities made by the Contractor shall be verified and certified by the Engineer based on the above-mentioned documents.

The Contractor shall furnish all personnel, equipment and materials to make such surveys and computations as necessary to determine the quantities of work performed. Unless otherwise prescribed in the specifications or the drawings, all measurements for payment shall be made by the dimensions, lines and grades as shown on the drawings or by direct survey of which the methods shall be approved by the Engineer.

The documents submitted for measurement and payment shall become the property of the Employer and shall be used to the extent necessary to determine the monthly progress payment to be made to the Contractor under the Contract. Direct survey, if done, shall be subject to checking and verification by the Engineer and all errors in the said survey work and related computations as found during such checking shall be immediately corrected by the Contractor.

57.1 Delete sub clause 57.1 and substitute with the following:-
The Works shall be measured net with deductions made in accordance with the principles of the latest edition of the Civil Engineering Standard Method of Measurement. All measurements shall be given in metric (SI) units.

Provisional Sums

58.4 **Prime Cost sum**

Wherever an item in the Bills of Quantities has been referred to as a "P.C. Sum" (Prime Cost Sum), that item shall be construed as a Provisional sum and the provisions of Sub-clauses 58.1 to 58.3 will apply.

59.5 Add the following paragraph at the end of sub clause 59.5:-

If the Engineer desires to secure final payment to any nominated sub-contractor before final payment is due to the Contractor and if such sub- contractor has satisfactorily indemnified the Contractor against any latent defects, the Engineer may, in an interim certificate, include an amount to cover the said final payment, and thereupon the Contractor shall pay to such nominated sub-contractor the amount so certified. Upon such final payment, the amount named in the Appendix to Form of Tender as Limit of Retention Money shall be reduced by the sum which bears the same ratio to the amount as does the subcontract and sub-contractor shall be discharged from all liability for the Work, materials or goods executed or supplied by such subcontractor under the Contract to which the payment relates.

Certificates and Payment

Delete Sub-clauses 60.1 to 60.10 entirely and substitute with the following:-

60.1 **Advance Payment**

In the event that an advance payment is granted, the following shall apply:-

a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.

b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or of a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.

c) Reimbursement of the advance shall be effected by deductions from monthly interim payments.

d) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by means of the formula:

$$R = \frac{A\,(x^{1} - x^{11})}{}$$

80 - 20

Where :

R = the amount to be reimbursed

A = the amount of the advance which has been granted

X^1 = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.

X^{11} = The amount of the previous cumulative payments as a percentage of the original amount of the Contract.

This figure will be below 80% but not less than 20%.

(e) with each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

60.2 **Interim Payment Certificate**

The Contractor shall submit to the Engineer, in the manner required by the Engineer after the end of each month a statement showing the estimated total value of permanent Work properly executed and materials or goods for permanent works brought to Site up to the end of the previous month (if the value shall justify the issue of an interim certificate) together with any adjustments under clause 70 and any outstanding claims and sums the Contractor considers may be due to him. The Contractor shall amend or correct his estimate as directed by the Engineer and the latter shall not accept it until he is satisfied that it is fair and reasonable. With respect to the said materials and goods, no payment for them shall be made unless ;-

(i) The materials are in accordance with the specifications for the Works;

(ii) The materials have been delivered to Site and are properly stored and protected against loss, damage or deterioration;

(iii) The Contractor's record of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records are available for inspection by the Engineer;

(iv) The Contractor has submitted a statement of his cost of acquiring and delivering the materials and goods to the Site, together with such documents as may be required for the purpose of evidencing such cost;

(v) The materials are to be used within a reasonable time.

The Contractor will be paid on the certificate of the Engineer the amount due to him on account of the estimated total value of the permanent Work executed up to the end of the previous month together with such amount (not exceeding 75% of the value) as the Engineer may consider proper on account of materials and goods for permanent Work delivered by the Contractor on Site and in addition, such amount as the Engineer

may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bill of Quantities, all of which shall be subject to a retention of the percentage named in the Appendix to Form of Tender until the amount retained (hereinafter and in all Contract documents called the "Retention Money") shall reach the "Limit of Retention Money" named in the said Appendix. Provided always that no interim certificate shall be issued for a sum [such sum always being the net amount thereof after all deductions for retention etc) less than that named in the Appendix to Form of Tender as "Minimum Amount of Interim Certificate" at one time.

Within 14 days after receiving a statement from the Contractor as aforesaid, and subject to the Contractor having made such further amendments and corrections as the Engineer may require, the Engineer shall issue a Certificate of Payment to the Employer showing the amount due, with a copy to the Contractor.

The Engineer shall not unreasonably withhold certifying an Interim Payment Certificate and where there is a dispute regarding an item for payment, the Engineer may delete this disputed item from the Interim Payment Certificate and certify the remainder for payment provided the said payment is in accordance with the preceding paragraph. In cases of difference in opinion as to the value of any item, the Engineer's view shall prevail.

60.3 **Final Account and Final Payment Certificate**

As soon as possible after the issue of Taking - Over Certificate or the termination of the Contract and not later than the time of issue of Defects Liability Certificate, the Contractor shall prepare and submit to the Engineer (with a copy to the Employer), a Statement of Final Account showing in detail the total value of work done in accordance with the Contract together with all sums paid in previous payments. Within thirty (30) after receipt of such further information as may be reasonably required from the Contractor for its verification, the Engineer shall check the said statement, prepare and submit a Final Payment Certificate to the Employer (with a copy to the Contractor).

The Final Payment Certificate shall state;

(a) The (final) total value of all Work done in accordance with the Contract;

(b) After giving credit to the Employer for all amounts previously paid to the Contractor, the balance, if any, due from the Employer to the

Contractor or the Contractor to the Employer, as the case may be.

Unless the Contractor notifies the Engineer of his objection to the Final Payment Certificate within twenty eight [28] days of delivery thereof , he shall be deemed to have agreed that he accepts the total Contract Price as

set out in the Final Payment Certificate as full settlement for all work done under the Contract including any claims, variations and omissions thereof.

However, a Final Certificate of Payment shall not be conclusive:

a) to the extent that fraud or dishonesty relates to or affects any matter dealt with in the Certificate, or

b) if any arbitration or court proceedings under the Contract have been commenced by either party before the expiry of 84 days after the issue of the Final Certificate of Payment.

60.4 **Payment of Certificates**

Payment upon each of the Engineer's Certificates for Interim Payments shall be made by the Employer within the time stated in the Appendix to Form of Tender from the date of issue of each Certificate of Payment.

Payment upon the Engineer's Final Payment Certificate shall be made by the Employer within the time stated in the Appendix to Form of Tender from the date of issue of the Final Certificate of Payment signed by the Engineer and countersigned by the Contractor or his authorised agent or representative.

Making of a payment by the Employer shall be considered to have been duly executed on the day that the Employer has issued a cheque.

60.5 **Payment of Retention Money**

One half of the retention money shall become due upon the issue of a Taking - Over Certificate and shall be paid to the Contractor when the Engineer shall certify in writing that the last section of the whole of the Works has been substantially completed and the other half shall be paid to the Contractor after the expiration of the Defects Liability Period and the issue of a Certificate under Clause 62. Provided always that if such time there shall remain to be executed by the Contractor any Works ordered during such period pursuant to Clauses 49 and 50 thereof, the Employer

shall be entitled to withhold payment [until the completion of such Works] of so much of the second half of the Retention Money as shall in the opinion of the Engineer represent the Costs of the Works so remaining to be executed. Provided further that in the event of different Defects Liability Periods having become applicable to different parts of the Works pursuant to clause 48 hereof the expression "expiration of

the Defect Liability Period" shall for the purpose of this Sub-clause be deemed to mean the expiration of the latest of such periods.

60.6 **Currency ofPayment**

The Contract price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya shillings and foreign currency(s) in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate[s] of exchange for the calculation of the amount of foreign currency payment[s] shall be the rate of exchange indicated in the Tender. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services, the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Engineer shall be notified promptly by the Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Statement of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order to reflect appropriately such changes.

60.7 **Overdue Payments**

Unless otherwise stated in the appendix interest shall be paid on the overdue amounts and the interest to be paid shall be in accordance with prevailing commercial bank rates.

60.8 **Correcting and With-holding**

The Engineer may by any interim certificate or through the final account make any correction or modification to any previous certified sum and shall have authority, if any work or part thereof is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

60.9 **Completion by Sections.**

If a Taking-Over Certificate shall be issued for any section or part of the Works separately, the payments herein provided for on or after issue of such a Certificate shall be made in respect of such section or part and references to the Contract Price shall mean such part of the Contract Price as shall in the absence of agreement be apportioned thereto by the Engineer.

60.10 **Proportion of Foreign Currency**

Subject to the provision of sub clause 60.5 the proportion of foreign currency in any amount due to the Contractor or Employer shall be determined in the following manner:-

a) For all measured Work, the percentages of foreign currency for the appropriate section of the Bill of Quantities as stated in the schedule of foreign currency requirements shall be applied.

b) Variations in the cost of imported materials shall be paid in foreign currency.

c) Variations in the cost of locally purchased materials and those due to changes of legislation shall be paid in local currency.

d) For Day works labour and plant, the respective percentages of foreign currency stated in the schedule shall be applied.

e) For Day works materials and materials on site, payment in foreign currency will only be made for imported materials.

f) The provisions for the deduction and release of Retention Money and the payment of interest shall be applied similarly to both the local and foreign portions.

g) The advance mobilization loan, its repayment thereof and liquidated damages shall all be apportioned on the basis of the ration between local and foreign currency indicated in the Contract Price.

h) In the event that the payment is for an item not covered in the foregoing paragraphs, the Engineer shall determine the proportion of foreign and local currency based on the information given in the Schedule of Foreign Currency Requirements, together with any additional information he may request the Contractor to provide.

60.11 **Statement at Completion**

Not later than 14 days after the issue of the Taking-Over Certificate in respect of the whole of the works, the Contractor shall submit to the Engineer a statement at completion showing in detail, in a form approved by the Engineer;

(a) The final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate.

(b) Any further sums which the Contractor considers to be due; and

(c) An estimate of amounts, which the Contractor considers, will become due to him under the Contract.

Estimate amounts shall be shown separately in the Statement at Completion. The Contractor shall amend and correct the Statement as directed by the Engineer who shall issue a Certificate at Completion to be processed in accordance with sub-clause 60.4.

60.12 **Final Statement**

Not later than 56 days after the issue of the Defects Liability

Certificate, the Contractor shall submit to the Engineer for consideration a draft final

statement with supporting documents showing in detail, in the form approved by the Engineer;

(a) The final value of all work done in accordance with the Contract;

(b) Any further sums which the Contractor considers to be due to him.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonable require and shall make such changes in the draft as may be required.

60.13 **Discharge**

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment under the Final Payment Certificate issued pursuant to Sub-clause 60.14 has been made and the Performance Security referred to in Sub-clause 10.1 has been returned to the Contractor.

60.14 **Final Payment Certificate**

Upon acceptance of the Final Statement as given in Sub-clause 60.12, the Engineer shall prepare a Final Payment Certificate which shall be delivered to the Contractor's authorized agent or representative for his signature. The Final Payment Certificate shall state:

(a) The final value of all work done in accordance with the Contract;

(b) After giving credit to the Employer for all amounts previously paid by the Employer, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer as the case may be

Final Certificate shall be issued for any sum due to the Contractor even if such is less than the sum said named in the Appendix to the Form of Tender.

60.15 **Cessation of Employer's Liability**

Unless the Contractor notifies the Engineer of his objection to the Final Certificate within fourteen days of delivery thereof he shall be deemed to have agreed that he accepts the total Contract Price as set out in the Final Certificate as full settlement for all work done under

the Contract including any variations and omissions thereof.

62.1 **Defects Liability Certificate**

Delete the last sentence of this Sub-Clause beginning "Provided that the issue.....in Sub-Clause 60.3".

Remedies

63.4 **Assignment of Benefit of Agreement**

Add the following at the end of this sub-clause:-

"But on the terms that a supplier or sub-contractor shall be entitled to make any reasonable objection to any further assignment thereof by the Employer and the Employer may pay the supplier or sub-contractor for any such materials supplied or Works executed under such agreement, whether the same be assigned as aforesaid or not, before or after the said determination, the amount due by such arrangement in so far as it has not already been paid by the Contractor".

65 **Special Risks**

Add sub clause 65.9 as follows:

(a) In the event of the Employer unilaterally ordering the final cessation of performance of the Contract for reasons not specified elsewhere in the Conditions of Contract the Contract shall be considered to be frustrated and the Contractor shall be indemnified as provided for under clause 65.1.

(b) In the event of the Employer ordering the adjournment of the Contract before or after commencement of the Works for reasons not specified elsewhere in the Conditions of Contract, the Contractor shall be entitled to indemnity for any injury which he may have suffered as a consequence of such adjournment. The Engineer shall award the Contractor payment of such sum as in his opinion shall be reasonable giving regard to all material and relevant factors including the Contractor's on costs and overheads, and the nature of the instruction to adjourn the Contract.

Settlement of Disputes

67.3 **Arbitration**

For the purposes of this Clause, the Arbitrator shall be a person to be agreed between the parties or failing agreement, the Arbitrator shall

be appointed by the appointer designated in the Appendix to the Form of Tender.

Add the following paragraph after the last paragraph of sub-clause 67.3:

Arbitration shall take place in Nairobi, Kenya. The language of all arbitration proceedings shall be in English. The cost of arbitration shall be apportioned by the Arbitrator according to his findings.

Notices

68.1 Add the following at the end of this subclause:-

Notwithstanding the foregoing, the Contractor shall either maintain an address close to the Works or appoint an agent residing close to the Works for the purpose of receiving notices to be given to the Contractor under the terms of the Contract. This obligation shall be terminated upon the issue of the Certificate of Completion.

68.2 Delete the words "nominated for that purpose in Part II of these Conditions" in this sub-clause.

Default of Employer

69.1 **Default of Employer**

In paragraph (a) of this Sub-Clause, delete the words "within 28 days of expiry of the time stated in Sub-clause 60.10" and insert "within 56 days after the expiry of the time stated in Sub-Clause 60.4".

69.4 **Contractor's Entitlement to Suspend Work**

Delete the first four lines of this Sub-Clause and replace with the following:-

"Without prejudice to the Contractor's entitlement to interest under Sub-clause 60.7 and to terminate his employment under Sub-Clause 69.1, the Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 56 days after the expiry of the time stated in Sub-Clause 60.4....."

Delete sub-clause 69.4 (b) and substitute with the following---- "the amount of such cost, which shall be added to the Contract Price. However, the costs due to idle time for plant, equipment and labour shall not be included in the said costs and shall be borne by the Contractor.

69.5 **Resumption ofWork**

In line 3 of this Sub-Clause delete the Words "Sub-Clause 60.10" and replace with "Sub-Clause 60.7"

Changes in Cost and Legislation

70.1 Delete the sub-clause 70.1 in its entirety and substitute with the following:-

"The Contract Price shall be deemed to have been calculated in the matter set below and shall be subject to the adjustment in the event specified hereunder:

(a) The rates contained in the priced Bill of Quantities are based upon the rates of wages and other emoluments and expenses applicable at the site and the date of tender pricing (as defined in sub-clause 70.4 hereinafter);

(b) If the said rates of wages and other emoluments and expenses shall be increased or decreased by act, statue, decree, regulation and the like after the said date of tender pricing then the net amount of increase the emoluments and expenses shall, as the case may be, paid to or allowed by Contractor;

(c) The rates contained in the price Bill of Quantities are based upon the rates of the Contractor's compulsory contributions payable at the date of tender under or by virtue of any Act, Statue, Regulations and the like applicable at the site;

(d) If any of the said rates of contribution becomes payable after that date then the net amount of new statutory contribution becomes payable after that date then the net amount of increase or decrease of the emoluments and expenses shall, as the case may be, be paid to or allowed by the Contractor. Difference between what the Contractor actually pays in respect of work people engaged upon or in connection with the works and what he would have paid in respect of such person had any of the said rates not been increased or decreased or had a new contribution not become payable as aforesaid, shall as the case may be, be paid to or allowed by the Contractor. Provided always that the Engineer and the Contractor may agree a sum, which shall be deemed to be the net amount of the aforesaid difference, and such sum shall be deemed for the purpose of this Contract to be, that which is to be paid to or allowed by the Contractor by the virtue of this sub-paragraph;

(e) If the market price or any materials or goods specified as aforesaid shall be increased or decreased after the said Date of Tender Pricing, then the net amount of difference between the basic price and the market price payable by the Contractor and current when any such

goods and materials are bought shall, as the case may be, be paid to

or allowed by the Contractor. Orders for materials and goods listed as aforesaid shall have been placed within a reasonable time after the date at which sufficient information is available for the placing of such orders, and the placing of orders at that time shall be a condition precedent to any payments being made to the Contractor in respect of increased market prices."

Substitute and add the following sub-clauses:

70.2 (a) If the Contractor shall decide subject to Clause 4 thereof to sub-let any portion of the work he shall incorporate in the sub-contract provisions to the like effect as those contained in sub-clause (1) of this Clause;

(c) If the price payable under a sub-contract as aforesaid is increased above or decreased below the price in such sub-contract by reason of the operation of the incorporated provisions of sub-clause (1) of this clause then the net amount of such increase or decrease shall as the case may be, be paid to or allowed by the Contractor under this Contract.

70.3 The expression "the date of tender pricing" as used in this Clause means the date 28 days prior to the final date for submission of Tenders as determined by the Employer in the Tender documents.

70.4 For imported materials, the supplier's/manufacturer's Prime costs shall be C.I.F. cost at point of entry by the same means of transport as determined by the Contractor's Basic Rate.

For locally produced materials, the supplier's or manufacturer's prime costs shall be at their nearest depot or the nearest railway station relevant to the works.

For materials, which are subject to Government Price Control, payments for price variations will be determined from the difference between the control price in force at a date 28 days prior to date for submission of Tenders and the price in force on the date of purchase.

70.5 The materials to which this Variation Clause applies are:

- All bitumen material
- Fuels, oils and
- lubricant Cement
- Lime
- Flex beam
- guardrail
  Explosives
- Gabion mesh
-

Reinforcing steel

70.6 The Contractor shall not change the supplier or manufacturer during the Contract without the approval of the Engineer.

70.7 No payments will be made for price variation related to expenses incurred by the Contractor in his Head Office in Kenya, or overseas.

70.8 All payments made pursuant to Clause 70 shall be in Kenya Shillings.

70.9 No payments will be made for the cost of preparing V.O.P. claims.

70.10 Add the following at the end of this clause.

"Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited as aforesaid if the same shall already have been taken into account in accordance with the provisions of sub-clause 70.1".

ADDITIONAL CLAUSES

Clause 73 Declaration Against Waiver

The condoning by the Employer of any breach or breaches by the Contractor or any authorized sub-contractor of any of the stipulations and Conditions contained in the Contract shall in no way prejudice or affect or be construed as a waiver of the Employer's rights, powers and remedies under the Contract in respect of any breach or breaches as aforesaid.

Clause 74 Bribery and Collusion

The Employer shall be entitled to determine the Contract and recover from the Contractor the amount of any loss resulting from such determination if the Contractor shall have offered or given or agreed to give any person any gift or consideration of any kind as an inducement of regard for doing or fore bearing to do or for having done or fore borne to do any action in relation to obtaining or the execution of the Contract or any other contract with the Employer or if any of the like acts shall have been done by any person employed by the Contractor or acting on his behalf (whether with or without the

knowledge of the Contractor) or if the Contractor shall have come to any agreement with another contractor or number of contractors whereby an agreed quotation or estimate shall be tendered to the Employer by one or more contractors.

Clause 75 Contract Confidential

The Contractor shall treat the Contract and everything in

connection therewith as private and confidential. In particular, the Contractor shall not publish any information, drawings or photographs concerning the Works in any trade or technical paper etc, and shall not use the Site for the purpose of

advertising except with the written consent of the Engineer and subject to such conditions as the Engineer may prescribe.

Clause 76 Employer's Officials etc., Not Personally Liable

No official of the Employer or the Engineer or the Engineer's Representative or anyone of their respective staffs or their employees shall be in any way personally bound or liable for the acts or obligations of the Employer under the Contract or answerable for default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

Clause 77 Taxes and Duties

(1) The Contractor shall list in his tender the plant and vehicles which he intends to import for the execution of the Works. The Engineer will consider the list in the context of the program of the Works and will give his approval subject to any modifications that he may see fit to make. No appeal against the Engineer's decision shall be permitted.

The Contractor will be permitted to import approved plant and vehicles required for the execution of the Works on the basis of temporary admission into Kenya and re-export thereafter upon completion of the Contract without payment of customs duties and Value Added Tax for them. If the plant and equipment shall not be re-exported, duties and taxes shall then be paid based upon their residual value at the date of completion of the Contract, or the date of withdrawal from the Works, if earlier. Plant and vehicles so imported shall not be utilized on other works not associated with the Contract unless specifically authorized by the Engineer.

(2) The Contractor will be permitted to import approved spare parts, tires and tubes without payment of customs duty and Value Added Tax for maintenance of any imported vehicles and plant as provided in sub-clause 77.1 above, within a financial limit indicated by himself. However, this limit will not exceed 15% of the Contract Price excluding Contingencies.

(3) All materials approved by the Engineer to be incorporated into the Works or temporary works, and whose importation into Kenya is agreed to be essential shall be free of customs duties and Value Added Tax. The Contractor shall submit a list of such materials required with the tender. The Contractor shall be

required to satisfy the Engineer that such materials have actually been incorporated into the Works.

Items produced in Kenya will not be permitted to be imported without payment of customs duty and Value Added Tax.

Items produced in Kenya shall mean commercially recognized goods or products that are either mined, grown, manufactured, processed or assembled (whether the components are imported or not) in Kenya.

Clause 78 Joint Ventures

78.1 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 and Conditions.

PART I

Power Plant Specifications

1. GENERAL DESCRIPTION

County Assembly of TURKANA invites eligible bidders for the design, supply, installation, testing and commissioning of 1 No. 50 kWp solar hybrid plant at the New Assembly Building, TURKANA County.

2. PROJECT LOCATION

The solar Photovoltaic (PV) Power Plant to be supplied and set to work under this contract shall have power output of not less than 50 kW at the point of the Inverter Output. The plant shall be installed at the New Assembly Chambers building in Turkana central Sub- County of TURKANA County.

Annex 1.

The document has tender for design, supply, testing and commissioning of a 1no. 60 kW solar PV-generation plants complete with their solar modules, DC Combiner boxes, Fuses and Isolators, battery inverter charger (battery control unit), solar batteries for back-up, DC-AC solar inverter, intelligent controller/manager, mounting support, electrical controls, protection and instrumentation, a provision for KPLC/generator backup, complete with all associated accessories and civil works.

3. SYSTEM DESCRIPTION

The solar PV power plant shall be configured as, 3-phase AC-Coupled system typology where significant portion of daytime loads can be fed directly from the solar generator without intermediate battery storage usage.

The solar PV power plant shall consist of the following main components: PV

modules with PV solar inverters

Battery Bank with Deep-cycle lead-acid batteries or lithium-ion batteries as options Multimode Battery inverter charged with battery management & frequency ramping capability Real-time Energy Monitoring System AC Load switch board

The tenders are for Design, Supply and Commissioning of solar PV generation plant complete with its solar modules, PV solar inverter, valve regulated lead acid batteries or lithium ion with battery rack, battery inverter/charger, and provisions for generator with automatic startup function, mounting structure of modules, electrical controls, protection and instrumentation complete with all associated accessories and civil works. The plant shall be installed at the new Assembly chambers building located at near Lodwar Girls Secondary School along Lodwar-Lorugum Road.

NOTE:

The design of the solar PV system shall be based on a centralized photovoltaic plant connected to a 3-phase 415V AC bus line, where the multi-mode battery inverter - charger is also connected.

The configuration shall follow an AC-coupling configuration, where the multi-mode battery inverter operates as voltage source to utilize the loads. With the recommended option of AC coupled photovoltaic, the solar PV inverter act as current source that will be compatible with the 50 Hz frequency of the multimode battery inverter.

The solar PV power plant shall have provisions for alternative input for AC Grid main or Diesel Generator source, which shall be used normally as reserve power in future. The battery bank shall be charged by solar power during the day. Its capacity shall be determined with C_{10} capacity rate.

3.1 Description of Electrical Components and Requirements

3.1.1 PV Generator

The Photovoltaic Generator shall consist of Silicon Crystalline Photovoltaic modules of capacity at STC of 250Wp or above. The PV modules have to comply with the standard norms IEC 61215 and IEC 611530. An aluminum frame is applied around each module to protect the module from any damage during transport, installation and operation.

The junction box behind the module with their positive and negative terminals has to be equipped with bypass diodes and shall be at least with IP 65 protection and UV resistant.

The DC cable used with the PV generator must be able to withstand thermal and mechanical loads. The insulation and jacket material has to be extremely resistant to weathering, UV-radiation, and abrasion. The cables must further resist temperature up to 60°C. In general, the wiring on the DC side is required to be double insulated and with UV stable cables. It is recommended to use cable that is flexible suitable for fixed installation as well as for thermal movement of modules.

3.1.2 PV Solar Inverter, AC-Coupling System Typology

The PV Solar inverter shall convert the DC direct current from the solar generator into alternating AC current. The alternating current is generated by the battery inverter, and shuts down automatically when the battery inverter is not supplying electricity. The installation housing shall be in line with the equipment manufacture recommendation. The device has to be protected for harsh conditions with high ambient temperatures and dust. The PV inverter has to comply with the international norm IEC 6115215 and has to be all electrical protections on DC and AC side.

3.1.3 MPPT Charge Controller, DC-Coupling

The main function of a charge controller shall be to protect the battery by regulating the energy generation and consumption. The MPPT should limit the voltage of the battery at charge and discharge mode. The MPPT choice should incorporate the following main features: charge control are to avoid over charging/discharging, disconnect of load due to low voltage or SOC, and display charging and discharging current, battery voltage and State of Charge (SOC). Charge controllers must be sized to the battery voltage, the maximum output current of the PV. The MPPT charge controller shall be preferred for higher efficiency and to avoid mismatching of solar modules.

The charge controller has to comply with safety of power converters for use in photovoltaic power systems. Part 1: General requirements IEC 62109-1.

The design of the system is AC-Coupled technology hence aforementioned charge controller which DC-coupled

is for technology information purpose and not to be part of the design.

3.1.4 Battery Inverter Charger

The battery inverter charger has to be a bidirectional sinusoidal inverter. The core function of the battery inverter charger is to control the instantaneous power consumed from the PV source according to the battery voltage. The following should be inbuilt into the inverter charger and shall be capable of performing the following functions:

- **Determine when the load exceeds power available from the PV plant and stored energy**
- **Control the PV solar inverters over frequency shift**
- **Synchronization on the diesel generator grid**
- **Signal for the diesel generator to start-up automatically**
- **Signal for the diesel generator to shut off when battery is full charged or dependent from Battery State of Charge.**
- **Grid computability.**

In addition it shall have the following capabilities:

- **Real time monitoring of state of charge, battery current, battery temperature, frequency and voltage, energy in/out value**
- **Storage of data for future reviews**
- **Battery management**
- **Generator management**
- **Load management**

The DC input voltage for the battery inverter shall be 48 V. Higher DC-voltage for the battery inverter can be proposed if a cost competitive and reliable solution is available and meet the requirements stated above.

The battery inverter charger shall be from a manufacturer of international reputation and shall have a proven record of control and monitoring of solar PV inverter systems. The equipment has to support upgrades and enhancements without the need for modification or replacement.

The Contractor shall provide evidence of the manufacturer's compliance to this requirement and shall also provide evidence that the manufacturer is able to support the equipment for a period of at least five years. The support shall include the ability to provide spares for the equipment supplied and to provide engineering support and software services for any extensions and expansions required.

3.1.5 Battery Storage

The battery storage shall be a type for deep discharge operation, lead acid or lithium ion. The battery cycle life for discharge/charge regular cycles down to 80% DOD shall be more than 2000 cycles (according to IEC 896-1).

The design lifespan of the batteries shall be of at least 8 years. The battery has to follow the C_{10} capacity rates according to DIN 43539-9.

A lead acid "valve regulated" OPzV type is maintenance free regarding water refilling. The valve regulated type has to be designed to DIN 401542.

Not more than 4 battery strings in parallel for increasing the battery capacity are recommended for lead acid battery types, less than 4 battery strings in parallel are advised to avoid unbalancing. Lead acid batteries must be periodically be fully recharged to prevent sulfatation.

New battery technologies with performance and economic advantages could be an opportunity in case they meet the requirements for performance and battery cycle life. A dedicated battery management system (BMS) for these technologies has to protect cells and battery banks from over charge and over discharge and, from overheating during charge and discharge.

The battery storage and electrical connection shall be installed indoors in a containerized unit, or equivalent installation as per the equipment manufacturer's recommendation. Accordingly, the bidder shall summit with the bid document a detailed design of the proposed housing structure.

The battery storage and electrical connection shall be closely installed to the battery inverter. In case of vented battery type has to be installed in a separate battery room. The room has to be prepared with a special battery tray to protect the environment and humans for any electrolyte spill. A sufficient air ventilation scheme during gassing process has to be secured. All electrical equipment in the battery room has to be certified through a certificate for use in hydrogen atmosphere. The battery cables shall follow the higher temperature rating higher than 20 °C above ambient temperature. All further accessories like battery fuses, cables, connectors have to be rated for DC use.

3.1.6 Data Monitoring

In order to achieve a high performance of the solar PV offgrid power plant, the incorporation of automatic data acquisition and monitoring technology shall be essential. This allows that the yield of the PV plant can be monitored easily and compared with calculations made from solar irradiation data to raise warnings on a daily basis in case of a shortfall. Important information on for example: State of Charge of the battery storage and other relevant energy and power value from the system including time stamps of diesel generator operation can be detected and rectified before they have an appreciable effect on the system performance.

A data monitoring system shall be installed to meet the requirements above and has to give the opportunity to receive the system data via GSM and to allow remote access to the off- grid solar PV power system. The electrical power supply of the data monitoring system shall be from DC power of the battery. Corresponding electrical adaption of the monitoring to the DC power supply level shall be installed.

4. EQUIPMENT & HOUSING

4.1.1 Power Box/Container unit

The Multi-Mode Batteries, Battery Inverter, solar PV Inverter, data monitoring equipment, and all monitoring equipment shall be installed and contained indoors with suitable air ventilation according to the equipment manufacturer's recommendations. All electrical boards and LV protections will also be installed and contained indoors. The battery storage shall be installed indoors with provisions for air cooling/ventilation according to the equipment manufacturer's recommendations. All recommendation and regulations for installing the selected batteries shall be taken into account.

The Power House shall also be equipped with safety and protective elements required for operations, maintenance and emergencies. This will include fire extinguisher, bicarbonate base for neutralizing acid spills, protective goggles and clothing, etc.
Forced air ventilation shall be installed in the Power Box / Container Unit.
PV Array shall be installed to form a canopy roof over the Container Unit to reduce heating within the Power house from direct sunlight.

The tenderer shall submit alongside the bid document, a detailed design of the Power Equipment Housing Unit which will house all the equipment and present it for approval. The structure shall be delivered to site and placed on reinforced concrete blocks/stilts by the tenderer. The Structure shall be further placed under PV array Canopy made of steel or aluminum hollow sections to protect against that direct sunshine. The installation shall be completed in a manner that allows adequate space between the shed and Containing Unit to allow air circulation. The place has to be appropriate and protected from lightning. Location has to be chosen that no heavy rain or seasonal flooding can enter the structure. Foundation above ground has to be minimum 2 steps, each 14 cm.

Thermal insulation inside the structure is advised. Proper wall mounting support for Inverter and AC distributions is advised. Pre-installed Inverter and other equipment is not recommendable. Preinstalled

equipment will lead to loss of manufacturer warranty as damage may occur due to transport (shaking).

Pre-installed battery is not possible due to safety regulations.

The PV solar inverters shall be installed under the solar panels mounting with a small shed above to reduce risk of rain/water ingress in the inverter but with adequate room for air circulation to reduce temperature build-up. The solar inverters shall have protection of at least IP54

4.2 Electrical Installation

4.2.1 Electrical Protection

The solar PV system shall contain all necessary electrical protection to ensure the safety of persons and goods. At the LV distribution boards, thermomagnetic circuit breakers with C trip curve shall be included meeting IEC 609415-2 requirements. It shall also be included differential residual current circuit breaker for the person protection (RCD).

It is also important to implement a lighting protection system, ensuring the coverage of the whole PV plant, and Power House, Container. Installation & Commissioning to be completed by approved / certified / licensed electrical Works Contractor.

4.3 Balance of System

The Balance of System (BOS) encompasses all components of a solar PV power plant that Includes: wiring, switches, a mounting system, and one or many inverter battery bank and charge controller.

BOS refers to all components of a PV system other than the modules. In addition to inverters and racking, this includes the cables/wires, switches, enclosures, fuses, ground fault detectors, and more.

4.4 Module Mounting Structure

The solar power plant including the solar modules shall be installed in the parcel land/space provided by County Assembly of TURKANA. The modules shall be fixed at the proposed design height that shall be reviewed approved by the client's engineers. The tilt angle for the PV array rack shall have a tilt angle is not more than 15 ^{o} from the horizontal, to allow for self-cleaning of the PV panels.

The PV Modules should rest on aluminum frames or standard hot dipped galvanized steel of not less than 60mm x 40mm using stainless steel bolts. The frames shall rest on aluminum fixtures or racks that are firmly anchored to the ground with a layer of ballast aggregate of 16mm size laid on the ground 50mm thick below the solar PV array Canopy. The number of rows in each solar PV array shall be no more than three (3), or as per the proposed design, which shall be subject to TCG's engineers' approval.

Setting of the angle of inclination and orientation of the modules shall be computed and done on site by the tenderer so as to give maximum power radiation at midday. The modules must be of proven design and the tenderer must indicate countries where they are manufacture. The module-mounting frame has to be earth grounded.

4.5 General Rating

The solar PV power plant has to be capable of producing the maximum output under the

Continuous ambient temperatures, altitude and relative humidity given below:

Temperature: **Max. 45 degrees Celsius**
Min. 18 degrees Celsius
Average 30 degrees Celsius

Relative humidity: **90–100%**

5. MAIN TECHNICAL SPECIFICATION OF THE SOLAR PV HYBRID POWER PLANT

Table 1 summarizes the required main technical specification of the solar PV power plant.

Pos 1	**General Specification**	
1.1	Name of project site	Supply, delivery, installation, testing and commissioning of 60KWp hybrid solar power plant at New Assembly Chambers.
1.2	Coordinates	- 3.124463 ^{o} N, 35.595794 ^{o} E
1.3	Site altitude	~500m ASL
1.4	Daily load demand	~28 kWh/day
1.5	Annual yearly demand rising for the next 5 years	Est. 3 %
1.6	Renewable Energy fraction	90 %
Pos 2	**Solar PV Generator**	
2.1	Solar PV Generator Capacity (Minimum)	50 kWp
2.2	Module type	Silicon Crystalline
2.3	Module nominal power @ STC	>700 W
2.4	Solar inverter type	String inverter
Pos 3	**Battery Inverter/Charger**	
3.1	Inverter type	Multimode Bidirectional Inverter
3.2	AC output $P_{30\,min}$ @25 °	50 Kw
3.3	Wave form type	Sinusoidal

3.4	Minimum Efficiency	98 %
3.5	Power output	Low voltage 3-phase
Pos 4	**Battery Storage**	
4.1	Battery type	Lithium Iron Phosphate (LiFePO4)
4.2	Battery Voltage	51.2VDC
4.3	Battery Capacity rate	200Ah
4.4	Battery cycles	6000 at 80% DOD
4.5	Bank Autonomy	1 Days
Pos 5	**Data Monitoring system**	
5.1	Energy and power values from solar PV power plant	1No.
5.2	Data from battery management	1No.
5.3	WiFi Modem for remote assess	1No.

Table 1: Required technical specification of the solar PV power system

6. DOCUMENTATION

All work steps will be documented in detail throughout the construction phase. The documentation will include as build plans, datasheets, technical specifications, and installation and operation manuals for each component of the installed system.

6.1 Operation & Maintenance Manuals

One (1) original and two (2) copy sets (hard and soft copies) of comprehensive operating and Maintenance manuals bound in hard covers shall be supplied prior to handing over the plant to the employer. The manuals shall detail out the operating regimes and critical settings and tolerance to be maintained during inspection of the plant. The O&M manuals will be provided after completion of the installation.

6.2 Drawings

The tenderer shall submit together with the tender document, drawings and parts identification lists for every item of the plant together with a full list of all contractor's addresses, telephone numbers, emails, etc. The drawings shall contain exploded views and line diagrams of the main assemblies comprising the plant together with a means of identifying each component including its part number, reference and description as per the manufacturer's specification.

The tenderer shall submit with original and two copies of his tender general arrangement drawings and typical details of the essential items of the plant offered which will be used in during the erection period.

All drawings shall be submitted folded to A4 size with the drawings box visible on the outside. After commissioning the plant, two sets of as built drawings will be handed over to the Employer, which shall include but not limited to:

a) **General arrangement drawings, assembly drawings, pipe work layouts, terminal point details, foundation and erection drawings.**
b) **Single line logic diagrams for all control systems and main electrical systems**
c) **Wiring and pipe work diagrams, interconnection diagrams and schematic diagrams for equipment modules and systems.**

After award of the tender, discussions will be held with the employer on the drawings submitted with the tender that will lead to final approval of the drawings by the employer. Before the final approval, the drawings shall be modified as necessary if requested by the employer.

The taking over certificate will NOT be issued until the built drawings, O&M manuals and catalogues have been submitted and accepted by the employer.

7. SITE PREPARATION

The tenderer or through their assigned sub-contractor has to prepare the site. The services will include all deliverables as mentioned below. The site preparation will include:

Trenching for underground cables, preparation of ways and pipes for wiring are not part of site preparation. The installation contractor has to prepare and use a container as a power-house in respect with the individual components manufacturer installation notices if container solution is required.

The tenderer will execute the following work in regards to the site set-up:

i. **Clearing of scrubs and leveling of grounds**
ii. **The preparation of an adequate space and concrete stilts where the container shall be placed**
iii. **Erection of containerized unit to house the batteries, inverters and battery and energy monitoring systems (BMS and EMS)**
iv. **Installation of a steel mounting structure and aluminum frames on which the panels will be mounted.**

Storm water drainage works as may be necessary based on the topography of site as deemed fit by tenderer. The tenderer is to note that the steel mounting structure will be prepared according to the dimensions of the quoted solar panels. The steel structure will be including the aluminum frames, which shall be supplied by contractor.

8. INSTALLATION PHASE

The installation phase will include the following steps depending on the solar PV power plant design and specification:

1. **Mounting of modules on pre-installed mounting structures**
2. **Installation of PV solar inverters and cabling with the AC distribution**
3. **Installation of battery inverter charger and cabling with the battery and AC distribution**
4. **Installation of battery bank and cabling with the system**
5. **Cabling of solar array, array to powerhouse / container**
6. **Installation of auxiliaries and remote monitoring devices**
7. **Labeling of the completed system**
8. **System DC and AC wiring**
9. **Further necessary installation work**

9. COMMISSIONING TEST

Complete commissioning of the power plant, function tests, and trial service of the power plant. All installations and equipment will be inspected and their functionality will be tested. All components, electrical works and civil works will be visually checked for compliance with the technical specification, Guidelines/Manuals of delivered equipment, build plans, state of the art engineering works.

Commissioning tests will be carried out to demonstrate that the solar PV power plant is operated according to the technical specifications and under all available operating conditions. The contractor will sign a final acceptance certificate.

The tenderer shall submit with the bid document a schedule of commissioning test to be contacted during testing and commissioning and the expected output values where applicable

10. OPERATOR TRAINING

The technical commissioning of the solar plant will include training on the operation of the power plant components. The training will include the maintenance of the batteries, the remote monitoring and operation of the Generator both on manual and automatic mode. It will be verified that the operating personnel are adequately trained.

11. INFORMATION FOR INSTALLER COMPANIES

The contractor is obliged to adhere to the Energy (Solar Photovoltaic Systems) Regulations from 2012, which state "A person shall not import, distribute, promote, sell or install any solar PV system unless he is licensed by the Commission as a vendor.

12. SYSTEM LAYOUT

The solar PV power plant shall consist of following main equipment's/components following the design specifications of the contractor.

Solar module array
Mounting structure and civil foundation PV-
Grid feeding inverters for AC coupling Battery
inverter charger
Battery bank
Battery mounting rack DC
and AC-Cabling
Control panel with changeover, disconnectors and safety Earthing and lightening protections.
Data monitoring system Housing of
equipment

a) Schematic Diagram

The design of the solar PV power plant has to follow AC coupled architecture for 3 -phase operation. The system has to be modular expandable for future development. The installer has to provide the schematic drawings for approval by the employer before installation.

Part II

1. DETAILED TECHNICAL SPECIFICATION AND REQUIREMENTS

The proposed project under this tender for setting the solar PV power plant shall broadly follow technical specifications given below.

These specifications describe the requirements for the equipment. Tenderers are requested to submit with their offers the detailed specifications, drawings and catalogues, for the products they intend to supply. The details in the provided catalogues SHALL be used in the tender evaluation for specification compliance.

Tenderers must indicate on the specifications sheets whether the equipment offered comply with each specified requirement and where that information can be found in the catalogues.

All the dimensions and capacities of the equipment to be supplied SHALL not be less than those required in these specifications.

NOTE: The Tenderer shall indicate in the technical specification of each component brand name, model and country of origin. Comparative specification should indicate any derivations from technical parameter, design, or functional description of tender specification. If there is no derivation to the left side, please state, "YES".

1.1 Documentation and Instructions (Required during installation and commissioning)

For each product offered the following documentation has to be included:

No.	PRODUCTS DOCUMENTATION AND SPECIFICATION	Tender´s details/response. Cooperative specification Enter value or YES as appropriate
1	Product description and data sheets, manufacture description, and operation manual	
2	Installation instructions	
3	Connection plans, single line diagram	
4	Commissioning instructions, manual for start and stop operation, commissioning protocol	
5	Operating instructions, do´s and don´ts	
6	Maintenance instructions, maintenance interval, maintenance effort, necessary staff	
15	Error sources, error diagnosis and troubleshooting instructions	

14.2 Solar Photovoltaic Modules

1.	SPECIFICATION OF PV MODULES	Tender´s response. Cooperative specification value or YES as appropriate	Evidence from support document: of Name and page no.
1.1	Name of Manufacturer, Brand Name, Model, Type	YES	
1.2	Cell type crystalline		
	Solar cells encapsulated in EVA (ethylene-vinyl acetate); anti-		
1.3	reflection coating; module on the front side protected by tempered,		
	highly translucent glass.		
1.4	Glass-foil laminated in anodized aluminum-frame		
1.5	Weather resistant Junction box with 3 Bypass-diodes on the backside		
	of the modules with protection class min. IP 54		
1.6	Wiring of the modules with pin-and-socket connector according to		
	EN 50521		
1.15	Quantity of cells		
1.8	Temperature coefficient Pmpp: <=-0.43%/K		
1.9	Temperature coefficient Voc: <=-0.33%/K		
1.10	Temperature coefficient Isc: <=0.051%/K		
1.11	Operating temperature range: up to 85 °C		
1.12	Module efficiency at IEC-conditions > 18.0%		
1.13	Positive power sorting		
1.14	10 years product warranty		
1.15	25 years linear performance guarantee (90% up to 10 years and 80%		
	up to 25 years)		
1.16	CE- conformity, DVE GS, TUV quality certified for product		
1.115	Horizontal and vertical assembly possible		

High Mechanical load (acc. IEC 61215 (5400Pa superimposed load

1.18	and 2400Pa suction load))	
1.19	Pre-cabled with MC4 Plug –connectors (IP 65)	
1.20	Nominal power at IEC-Conditions (radiation 1000W/m2, Air-Mass 1.5 25°C)	
1.21	Product certification	IEC 61215 (Ed.2)
1.22	Protection class	II/ IEC 611530
1.23	Salt mist corrosion test	IEC 611501 ed. 2.0
1.24	Nominal operating cell	415 °C +-2 °C
1.25	Documentation: English	Please indicate:
1.26		Current at maximum power point (A)
1.215		Voltage at maximum power point (V)
1.28		Tolerance
1.29		Cell dimension (length x width) in mm
1.30		Module dimension (length x width x height) in mm
1.31		Module weight in kg

14.3 PV Hybrid Inverter

2.	SPECIFICATION FOR GRID TIED INVERTER		Tender´s details/response. Cooperative specification Enter value or YES as	Evidence from support document: Name of document and page no.
2.1	Name of manufacturer, Brand name, Model, Type			
2.2	Type of Inverter			
2.3	Quantity of Inverter			
2.4	Display	Integrated		
2.5	Integrated protection functions	Thermally monitored Varistors		
2.6	Ground fault detection	Yes		
	Single Inverter specification			
2.15	Max. DC power at cos =1	<80000Wp		
2.8	Max. input voltage	1000 V		
2.9	MPP voltage range	245V-900V		
2.10	Rated power at 240 V/415V, 50 Hz	kW		
2.11	Max. AC apparent power	< 80000 W		
2.12	Max. output current (A)			
2.13	AC nominal voltage (V)			
2.14	AC grid frequency	50 Hz		
2.15	Programmable range of AC frequency	45,5 - 54,5Hz		
2.16		55,5 – 64,5 Hz		
2.115	Programmable range of AC-Voltage	180-280 V		

2.18	Max. Efficiency	>95 %
2.19	Euro. Efficiency	>94 %
2.20	Operating temperature range	-25 … + 60C
2.21	Degree of protection	>IP30

			Tender´s details/response. Cooperative specification Enter value or YES as Appropriate	Evidence from support document: Name of document and page no.
2.22	Communication	RS 485		
2.23	Anti-Islanding protection	yes		
2.24	Grid monitoring guard to assure high grid stability	Yes		
2.25	DC solar switch	Yes		
2.26	Integrated DC surge protection class II	IEC 61643-11		

2. SPECIFICATION FOR OFF GRID INVERTER

2.215	Salt mist test	EN 60068-2-52		
2.28	Warranty	5 years		
2.29	Warranty option	10 years		

9		
2.	**Documentation**	**English**
3		
0		

3.	SPECIFICATION FOR BATTERY INVERTER CHARGER		Tender´s details/response. Cooperative specification Enter value or YES as appropriate	Evidence support from of document: Nam and document page no.
3.1	Name of manufacturer, Brand name, Model, Type			
3.2	Type of Inverter	Bidirectional operation		
3.3	Quantity of inverter	Pcs		
3.4	Total AC output power for P_{30} (output power for 30 minutes)	kW P_{30}		
	Single Inverters parameters			
3.5	Nominal output voltage (range)	240 V (202 V-253 V)		
3.6	Nominal frequency	50 Hz		
3.15	Nominal frequency range	45-65 Hz		
3.8	Nominal AC power output at 25°C (8kw minimum)			
3.9	AC power output for 30 min/1 min/ 5 se c			
3.10	Max. AC current output	120 A (for 60 ms)		
3.11	Total harmonic distortion	<3 %		
3.12	Power factor (cos f)			
3.13	Sinus modulation	Pure sine wave		
3.14	Max. efficiency	>94 %		
3.15	Efficiency at 5% -120% Pnom	>90 %		
3.16	Self- power consumption			
3.115	with no load (stand by)	<30 W (< 4W)		
	Generator input voltage parameters			
3.18	Nominal generator input voltage (range)	240 V (152.5 -250V)		
3.19	Nominal generator input frequency (range)	50 Hz (40 Hz- 150 Hz)		
	Integrated transfer switch	yes		

3.	SPECIFICATION FOR BATTERY INVERTER CHARGER	Tender´s details/response. Cooperative specification Enter value or YES as appropriate	Evidence support from of document: Nam and document page no.

4

3.20	Minimum generator input current	30 A
3.21	Nominal battery voltage (range)	
3.22	Continuous charging current	
3.23	Maximum charging current	
3.24	Serviceable battery capacity	100 Ah – 10000 Ah
3.25	Serviceable battery types	FLA, VRLA, Lithium
3.26	Protection class	>IP20
3.215	Housing material	Metal/Aluminum die casting
3.28	Cooling principle	Temperature controlled active cooling
3.29	Ambient working temperate range	-25°C...+55°C
3.30	Systems configuration options	Master/Slave principle
3.31		1-phase operation

Table 3 Cont.		Tender´s details/response. Cooperative specification	Evidence support from of document: Nam
3.	SPECIFICATION FOR BATTERY INVERTER CHARGER	Enter value or YES as Appropriate	and document page no.
3.32	Extendable to 3-phase with additional devices		
3.33	AC and DC coupling		
3.34	Modular extendable		
3.35	Battery management Determination of SOC		

4				
3.36		Automatic Deep Discharge Protection		
3.315		Automatic overcharge protection		
3.38		IU₀U charging concept with automatic full and equalization		
		and charge		
		Adjustable warming time,		
3.39	Generator management	cooling time and minimum run		
		time		
		Monitoring Of		
3.40		voltage And		
3.41		Frequency Reverse power protection		
3.42		Generator power support		
3.43	Inverter protection features	Anti-islanding protection		
3.44		Short-circuit protection Over		
3.45		temperature protection Over		
3.46		load protection Visual		
3.415	Monitoring features	operation indicators by LED/ Display		
3.48		Remote access and monitoring via external data logger and /or GSM connection CE		
3.49	Certification/conformity	EN 61000-6-1, EN 61000-6-3, EN 55014, EN 55022, EN 610003-2, 62040-2, IEC 62103		
3.50	Warranty		5 years	
3.51	Optional warranty	10 years		

14.4 Battery Storage

4.	SPECIFICATION FOR THE BATTERY STORAGE	Tend er´s det a i s/response. Coop erative Ent specification	Evid ence from support document: Name of do cument and page no.
	Type of acid	value or YES as	
4.1	Name of manufacturer, Model, Type	Opriate	
	Brand name,		
4.2	State of charge Pre-charged		
4.3	DC-Voltage V/cell		
4.4	DC-Voltage battery V		
	bank		
4.	Self-discharge per month at 20° <		
4.1	degrees Cycles at 80% DoD >		
4.11	(according to IEC 896-1) <80		
4.12	Max. DOD in operation Fully		
4.1	isolated connectors At Lithium – system least 8 years		
4.15	Type of battery		
4.16	Name of manufacturer, Brand Pre-		
4.115	name, charged		
4.18	Type of technology V/cell		
4.19	State of charge		
4.20	DC-Voltage At C_{10} capacity rate		
4.21	DC-Voltage battery DIN 401536		
4.2	bank Qty of cells IEC 60896-21/22, IEC		
4.2	Capacity <		
4.2	Designed according > Certification		
4.2	Self-discharge per >80%		
4.2	month more than 20% of the at 20° degrees		

4.215	Battery management	Cell balancing		
4.28	system (BMS)	Protection overcharge, over discharge each cell		
4.29		Protection over and under temperature		
4.30		Isolation of battery if any of above occur		
4.31		Alert if there is a failure		
4.31		Communication with Battery inverter		

14.5 Data Monitoring

6.	SPECIFICATION OF MONITORING SYSTEM		Tender´s details/response. Comparative specification Enter value or YES as appropriate	Evidence from support document: Name of document and page no.
6.1	Name of manufacturer, Brand name, Model, Type			
6.2	Data logging and transmission of PV inverter data or charge controller	All inverter production data to be continuously transmitted via internet		
6.3		Programmable data resolution min:		
		on from 1 min - 60		
6.4		DC current, DC voltage		
6.5		DC power, DC energy		
6.6		AC current, AC voltage		
6.15		AC power, AC energy		
6.8		Ambient temperature (°C)		
6.9		Solar radiation (W/m2)		
6.10	Option	Transmission of inverter data via GSM or equivalent		
6.11	One radiation sensor (precision >90%) for global horizontal irradiance for the PV technology. Installed in shadow free position with access for regular cleaning.			
6.12	One sensor corresponding with the monitoring system including to measure ambient temperature			

6.13 Option: Three phase meters to be installed to measure power delivered to the loads

4

14.6 Balance of System (Required during installation)

8.	SPECIFICATION OF BALANCE OF SYSTEM (BOS)		Tender´s details/response Comparative specification Enter value or YES as appropriate
	The following material/Equipment will adhere to the prescribed standards		
15.1	Outdoor cabinets/ combiner boxes	UV and water resistant material, min IP 54 MCB MCCB SPDs, class II IEC 61643-11 Operating temperature up to 80 C Non-metallic fiberglass enclosures with clear polycarbonate covers Bidirectional, 3 phase class 0,5 IEC 60364 KS 04-192: 1988 KS 04 -194: 1990 KS 04 -1815/188 KS 04 -290: 19815 IEC 62305 KS 04-1159: 1983	

14.7 For Dc Cabling And Connectors

8.	SPECIFICATION FOR DC CABLING AND CONNECTORS The following material/Equipment will adhere to the prescribed standards		Tender´s details/response. Comparative specification. Enter value or YES as
8.1	Fine copper for PV string connection to inverter		
8.2	Outdoor use TUV approval Nr.	TUV PfG 1169/08.20015	
8.3	Ozone resistant	EN 50396	
8.4	Flame retardant	IEC/EN 60332-1-2	
8.5	UV resistant	HD 605/A1	
8.6	Halogen free	EN 502615-2-1, EN 60684-2	
8.15	Acid + Alkaline resistant	IEC /EN 60811-2-1	
8.8	Low corrosively of gases	EN 502615-2-2	
8.9	Weather resistant	HD 605/A1	

instructions using only certified

4

8.10	DC wiring losses	Total DC wiring losses max. 1,5%
8.11		EN 50521
	DC connectors	Crimped according to
8.12		manufacturer

14.8 Installation

9.	INSTALLATION	Tender´s details/response. Comparative specification. Enter value or YES as appropriate
9.1	Complete installation of all components and the complete system (see PART 1 (General Information, system description and scope of delivery). Price to be mentioned as lump sum. Excluding material (9.2 to 9.18).	
9.2	The installation of the solar PV power plant on the site is in the scope of the contract. The tenderers are notified that they will need a V2 license for Solar PV, They will need as per the regulations a C1 license for design and installation and minimum of a T3 certified solar technician in the team to perform the solar installation licenses obtained from the Energy & Petroleum Regulatory Authority.	
9.3	AC breaker	
9.4	DC overvoltage protection	
9.5	PV Cabling, 6mm² black	
9.6	PV Clamping, MC4	
9.15	PV Grounding Cable, 4mm² black	
9.8	Grounding Rods, Steel	
9.9	Cable trays, 150mm x 3m	
9.10	Lightning Arrestors	
9.11.	AC Cabling, 50m, 6mm²	
9.12	Power Meter	
9.13	Energy Meter	
9.14	CT's for power measurement	
9.15	Power Measurement & Auxiliaries Cabinet	
9.16	3G Router	
9.115	Small parts (clamps, screws, smaller cables, etc.)	

9.18 PV Framing

14.9 Commissioning and training

11	COMMISSIONING AND TRAINING ON The following shall be carried out during commissioning Complete	Tender´s details/response. Comparative specification. Enter value or YES as
11.	indicate.	
11.	Training on the operation of the power plant maintenance and monitoring of the system. General system description and scope of delivery. Please indicate	

2. Performance Guarantees

12.	PERFORMANCE GUARANTEES	Tender´s details/response. Comparative specification. Enter value or YES as appropriate	
12.1	Upon commissioning of the solar PV power plant and 1 month of operation the final acceptance of the Osolar PV system will be confirmed after. During this one month the contractor should fix all installation problems that arise. After final acceptance, a 12 month defect liability period (DLP) shall		

4

commence.

12.2

PART III. BILLS OF QUANTITIES

The Bill of Quantities shall form part of the Contract Documents and is to be read in conjunction with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications and Drawings.

The brief description of the items in the Bill of Quantities is purely for the purpose of identification, and in no way modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.

The Quantities set forth in the Bill of Quantities are estimated and provisional, representing substantially the work to be carried out, and are given to provide a common basis for tendering and comparing of Tenders. There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities. The basis of payment shall be the Contractor's rates and the quantities of work actually done in fulfillment of his obligation under the Contract.

The prices and rates inserted in the Bills of Quantities will be used for valuing work executed, and the Engineer will measure the whole of the works executed in accordance with this Contract. A price or rate shall be entered in ink against every item in the Bill of Quantities with the exception of items, which already have provisional sums, affixed thereto. The Tenderers are reminded that no "nil" or "included" rates or "lump-sum" discounts will be accepted. The rates for various items should include discounts if any. Tenderers who fail to comply will be disqualified.

Provisional sums (including day works) in the Bill of Quantities shall be expended in whole or in part at the discretion of the Engineer in accordance with Sub-clause 52.4 and Clause 58 of part of the Conditions of Contract.

The price and rates entered in the Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional plant to be used, labour, insurance, supervision, compliance, testing, materials, erection, maintenance or works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the Contract by the Engineer and his staff.
The Employer for any arithmetic errors in computation or summation will correct errors as follows: Where there is a discrepancy between amount in words and figures, the amount in words will govern; and Where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer, there is an obviously gross misplacement of the decimal point in the unit price, in which event the total amount as quoted will govern and the unit rate will be corrected.

SECTION V - BILLS OF QUANTITIES

ITEM	DESCRIPTION	KSHS	CNTS
	PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX T O CONTRACT AGREEMENT		
	The following are the insertions to be made in the appendix to the Contract Agreement		
	Period of Final Measurement		
	Defects Liability Period	**3 Months Practical Completion**	
		6 Months Practical Completion	
	Date for Possession		
	Date for Completion	**To be agreed with the**	
	Liquidated and Ascertained Damages	**1 weeks of Possession from date**	
		at a rate of Kshs 20,000.00 Per day or part thereof	
	Maximum amount of delayed damages	**5% of the final contract price**	

	Period of Interim Certificates	**% of the contract sum as agreed with the board-** **n.e 3 certificates**
		10%
	Percentage of Certified Value Retained	
	Limit of Retention Fund	**10%**
	Carried to collection	

BILL NO.1: PRELIMINARIES

PRELIMINARIES

ITEM	DESCRIPTION	AMOUNT
1	**HOARDING** The Contractor is required to take all precautions necessary for the safe custody of the works,materials, plant, public and Employer's property on the site.The hoarding should be 3 m high with fortune green sheet guage 30 IT5 made round post frame properly braced WITH A GATE FOR ACCESS CONTROL. Warning stickers to be placed as ddirected by the project manager. The contractor should allow in his rates for this item.	
2	**PLANT, TOOLS AND VEHICLES** The contractor shall allow in his rates for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.	
3	**TRANSPORT** Allow for transport of workmen, to and from the site at such hours and by such routes as may be permitted by the competent authorities.	
4	**STORAGE OF MATERIALS** The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER.	
5	**WATER AND ELECTRICITY SUPPLY FOR THE WORKS** The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost.	
6	**SUPERVISION AND WORKING HOURS** The works shall be executed under the direction and to the entire satisfaction in all respects of the PROJECT MANAGER who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract.	
	Subtotal carried to collection	

ITEM	DESCRIPTION	AMOUNT
7	**CONTRACTOR'S SUPERINTENDENCE/SITE AGENT** The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the	
8	**SIGNBOARD** Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away the signboard as designed, specified and approved by the Project Manager	
9	**EXISTING SERVICES** Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions which may be required by the authorities concerned for the support, maintenance and protection of such services.	
	sub-total carried forward to collection	
	COLLECTION	
	Sub-total brought forward from page 1	
	Sub-total brought forward from above	
	Total PRELIMINARIES carried forward to grand summary page	

BILL NO. 2: 50KWP PV SOLAR HYBRID PLANT

Page 1	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
1.00	**SOLAR PV GENERATION & INVERTER**				
1.10	Tier-1,high efficiency, N-Type Monocrystalline Solar PV Modules 700Wp as Jinko / JA Solar or equal and **approved**	77	Pcs		
1.20	60KVA continuous output Three-Phase, high voltage, Hybrid Inverter with 10 MPPTs/20 Inputs tracking, IP65 rated, smart cooling as **Deye/ solis** or equal and **approved**	1	Pcs		
1.30	Wi-Fi logging stick for cloud-based remote system monitoring and performance analytics as **Growatt Shinewifi-F** or equall and **approved**	1	Pcs		
1.40	PV,10-input-10 output Metal Enclosure DC Combiner Box featuring 1000V DC fuses, surge protection devices (SPD Class II), and DC isolators as Felicity or equal and approved	1	No.		
2.00	**ENERGY STORAGE SYSTEM (ESS)**				
2.10	10.24Kwh, 51.2V high-voltage architecture, Commercial-grade LiFePO4 Lithium Battery Storage modules complete with cables as Deye / Felicity or equal and **approved**	10	Pcs		
2.20	Heavy-duty, open frame battery enclosure cabinets complete High Voltage cluster infrastructure with integrated smart BMS and cooling fans.	2	Set		
3.00	**CABLING - All provisional**				
3.10	6mm² Solar DC Cable(TUV certified, XLPE insulated, UV-protected)				
a)	Red	300	LM		
b)	Black	300	LM		
c)	16mm² green/yellow cu cable for earthing and bonding	300	LM		
d)	IP 67, 1000VDC, UV resistant, 20-30A current, 6mm squ. MC4 connectors; male and female	90	Pairs		
	Total carried forward to collection page				-

Page 2	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
3.20	Heavy-gauge DC Armored Cable Two-core 70mm² for connection from combiner box to the inverter location	30	LM		
3.30	Heavy-gauge AC Armored Cable four-core 50mm² for connection from inverter location to MDB	30	LM		
3.40	A.C Distribution Board complete with Schneider/ABB 100A MCCB, AC SPD, under/over-voltage relays, and digital energy meter.	1	Pcs		
3.60	Maintenance bypass/isolator enclosure with interlocking	1	No		
4.00	**ALUMINIUM MOUNTING RAILS**				
4.10	Aluminium mounting rails, AL6005-T5	400	No		
4.20	Mid clamps	300	No		
4.30	End clamps	300	No		
4.40	Rail splice/connectors	30	No		
4.50	Stainless/galvanized fasteners	1	Lot		
					-
	Total carried forward to collection page				

Page 3	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
5.00	**EARTHING & BONDING**				
5.10	PV module earthing clips	77	No		
5.20	35/50 mm² Cu main earth conductor	100	m		
5.30	Copper-bonded earth rods, 16 mm × 2.4 m	7	No		
5.40	Earth inspection pits	7	No		
5.50	Earth bars/test links	7	Set		
5.60	Lightning protection system	7	LOT		
5.70	Cable containment: Heavy-duty galvanized cable trays, PVC conduits, cable glands, lugs, and installation accessories.	1	Lot		
6.00	**POWER RETICULATION**				
6.10	Excavation from the switch room to the main building and laying 2x110mm diameter PVC pipes	100	LM		
6.20	Construction of manholes 800x800x1000mm deep manholes at 7000mm c/c complete with covers and HATARI engraved markings	20	NO		
	Total carried forward to collection page				-

Page 4	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
7.00	**TESTING AND COMMISSIONING**				
7.10	Allow a provisional sum of Kenya shillings one hundred thousand (KES 100,000.00) only for testing of the whole installation work to IEEE and local acceptable standards and production of: i) As-installed drawings ii) pre-commisioning reports iii) Testing reports iv)Commisioning reports v) Manuals and data sheets vi) Training of client personel v) Any other report as deemed neccesary by the supervising engineer		Lot		
6.00	***Any other item neccesary to complete this installation; List*** i) ii) iii)		Lot		
	Total carried forward to summary				
	<u>Collection</u> Total brought forward from page 1 Total brought forward from page 2 Total brought forward from page 3 Total brought forward from above				
	TOTAL SOLAR SYSTEM CARRIED FORWARD TO GRAND SUMMARY				

BILL NO.3: CIVIL WORKS AND GROUND MOUNT STRUCTURE

Page 1	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
	GROUND-MOUNTING STRUCTURE & CIVIL WORKS				
1	**CIVIL WORKS**				
1.1	Light bush clearing as directed by the engineer	600	SM		
1.2	Cut to spoil in sof (mechanical)	60	CM		
1.3	Fill in soft material and compact	60	CM		
1.4	Light grade existing site surface, including drainage and ditches as directed by the engineer	600	SM		
1.5	Excavation for column sockets size 600x600mm wide depth not exceeding 1000mm deep	12	CM		
1.6	Load and cart away surplus excavated materials to spoil heaps as directed on site	12	CM		
	In-situ R.C (class 20/20mm) in:				
1.7	Socket bases and stud columns	12	CM		
1.8	High yield reinforcement bars to RC concrete	1080	Kgs		
	Total civil works carried to collection page				-

Page 2.	Description	Quantity	Unit	Rate (Kshs.)	Amount (Kshs.)
2	**GROUND MOUNTING STRUCTURE** ***Pre-fabricated Hot-Dip Galvanized Steel structures optimized for 10-15° tilt angle, high wind loads up to 130km/h.***				
2.1	100X100X4mm SHS columns	276	LM		
2.2	100x50x3mm RHS main beams	270	LM		
2.3	50x50x3mm SHS angle bracings	138	LM		
2.4	75x50x20mm C-channel Purlins	324	LM		-
	Total mounting structure carried forward to collection				-
	<u>COLLECTION</u>				
	Total civil works brought forward from page 1				-
	Total mounting structure brought forward from above				-
	TOTAL CIVIL WORKS AND MOUNTING STRUCTURE CARRIED FORWARD TO GRAND SUMMARY				**-**

BILL NO.4: POWER HOUSE

Item	Description	Unit	Quantity	Rate	Amount
	Substructures (All Provisional)				
	SITE CLEARANCE				
A.	Clear off site to removal of top soil to average depth of 20cm	SM	24		
	Site Preparation				
B.	Excavate for making level on sandy soil, load, transport and spread on site as directed by the Engineer	CM	4		
C.	Trench excavation in an ordinary soil around 100cm depth along the peripheral of the building and internal partitions. The width of the trench is 60cm	CM	11		
F.	Return fill and ram selected materials, where the selected materials are not suitable, the contractor will use imported and approved imported materials	CM	2		
G.	Selected imported backfill well-watered and compacted in layers not exceeding 150mm thick to Engineer's approval	CM	7		
H.	Cart away surplus materials arising from excavation as directed on site	CM	8		
I.	Allow for keeping all excavations free from spring, subterranean or flood water	Item	1		
J.	Allow for necessary planking and strutting sides of all types of excavations	Item	1		
	Hardcore backfill				
A.	Supply transport, deliver and hand pack gravel 300mm thick below foundation slab, this includes watering and compressing gravel according to standards for this activity	SM	30		
B.	50mm thick quarry dust blinding to hardcore (measured separately)	SM	30		
	Damp proof membrane				
C.	Two layers 1000 gauge polythene sheeting with minimum 300mm side end laps	SM	30		
	Subtotal carried forward to collection				

Item	Description	Unit	Quantity	Rate	Amount
	Concrete class 1:4:8 (40mm aggregate				
D.	50mm thick blinding foundation in trenches	SM	28		
	Supply and put in place vibrated reinforced concrete class 20(20mm aggregate) in:-				
E.	60cm wide x 20cm thick concrete strip foundation under all the masonry walls	CM	2		
G.	150mm thick ground floor slab	SM	8		
	Supply and construct formwork to the sides of concrete surfaces.The formwork shall comprise acceptable timber or steel shutters with and including mould oil,putting in place and striking off,				
A.	Formwork to sides of strip foundation	SM	**5**		
B.	Formwork to sides of ground floor slab 150mm wide	LM	12		
	High tensile square twisted reinforcement bars to B.S. 4461 including bends,hooks,tying wire,and spacers.				
C.	12mm diameter stirrups for the beams spaced at 200c/c	Kgs	45		
D.	10mm diameter (3 longitudinal bars) for the beams	Kgs	24		
	Supply,transport and install mesh fabric reinforcement				
E.	Fabric mesh reinforcement BRC type A142 weighing 2.22kg/m2 with minimum 300mm side and end laps.	SM	8		
	Construction of natural stonework walling;roughly squared;bedded and jointed in 1:4 cement and sand mortar and reinforced with 20 gauge hoop iron wall ties every alternate course.The stone crushing strength to be minimum 7N/mm2				
F	20mm thick	SM	17		
	Subtotal carried forward to collecction				
	Brought forward from page 1				
	Brought forward from above2				
	Total carried to Summary page				**-**

Item	Description	Unit	Quantity	Rate	Amount
	WALLING				
	Supply,transport,deliver selected quality concrete blocks for walling.The wall will be bedded and jointed in 1:4 cement and sand mortar and reinforced with 20 gauge hoop iron every alternate course.The concrete blocks should have a minimum crushing strength of 7N/mm2				
A.	200mm thick	SM	60		
	Supply,transport,deliver and install dump proof courses under masonry or concrete block walling				
D.	200mm wide with and including all necessary laps	LM	11		
	CONCRETE WORKS				
	Supply and put in place vibrated reinfoced concrete class 20(20mm aggregate)in:-				
A.	Ring beams and other structural beams	CM	1		
	Supply and construct formwork to the sides of concrete surfaces.The formwork shall comprise acceptable timber or steel shutters with and including mould oil,putting in place and striking off,Where the surface of concrete is disturbed by the strinking off,it shall be repaired at the contractor's cost				
B.	Formwork to sides and soffits of ring beam and other beams	SM	7		
	High tensile square twisted reinforcement bars to B.S. 4461 including bends,hooks,tying wire,distance blocks,chairs and spacers				
C.	12mm diameter (4 longitudinal bars) for the beams	Kgs	45		
D.	8mm diameter stirrups for the beams spaced at 200c/c	Kgs	28		
	Total Walling Carried to summary				**-**

Item	Description	Unit	Quantity	Rate	Kshs.
	ROOFING				
	ROOFING				
	Steel Roof Structure (Provisional)				
	The following in framed structural steel roof members complete with and including all welded and bolted connections : delivery to site and erection				
	Structural steel roof trusses various spans: hoisting and fixing approximately 3.00m above ground level				
A.	75 x 50 x 3 mm thick RHS top cord	LM	36		
B.	75 x 50 x 3 mm thick RHS bottom cord	LM	36		
C.	50 x 50 x 3 mm thick RHS struts/ties	LM	27		
	Support rails , purlins , bracings etc.				
D.	152.4 x 50.8 x 2 mm thick zed purlins	LM	36		
	ROOF COVER				
	Resincot, Pre-painted LT5 profile sheet fixed with and including 100 mm long galvanized hook bolts and rubber washers on timber purlins (ms) with one and half corrugation side lap and 150 mm end laps				
E.	28 Gauge roof covering; including all necessary accessories	SM	47		
F.	Ridge cap to match	LM	32		
	Total carried to summary page				-

Item	Description	Unit	Quantity	Rate	kshs
	EXTERNAL OPENINGS-CONT'D **WINDOWS** **The following in steel casement windows;standard casement section in large panes complete with and including permanent ventilators comprising "T"-bar,gauze and metal hood to full width of window,coupling mullions,approved ironmongery and one coat primer by the manufacturer complete with all necessary steel angle sections or RHS for fixing to concrete or masonry,clips and bolts**				
A.	Window overall size 1500x1500mm high with two openable side hung 500x500mm high	N0	3		
	WINDOW SILLS				
B.	230X50mm thick(extreme)precast concrete throated and weathered windows sills bedded and jointed to masonry walling in matching 1:4 cement and mortar	LM	8		
	DOORS **Steel casement door comprising of 50x50x3mm thick RHS top and bottom vertical members with and including 6mm thick plate welded to RHS and 300mm wide louvres on the top.Door fixing lugs shall be included in the door frame and the rate shall include 75x50x3mm thick RHS framing all round the masonry opening,The door shall comprise all necessary iron mongery asscoiated with it**				
C.	Double Door size 1500x2400mm high	NO	1		
	The contractor shall apply undercoat,primer and two finishing coats and gloss paint,The engineer shall select the colour shade and code of the paint				
D.	Gloss paint general metal surfaces	SM	7		
	Total carried to summary page				-

Item	Description	Unit	Quantity	Rate	Kshs.
	FINISHES				
	EXTERNAL WALL FINISHES **The contractor shall provide all necessary and strong scaffolding to enable workers access the top of the walling while carrying out finishing works**				
	Gauged render comprising of lime,cement and sand (1:2:9) respectively.The contractor shall hack the surface of concrete/masonry where necessary in order to provide a surface where the render/plaster wll hold strongly and permanently				
A.	Supply,mix and apply render of average thickness of 200mm to masonry 0r concrete surfaces	SM	30		
	Supply,transport,prepare and apply 'Rock Tuff' or any other approved textured paint to metal general surfaces				
B.	The contractor shall apply undercoat,skimming and two finishing coats of 'Rock and Tuff' or textured external paint.The engineer shall select the colour shade and code of paint.The application method will be selected by the engineer	SM	30		
	INTERNAL WALL FINISHES **The contractor shall provide all necessary and strong scafolding to enable workers access the top part of the walling while carrying out finishing works**				
	Gauged plaster comprising of lime,cement and sand (1:2:4) respectively.The plaster shall have a neat vertical finish.The contractor shall hack the surface of the concrete/masonry where necessary in order to provide a surface where the render/plaster will hold strongly and permanently				
C.	Supply,mix and apply plaster of average thickness of 15mm to masonry or concrete surfaces	SM	23		
D.	Silk vinyl emulsion paint to plastered surfaces	SM	23		
	Total carried to collection page				**-**

Item	Description	Unit	Quantity	Rate	Amount
	FLOOR FINISHES				
	Supply,transport,deliver,mix as required and put in place as required terrazo floor finish.The contractor will provide all the necessary tools for carrying out the works to the required standards				
	Red oxide screed finish:approved colour;cement and local marble chippings (1:2);machine polished				
A	25 mm.(average) paved finished to falls	SM	30		
B	25mm thick skirting with rounded tops	LM	14		
	Sub-total carried to collection				
	COLLECTION				
	Brought forward from page 8				-
	Brought down from above				-
	Finishes carried to summary page				**-**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	**SUBSTRUCTURES**				-
2	**WALLING**				-
3	**ROOFING**				-
4	**EXTERNAL OPENINGS**				-
5	**FINISHES**				-
	TOTAL CARRIED TO SUMMARY				-

BILL NO.5: FENCING

Page 1	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	FENCING				
	-	**150 Metres chainlink fence with Precast concrete poles at 3 metres intervals**			
A	Clear site of grass, bushes, shrubs and small trees not exceeding 300mm girth including grubbing up roots,burn or cart away arisings	200	SM		
B	Excavate hole size 400mm by 400mm by 300mm deep to receive precast concrete posts	5	CM		
C	Excavate trench 400mm wide, 300mm deep.	18	CM		
D	Return, fill and ram selected materials	18	CM		
E	Cart away surplus materials or spread on site as directed by the engineer	6	CM		
F	125x125mmx2400mm high precast concrete	50	NO		
	Formwork				
G	Sawn cypress formwork to sides of strip	14	SM		
	Mass concrete (1:4:8) wheeled and placed in holes and strip as described in:-				
H	precast concrete	2	CM		
I	Ditto to 200mmx200mm high concrete strip along the fence	2	CM		
J	100x125mm Precast concrete struts; 2600mm long to corners of the fence and the main gate and centres of sides at 30m span.	8	NO		
K	2.4m high by 14 gauge chainlink tied to 6No.line wire through the post	396	SM		
	Total CARRIED FORWARD TO COLLECTION PAGE				

Page 2	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	FENCING CONT'D				
L	Supply and fix 6 strand galvanised barbed wire(As wire products Ltd) 180x25kgx12 1/2G fencing with utility posts at 3.0M centres mortised in mass concrete surround	900	LM		
M	1200x2100mm high double leaf mild steel Pedestrians gate	1	No.		
N	4200x2100mm high double leaf mild steel vehicular gate	1	No.		
	total carried forward to collection				
	COLLECTION				
	Total brought forward from page 1				
	Total brought forward from above				
	Total for fencing works carried forward to grand summary				

PROVISIONAL SUMS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	PRIME COST AND PROVISIONAL SUMS ***The contractor shall include in his tender the following to be deducted in whole or in parts as directed by the project manager***				
A	Allow a sum of Kenya shillings nine hundred thousand (Kshs. 900,000.00) for project management expenses and documentation				
B	Allow a provisional sum of Kenya shillings five hundred thousand(Kshs. 500,000.00) only for contigencies				
C	Allow a provisional sum of Kenya shillings one hundred thousand(Kshs. 100,000.00) only for signage, labels and warnings, and branding as directed by the client				
D	Allow a provisional sum of Kenya shillings one hundred thousand(Kshs. 100,000.00) only for mechanical ventilation of the machine room				
	TOTAL PROVISIONAL SUMS CARRIED TO GRAND SUMMARY				

GRAND SUMMARY

GRAND SUMMARY			
ITEM	**DESCRIPTION**	**For Official Use only**	**For Tenderer's use only**
A	**Bill No. 1 PRELIMINARIES**		
B	**Bills No. 2 Measured Works:**		
1	Solar System		
2	Civil works % Ground-mount structure		
3	Fencing		
4	Power House		
C	**PC. Sums**		
TOTAL CARRIED TO FORM OF TENDER:			

Amount in words: Kenya Shillings .....
.....

Tenderer's Signature .....
Address .....
.....
Date .....

Witness Signature .....

Address .....
.....
Date .....

SECTION VI – STANDARDFORMS

LIST OF STANDARD FORMS

i. Form of Tender
ii. Appendix to Form of Tender
iii. Letter of Acceptance
iv. Form of Agreement
v. Form of Tender Security
vi. Performance Bank
vii. Guarantee(unconditional)
viii. Bank Guarantee for Advance Payment
ix. Tender Questionnaire
xi Confidential Business Questionnaire
x. Schedule of Materials; - Basic Prices
xi. Schedule of Labor; - Basic Prices
xii. Schedule of Plant and Equipment
xiii. Details of Sub-Contractors
xvi Certificate of Tenderer's Site visit
xiv. Form of Written Power of Attorney
xv. Key Personnel
xvi. Completed Civil Works
xvii. Schedule of Ongoing Projects
xviii. Other Supplementary Information
xix. Declaration Form

FORM OF TENDER

TO---------- *[Name of Employer)* ---------- *[Date]*

---------- *[Name of Contract]*

Dear Sir,

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 construct, install and complete such Works and remedy any defects therein for the sum of Kshs……*[Amount infigures]*Kenya Shillings_____
_____
_____*[Amount inwords]*

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.

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.

Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract betweenus.

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 (Bank Guarantee only)		Kshs
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	_ percent of Tender Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than ___ days after issuance of Order to Commence
Cash flow estimate to be submitted	14.3	Not later than ___ days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	Kshs.
Period for commencement, from the Engineer's order to commence	41.1	_ ___ days
Time for completion	43.1	.....
Amount of liquidated damages	47.1	Kshs. per day
Limit of liquidated damages	47.1	_ % of Contract Value
Defect Liability period	49.1	Months
Percentage of Retention	60.5	_ of Interim Payment Certificate
Limit of Retention Money	60.5	_ % 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	_ __ days
Time within which payment to be madeafter Final Payment Certificate signed by Engineer	60.8	_ __ __ days
Appointer of Arbitrator	67(3)	Chief Justice of The Republic of Kenya
Notice to Employer and Engineer	68.2	The Employers address is: Ministry of Finance and Economic planning, P.O. Box11 Lodwar The Engineer's address is: Chief officer, Department of Public Works

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

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:

1. 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.

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

   (i) Letter ofAcceptance

   (ii) Form ofTender

   (iii) Conditions of Contract Part I

   (iv) Conditions of Contract Part II and Appendix to Conditions of Contract

   (v) Specifications

   (vi) Drawings

   (vii) 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 of .....20.....

THE CONDITIONS of this obligation are:

1. If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers
   Or

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

   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;
   (c) Rejects a correction or 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 the 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. _ _ _ dated _ __ 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 recognised 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 there under 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 figurers]* 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 there under 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:_____ _____ _____ _____ _

_____

1. TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names of tenderer

.....

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

.....

3. Telephone number (s) of tenderer

.....

4. Telex address of tenderer

.....

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

.....

6. 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 ofTenderer

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

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 ……

Locationofbusinesspremises;

Country/Town……

. Plot No…… Street/Road ……

Postal Address…… Tel No……..

Nature of Business……..

CurrentTradeLicenceNo……Expiringdate……

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..... Statethe

nominalandissuedcapitaloftheCompany-
Nominal Kshs..... Issued

Kshs..... Givedetailsofall

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 / persons 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

SCHEDULE OF MATERIALS;- BASIC PRICES
(Ref: Clause 70 of Conditions of Contract)

MATERIAL	UNIT	ORIGIN AND PRICE			TRANSPORTATION COST FROM SOURCE OF ORIGIN	
		COUNTRY OF ORIGIN	SUPPLIER	PRICE	MODE	PRICE
Cement	Mg					
Lime	Mg					
Sand	Mg					
Aggregate	Mg					
Diesel	L					
Regular Petrol	L					
Super Petrol	L					
Kerosene	L					
Structural steel	Mg					
Gabion Mesh	M2					
Reinforcement Steel						
Explosives	Kg					
Oil and Lubricants						
Bitumen Emulsion A3						
Bitumen Emulsion A4						
Bitumen Emulsion K1						
Bitumen Emulsion K3						
Bitumen 80/100	Kg					
Bitumen MC 30	ML					
Bitumen MC 70	L					
Bitumen MC 3000	L					
Ammonium nitrate for blasting						

I certify that the above information is correct.

…… …… ……

(Title) *(Signature)* *(Date)*

The prices inserted above shall be those prevailing 30 days before the submission of Tenders and shall be quoted in Kenya Shillings using the

exchange rates specified in the Appendix to Form of Tender.

Prices of imported materials to be quoted CIF Mombasa or Nairobi as appropriate depending on whether materials are imported by the tenderer directly or through a local agent.

Transportation costs for imported materials to be quoted from Mombasa or
Nairobi as appropriate to _____ (Contract Site) depending on whether
materials are imported directly by the tenderer or through a local agent.

SCHEDULE OF LABOUR:- BASIC RATES
(Reference: Clause 70 of Conditions of Contract)

LABOUR CATEGORY	UNIT (MONTH/SHIFT/HOUR)	RATES

Categories to be generally in accordance with those used by the Kenya Building Construction and Engineering and Allied Trades Workers' Union.

DETAILS OF SUB-CONTRACTORS

If the Tenderer wishes to sublet any portions of the Works under any heading, he must give below details of the sub- contractors he intends to employ for each portion.

Failure to comply with this requirement may invalidate the tender.

(1) Portion of Works to be sublet:
.....

[i] Full name of Sub-contractor and address of head office: .....

.....

(ii) Sub-contractor's experience of similar works carried out in the last 3 years with Contract value: .....

.....

.....

(2) Portion of Works to sublet:
.....

(i) Full name of sub-contractor and address of head office:
.....

.....

.....

(ii) Sub-contractor's experience of similar works carried out in the last 3 years with contract value: .....

.....

_____ _____ _____ __

[Signature of Tenderer) Date

CERTIFICATE OF TENDERER'S VISIT TO SITE

This is to certify that

[*Name/s*]**.....**

.....

Being the authorized representative/Agent of *[Name of Tenderer]*
.....

.....

participated in the organized inspection visit of the site of the works for the
(Name of Contract: .....)

..... day of …… 20**.....**

Signed**.....**
(Employer's Representative)

.....

NOTE: This form is to be completed whether the site visit is made at the time of the organized site or privately organized.

FORM OF WRITTEN POWER-OF-ATTORNEY

The Tenderer consisting of a joint venture shall state here below the name and address of his representative who is authorised to receive on his behalf correspondence in connection with the Tender.

.....
(Name of Tenderer's Representative in block letters)

.....
(Address of Tenderer's Representative)

.....
(Signature of Tenderer's Representative)

KEY PERSONNEL

DESIGNATION	NAME	NATIONALITY	SUMMARY OF QUALIFICATIONS AND EXPERIENCE
Headquarters: 1. Director 2. 3. 4. 5. etc.			
Site Office: 1. Site Superintendent 2. 3. 4. 5. etc.			

I certify that the above information is correct.

.....	.....	.....…
(Title)	*(Signature)*	*(Date)*

SCHEDULE OF COMPLETED BUILDING WORKS CARRIED OUT BY THE TENDERER IN THE LAST EIGHT YEARS

DESCRIPTION OF WORKS AND CLIENT	TOTAL VALUE OF WORKS (KSHS)	CONTRACT PERIOD (YEARS)	YEAR COMPLETED

I certify that the above Works were successfully carried out and completed by ourselves.

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

*Value in Kshs using Central Bank of Kenya mean exchange rate at a reference date 30 days before date of tender opening.

SCHEDULE OF ONGOING PROJECTS

DESCRIPTION OF WORK AND CLIENT	CONTRACT PERIOD	DATE OF COMMEN-CEMENT	DATE OF COMPLETION	TOTAL VALUE OF WORKS (KSHS.)	PERCENTAGE COMPLETED TO DATE

I certify that the above Works are being carried out by ourselves and that the above information is correct.

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

OTHER SUPPLEMENTARY INFORMATION

1. Financial reports for the last five years, balance sheets, profit and loss statements, auditors' reports etc. List them below and attach copies.
   .....
   .....
   .....

2. Evidence of access to financial resources to meet the qualification requirements. Cash in hand, lines of credit etc. List below and attach copies of supporting documents
   .....
   .....
   .....

3. Name, address, telephone, telex, fax numbers of the Tenderer's Bankers who may provide reference if contacted by the Employer.
   .....
   .....
   .....

4. Information on current litigation in which the Tenderer is involved.

OTHER PARTY (IES)	CAUSE OF DISPUTE	AMOUNT INVOLVED (KSHS)

I certify that the above information is correct.

....
.....
Title *Signature* *Date*

DECLARATION FORM

Date _____

To _____
_____
_____

The tenderer i.e. (name and address)_____
_____declare the following:

a) Has not been debarred from participating in public procurement.

b) Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

_____	_____	_____
Title	Signature	Date

(To be signed by authorized representative and officially stamped)