



KERIO VALLEY DEVELOPMENT AUTHORITY

TENDER NO.: KVDA/T/011/2019-2020

**PROPOSED INSTALLATION OF 250 KW SOLAR GRID AND
DRILLING OF THREE BOREHOLES IN NAPUU II IRRIGATION
SCHEME.**

Receipt No.....

Tender Reg. No.....

**CLOSING DATE: WEDNESDAY 11TH DECEMBER
2019**

CLOSING TIME: 10.00 AM

INVITATION TO TENDER

DATE: 26TH NOVEMBER 2019

TENDER REF NO. KVDA/T/011/2019-2020

TENDER NAME: PROPOSED INSTALLATION OF 250 KW SOLAR GRID AND
DRILLING OF THREE BOREHOLES IN NAPUU II IRRIGATION
SCHEME .

- 1.2.1 Kerio Valley Development Authority (KVDA) invites sealed bids from eligible and interested bidders for the installation of 250 kw solar grid and drilling of three boreholes in Napuu ii irrigation scheme.
- 1.2.2 Interested eligible candidates may obtain further information from our website www.kvda.go.ke OR National Treasury Ifmis Portal www.supplier.treasury.go.ke OR inspect the tender documents at Supplies and Procurement Department, situated at 13th floor KVDA Plaza Eldoret, Telephone No. 053 63361/3 – Ext. 225 during normal working hours.
- 1.2.3 A complete set of tender documents may be obtained by interested candidates upon payment of non-refundable fees of **Kshs.1,000/=** in cash or Bankers cheque payable to Kerio Valley Development Authority OR downloaded from our website www.kvda.go.ke OR National Treasury Ifmis Portal www.supplier.treasury.go.ke free of charge.
- 1.2.4 Completed tender documents are to be enclosed in plain sealed envelopes marked with tender reference number and be deposited in the Tender Box at the entrance of 13th Floor, KVDA PLAZA (Eldoret) or be addressed to:
The Managing Director,
Kerio Valley Development Authority,
P. O. Box 2660 - 30100
ELDORET.
So as to be received on or before Wednesday 11th December, 2019 at 10.00 A.M
- 1.2.5 Prices quoted should be net inclusive of all taxes and delivery must be in Kenya Shillings and shall remain valid for 120 days from the closing date of the tender.
- 1.2.6 **Youths, women and persons living with disabilities are encouraged to participate.**
- 1.3 All tenders must be accompanied by Bid Security of Ksh 1,000,000.00 in form of Bank guarantee, Bankers Cheque or Insurance guarantee from approved Insurance companies by PPRA
- 1.4 Tenders will be opened immediately thereafter at the **Boardroom, 14th Floor** in the presence of the Candidates or their representatives who choose to attend.

HSCMS

FOR: MANAGING DIRECTOR

KERIO VALLEY DEVELOPMENT AUTHORITY

Section A

Form of Bid

Form of Bid

KERIO VALLEY DEVELOPMENT AUTHORITY

PROPOSED INSTALLATION OF 250 KW SOLAR GRID IN NAPUU II IRRIGATION SCHEME

Contract No. _____

To:

Kerio Valley Development Authority
KVDA Plaza, Oloo Street
P.O. Box 2660-30100, Eldoret – Kenya
Tel: +254 (053) 22063361-4
Fax: +254(053) 2063365
Email: info@kvda.go.ke

Gentlemen:

1. In accordance with the requirements of the Bid Documents and Bill of Quantities and Addenda Nos. _____ for the execution of the above-named Works, we the undersigned, offer to construct and install such Works and remedy any defects therein in conformity with the requirements of the Bid Documents and Addenda for the sum of [*insert amounts in words*] Kenya

Shillings (KShs) _____

[Insert amounts in Figures] _____ or such other sums as may be ascertained in accordance with the Contract Agreement.

2. We acknowledge that the Appendix to form of Bids forms part of the Bid.
3. We undertake, if our Bid is accepted, to commence and complete the Works as soon as is reasonably possible after the receipt of Engineers notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Form of Bid.
4. We agree to abide by this Bid until the date ----- days after the date of Bid opening and it shall remain binding upon us and may be accepted at any time before that date.
5. We understand that the Client, upon determination of a responsive bid, will negotiate the bid price with the accepted bidder to within the limits of his budget allocation.
6. We agree that unless and until a formal Agreement is prepared, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.

7. We understand that you are not bound to accept the lowest or any Bid you may receive.
8. On the basis of our previous experience we are fully experienced and competent in the type of work included in this tender and we have adequate financial resources to carry out the works described within the period for completion. We are in a position to fulfil the Contract for which we have tendered.

Name of Bidder: _____

Address: _____

Signature of Bidder: _____

Date: _____

Name of Witness to
signature of Bidder: _____

Signature of Witness: _____

Address of Witness: _____

Date: _____

Section B

Appendix to Form of Bid

APPENDIX TO FORM OF BID

(This Appendix forms part of the Bid)

CONDITIONS OF CONTRACT	CLAUSE	VALUE
Definitions	1.1 (a), (i)	The Employer is: Kerio Valley Development Authority KVDA Plaza, Oloo Street P.O. Box 2660-30100, Eldoret – Kenya Tel: +254 (053) 22063361-4 Fax: +254(053) 2063365 Email: info@kvda.go.ke
	1.1 (a), (iv)	The Engineers Representative-Engineer delegated for supervision works by the Employer
Engineer's Authority to issue variations	2.1 (d)(ii)	Not exceeding 15% percent of Contract Sum
Language	5.1 (a)	The Language is English
Law	5.1 (b)	The law in force is that of Kenya
Bid bond		The bid bond shall be Ksh 1,000,000.00 and should be valid for 30 days beyond tender validity period
Amount of performance Bond	10.1	The performance security shall be in the form of an unconditional bank guarantee in the amount of 10% of the Contract Sum
Program to be submitted	14.1	Not later than seven (7) days after issuance of Order to Commence
Language ability of Contractor's representative	13.6	The Language shall be English
Period for commencement, from Engineer's order to commence	41.1	Fourteen (14) days after the signing of the contract
Time for completion	43.1	Six (6) Months
Amount of liquidated damages	47.1	0.5% of Contract Sum per day
Limit of liquidated damages	47.1	10% of Contract Sum
Defects liability period	49.1	Six (6) Months
Value of advance Payment	60.0	No advance payment- section 147 of PPADA 2015
Payment of Material on site	60.1	75% of Value
Minimum amount of interim certificates	60.2	10% of Contract Sum
Percentage of retention	60.5	10% of Payment Certificate
Appointer of arbitrator	67(3)	Chairman Institute of Arbitrators of Kenya

Section C

Instructions to Bidders

Section C

Instructions to Bidders

PART 1 - GENERAL

C.1.1 Scope of bid

1. Kerio Valley Development Authority, funded by GoK, wishes to receive Bids for the proposed installation of 250 kw solar grid in Napuu irrigation scheme. The scope of the works is as follows:
 - Supply and installation of 250 kw comprising of 325 w solar modules complete with 3 phase inverter /controller and smart monitoring system.
 - Construction Module mounting Structure(bidders to describe details of proposed module structure in their bid)
 - Supply and installation of hardware and accessories as detailed in BQ
 - Drilling and equipping three boreholes
 - Any other works as specified in the BQ
2. The successful Bidder will be expected to complete the Works within the period stated in the Appendix to Form of Bid from the date of commencement.
3. Throughout these Bidding documents, the terms '*Employer's Representative*' and '*Engineer*' and the terms '*Bid*' and '*Tender*' and their derivatives (*Bidder/Tenderer, Bid/Tender, Bidding/Tendering, Tender/Bid Sum, and Bid/Tender Price etc.*) and the terms '*it*' and '*he*' and their derivatives (*its/his, itself/himself, etc.*) are synonymous, and day means calendar day. Singular also means plural.

C.1.2 Eligible bidders

1. This invitation to Bid is open to all eligible bidders.
2. Bidders shall provide such evidence of their eligibility satisfactory to the Employer as requested in Section D and as the Employer shall reasonably request.
3. Government-owned enterprises may only participate if they are legally and financially autonomous and operate under commercial law.

C.1.3 Qualification of the bidder

1. Bidders shall as part of their Bid:
 - a) Submit a written power of attorney authorizing the signatory of the bid to commit the bidder; and
 - b) Provide legal proof of registration as a business and compliance to the business requirement of the Government.
 - c) Provide proof of registration by the Ministry of Public Works as Civil Engineering Contractor.
 - d) Provide proof of licensing by Energy Regulatory Authority ERA on electrical /Solar works.
 - e) Any other relevant information for effective evaluation of the bid.
2. Bidders shall provide the following information:

- a) Evidence of access to lines of credit and availability of other financial resources
 - b) Financial predictions for the current year and financial for previous years as per schedule I, Section D, including the effect of known commitments
 - c) Current work commitments
 - f) Current litigation information; and
 - g) Availability of critical equipment
- 3 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements:
- a) the Bid shall include all the information as required in sections C.1.3.1 and C.1.3.2 above
 - b) the Bid, in case of a successful Bid, shall be signed so as to be legally binding on all partners;
 - c) one of the partners shall be nominated as being in charge, and submitting a power of attorney signed by legally authorized signatories of all partners shall evidence this authorization
 - d) the partners in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the Contract, including payment shall be done exclusively with the partner in charge;
 - e) 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 statement to this effect shall be included in the authorization mentioned under c) above, as well as in the Bid and in the Agreement (in case of a successful Bid);and
 - f) a copy of the agreement entered into by the joint venture partners shall be submitted with the Bid
- 4 Bidders shall also submit proposals of work methods and schedules in sufficient detail to demonstrate the adequacy of the Bidder's proposals to meet the technical specifications and the completion time referred to in the Appendix to Form of Bid.

C.1.4 One bid per bidder

- 1 Each Bidder shall submit only one Bid by itself. A Bidder who submits or participates in more than one Bid will be disqualified.

C.1.5 Cost of bidding

- 1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

C.1.6 Site visit

- 1 The Bidder is advised to visit and examine the Site of the Works and its surroundings and obtain for himself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for construction of the Works. The cost of visiting the Site shall be borne by the Bidder.
- 2 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the

express condition that the Bidder, its personnel, and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

PART 2 – BIDDING DOCUMENTS

C.2.1 Content of bidding documents

- 1 The Bidding documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with the provisions of this section:
 - Invitation to Bid
 - Form of Bid
 - Appendix to form of Bid
 - Instructions to Bidders
 - Schedules of Supplementary Information
 - Form of Contract Agreement
 - Conditions of Contract
 - Technical Specifications
 - Bill of Quantities
 - Tender Drawings
- 2 The number of copies to be completed and returned with the Tender is specified in the invitation to Bid.

C.2.2 Clarification of bidding documents

- 1 A prospective Bidder requiring any clarification of the Bidding documents may notify the Engineer in writing or by cable (hereinafter, the term cable is deemed to include facsimile and e-mail) to the Engineer at the address indicated in the Appendix to Form of Bid, but not later than Three (3) days prior to the submission of Bids. The Engineer will respond to any request for clarification that he receives earlier than the time above prior to the deadline for submission of Bids. Copies of the Engineer's response will be forwarded to all purchasers of the Bidding documents, including a description of the inquiry but without identifying its source.

C.2.3. Amendment of bidding documents

- 1 At any time prior to the deadline for submission of Bids, the Employer may, through the Engineer, amend the Bidding documents by issuing Addenda.
- 2 Any Addendum thus issued shall be part of the Bidding documents pursuant to Clause C.2.1, and shall be communicated in writing or by cable to all prospective bidders. Prospective Bidders shall promptly acknowledge receipt of each Addendum in writing or by cable to the Engineer.
- 3 To give prospective Bidders reasonable time in which to take an Addendum into account in preparing their Bids, the Engineer may extend as necessary the deadline for submission of Bids.

PART 3 – PREPARATION OF BIDS

C.3.1 Language of bid

- 1 The Bid, and all correspondence and documents related to the Bid exchanged by the Bidder and the Engineer shall be written in English, and shall be copied to the Employer.

C.3.2 Documents comprising the bid

- 1 The Bid submitted by the Bidder shall comprise the following:
 - i) duly filled-in Form of Bid;
 - ii) priced Bills of Quantities;
 - iii) duly filled-in Schedules of Supplementary Information;
 - iv) any information or other materials required to be completed and submitted by Bidders in accordance with these Instructions to Bidders;
 - v) any other information that the Bidder wishes to submit to qualify its Bid.
- 2 The Bidder shall provide an outline program for the Works with his Bid sufficient to allow the Engineer to ascertain the Bidder's intentions and plans for delivering the completed Works within the time for completion stated in the Appendix to Form of Bid.

C.3.3 Bid prices

- 1 The Contract shall be for the whole Works, as described in Sub-Clause C.1.1.1, based on the priced Bill of Quantities submitted by the Bidder
- 2 The Bidder is required to submit Tender prices to cover for the execution, completion and commissioning of the Works including making good defects in accordance with the Contract drawings.
- 3 The Bidder shall fill in prices for all items of the Works in the Bill of Quantities. Items against which no price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items in the Bill of Quantities.
- 4 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date of submission of Bids shall be included in the prices and the total Bid Price submitted by the Bidder. The Bid prices shall also include all associated costs to be borne by the Contractor including all overheads, profits and supervision costs.
- 6 The rates in Bills of Quantities shall be used for interim payments and, where appropriate, for the valuation of variations.
- 7 The rates and prices quoted by the Bidder shall not be subject to adjustment during the performance of the Contract on account of price fluctuations or fluctuations in the rate of exchange of the various currencies.

C.3.4 Currencies of bid and payment

- 1 The prices shall be entirely in Kenya Shillings (**KShs**) and all payments shall be made in the same currency.

C.3.5 Bid validity

- 1 Bids shall remain valid for a period indicated in the form of Bid after the date of Bid opening
- 2 In exceptional circumstances, prior to expiry of the original Bid validity period, the Employer may request that the Bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A Bidder agreeing to the request will not be required or permitted to modify its Bid.

C.3.6 Pre-bid meeting

- 1 The Bidder's designated representative is invited to attend a pre-Bid meeting, which will take place at the venue and time stipulated in the Letter of Invitation to Bid.
- 2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 3 The Bidder is requested, as far as possible, to submit any questions in writing or by cable, to reach the Engineer before the time of the meeting. It may not be practicable at the meeting, to answer questions received, but questions and responses will be transmitted subsequently.
- 4 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 Bidding documents.
- 5 The Engineer shall make any modification of the Bidding documents listed in Clause C.2.1, which may become necessary as a result of the pre-Bid meeting exclusively through the issue of an Addendum pursuant to Clause C.2.3 and not through the minutes of the pre-Bid meeting.

C.3.7 Format and signing of the bid

- 1 The Bidder shall prepare one original of the documents comprising the Bid as described in Clause C.3.2 of these Instructions to Bidders, bound with the section containing the Form of Bid and clearly marked "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number specified in the Bidding Data, and clearly marked as "COPIES." In the event of discrepancy between them, the original shall prevail.

The Bid document 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 Bidder. The person or persons signing the Bid shall initialize all pages of the Bid where entries or amendments have been made. Each page of the Priced Bill of Quantities shall be initialled and the Summary page shall be completed and signed.

- 2 The Bid shall contain no alterations, omissions, or additions, unless such corrections are in accordance with instructions issued by the Engineer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

PART 4 – SUBMISSION OF BIDS

C.4.1 Sealing and marking of bids

- 1 The Bidder shall seal the Bid Document in two inner envelopes and one outer envelope, duly marking the inner envelopes as “ORIGINAL” and “COPIES”. The envelope shall:
 - (a) Be addressed to the Engineer at the address provided in the Appendix to form of Bid; or any other address as may be directed in the Letter of Invitation to Tender.
 - (b) Bear the name and identification number of the Contract. In addition to the identification required in sub-Clause C.4.1.1 (a), the inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to Clause C.4.2.1, and for matching purposes under Clause C.4.3.
 - (c) Provide a warning not to open before the time and date for Bid opening, as specified in the Bidding Data.
- 2 If the outer envelope is not sealed and marked as above, the Engineer will assume no responsibility for the misplacement or premature opening of the Bid.

C.4.2 Deadline for submission of bids

- 1 The Bidders must submit the Bids to the Engineer at the address specified in the invitation to Bid, no later than the time and date stipulated.
- 2 The Engineer may, in exceptional circumstances and in consultation with the Employer, extend the deadline for submission of Bids by issuing an Addendum in accordance with Clause C.2.3, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

C.4.3 Late bids

- 1 The Engineer shall return any Bid received after the stipulated deadline for submission of Bids prescribed in Clause C.4.2, unopened to the Bidder.

C.4.4 Modification, substitution and withdrawal of bids

- 1 The Bidder may modify, substitute, or withdraw its Bid after Bid submission, provided that written notice of the modification or withdrawal is received by the Engineer prior to the deadline for the submission of Bids.
- 2 The Bidder's modification, substitution, or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with the provisions of Clause C.4.1, with the envelope additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.
- 3 Subject to clause C.5.3, no Bidder may modify its Bid after the deadline for the submissions of Bids.

PART 5 – BID OPENING AND EVALUATION

C.5.1 Bid opening

- 1 The Engineer will open the Bids, including withdrawals and modifications made pursuant to Clause C.4.4, in the presence of the Bidders' designated representatives who choose to attend, at the time, date, and location stipulated in the Letter of Invitation to Bid. The Bidders' representatives who are present shall sign a register evidencing their attendance.
- 2 Envelopes marked "WITHDRAWAL" and "SUBSTITUTION" shall be opened first and the name of the Bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause C.4.4 shall not be opened.
- 3 The Bidders' names, the Bid Prices, including any deviation, any discounts, Bid modifications and withdrawals, and any such other details as the Engineer may consider appropriate, will be announced by the Engineer at the opening. Subsequently, all envelopes marked "MODIFICATION" shall be opened and the submissions therein read out in appropriate detail. No Bid shall be rejected at Bid opening except for late Bids pursuant to Clause C.4.3.
- 4 The Engineer shall prepare minutes of the Bid opening, including the information disclosed to those present.
- 5 Bids not opened and read out at Bid opening shall not be considered further for evaluation, irrespective of the circumstances.

C.5.2 Process to be confidential

- 1 Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. The Engineer, in accordance with the provisions of this section, shall carry out the evaluation of the Bids. Any effort by a Bidder to influence the Bid Evaluation process or award decisions will result in the rejection of the Bidder's Bid.

C.5.3 Clarification of bids

- 1 To assist in the examination, evaluation, and comparison of Bids, the Engineer may, at its discretion, ask any Bidder for clarification of its Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable.

C.5.4 Examination of bids and determination of responsiveness

- 1 Prior to the detailed evaluation of Bids, the Engineer will determine whether each Bid (a) has been properly signed; (b) is substantially responsive to the requirements of the Bidding documents; (c) is accompanied by the required securities; and (d) provides any clarification and/or substantiation that the Engineer may require to determine responsiveness pursuant to this Clause.
- 2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding documents without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

- 3 If a Bid is not substantially responsive, it may be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

C.5.5 Correction of errors

- 1 The Engineer will check the Bids determined to be substantially responsive for any arithmetic errors. Errors will be corrected by the Engineer as follows:
 - i) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
 - ii) 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 govern, unless in the opinion of the Engineer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.
 - iii) The amount stated in the Bid will be adjusted by the Engineer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered binding upon the Bidder. If the Bidder does not accept the corrected amount of Bid, its Bid will be rejected.

C.5.6 Evaluation and comparison of bids

- 1 The Engineer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause C.5.4.
- 2 In evaluating the Bids, the Engineer will determine for each Bid the Evaluated Bid Price by adjusting the Bid Price as follows:
 - (a) making any correction for errors pursuant to Clause C.5.5;
 - (b) excluding Provisional Sums and the provision, if any, for Contingencies in the Summary of the Schedules;
- 3 In order to assess the capability of the Bidder to carry out the Works in the Contract, account shall be given to the information submitted by the Bidder in the Schedules of Supplementary Information.
- 4 The Employer reserves the right to accept or reject any variation or deviation. Variations and deviations and other factors which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.

C.5.7 Negotiations

- 1 The Employer shall, if it is deemed necessary, enter into negotiations with the Bidder with the lowest Evaluated Bid Price or any other Bidder prior to Contract award. The negotiations shall not necessarily be limited to cost but may cover other issues such as scope, project schedules or project personnel and other resources.

PART 6 – AWARD OF CONTRACT

C.6.1 Award

- 1 Subject to Clause C.6.2, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest Evaluated Bid Price pursuant to Clauses C.5.6 and, who shall be considered to be technically qualified to carry out the Works as explained in Clause C.5.6 above.

C.6.2 Employer's right to accept any bid and to reject any or all bids

- 1 The Employer reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

C.6.3 Notification of award

- 1 Prior to expiration of the period of Bid validity prescribed by the Employer, the Employer will notify the successful Bidder by cable confirmed by registered letter that its Bid has been accepted. This letter shall specify the sum, which the Employer will pay the Contractor in consideration of the execution and completion of the Works and the remedying of any defects therein by the Contractor.
- 2 The notification of award will constitute the formation of the Contract.

C.6.4 Signing of Agreement

- 1 Employer will notify the successful Bidder that its Bid has been accepted. The successful Bidder shall then issue to the Employer a Letter of Acceptance of the offer. Once the Employer receives the Letter of Acceptance from the successful Bidder, he will send to the Bidder the Contract Agreement (in the form attached hereinafter) incorporating all agreements between the parties. Any agreements made following negotiations held subsequent to the Bid submissions (refer to Clause C.5.7), shall be incorporated in the Contract documents. The Engineer shall act on behalf of the Employer on all matters pertaining to this Contract as stipulated in the Conditions of Contract.
- 2 Within 1(One) week of receipt of the Agreement, the successful Bidder shall sign the Agreement and return it to the Employer.
- 3 The Employer will thereafter, promptly notify the other Bidders that their Bids have been unsuccessful.

C.6.5 Performance Security

- 1 Within 14 days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in the amount and in the form (Bank Guarantee stipulated in the Contract Data, denominated in the type and proportions of currencies in accordance with the Conditions of Contract.
- 2 If the Performance Security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either at the Bidder's option, by a bank located in the country of the Employer.

- 3 If the Performance Security is to be provided by the successful Bidder in the form of a Bond, it shall be issued by a surety which the Bidder has determined to be acceptable to the Employer.
- 4 Failure of the successful Bidder to comply with the requirements of Sub-Clause C.6.5.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security

Section D

Schedules of Supplementary Information

SCHEDULE I

QUALIFICATION INFORMATION

- 1.1 Constitution or legal status of bidder: *[attach copy]* _____
 Place of registration: _____
 Principle place of business: _____
- 1.2 Ministry of Public Work Registration No and Class. : *[attach copy]* _____ *Renewal*
 date _____
- 1.3 Ministry of Water and Irrigation License No. : *[attach copy]* _____
 Renewal date _____
- 1.4 Power of attorney of signatory of Bid: *[attach copy]*
- 1.5 Total annual volume of construction work performed in five years, in the local trading currency:
[insert]
- 2018 _____
- 2017 _____
- 2016 _____
- 2015 _____
- 2014 _____
- 1.6 Details of work under way or committed, including expected completion date.

Project Name and Location	Name of Client and Contact Person	Type of Work Performed and year of Completion	Value of Contract

Project Name and Location	Name of Client and Contact Person	Type of Work Performed and year of Completion	Value of Contract

SCHEDULE II**MAJOR ITEMS OF CONSTRUCTION PLANT AND EQUIPMENT**

The Bidder hereby commits himself to produce Equipment in accordance with this Schedule as a minimum, but detailed departures therefrom are to be expected in line with actual conditions. This Schedule will be taken into account during the assessment of Bids.

Description Type, Model, Make	
No. of each	
Owned/ Leased/ Imported	
Capacity ton or m cu or other relevant units	
New or Used	
Year of Manufacture.	

The Tenderer shall enter in this schedule all major items of plant and equipment which he proposes to bring to site. Only reliable plant in good working order and suitable for the work required of it shall be shown on this Schedule.

SCHEDULE III

KEY PERSONNEL

The Bidder shall list in this Schedule the key personnel (including first nominee and the second choice alternative) he will employ from his headquarters and from the Site offices to direct and execute the Contract, together with their qualifications, experience, positions held and nationalities, including supporting CV's for key staff.

The Bidder hereby commits himself to provide staff generally in accordance with this Schedule as a minimum, but detailed departures there from are to be expected in line with actual conditions. This Schedule will be taken into due account during the assessment of tenders.

Designation	Name of: (i) Nominee (ii) Alternative	Summary of Qualification, Experience and Present Occupation

SCHEDULE IV**SUB-CONTRACTORS****NOMINATED BY THE CLIENT**

The Following Contractor has been nominated by the Client to carry out specialised installations. Notwithstanding such information the Bidder, if awarded the Contract, shall remain entirely and solely responsible for the satisfactory completion of the works performed by itself or the Sub-Contractors.

Element of Work to be Sub-Contracted	Approximate Value (Kshs.)	Name and Address of Subcontractor

SCHEDULE V**SUB-CONTRACTORS****NOMINATED BY CONTRACTOR**

The Bidder shall enter in this Schedule a list of the sections and appropriate value of the work for which he proposes to use Sub-Contractors, together with the names and addresses of the proposed Sub-Contractors. The Bidder shall also enter a statement of similar works previously executed by the proposed Sub-Contractors, including description and location of work, year completed and name and address of the Employer. Notwithstanding such information the Bidder, if awarded the Contract, shall remain entirely and solely responsible for the satisfactory completion of the works performed by itself or the Sub-Contractors.

Element of Work to be Sub-Contracted	Approximate Value	Name and Address of Sub-Contractor	Statement of Similar Works Previously Executed

A: ACCEPTANCE LETTER**Kerio Valley Development Authority**

KVDA Plaza, Oloo Street

P.O. Box 2660-30100, Eldoret – Kenya

Tel: +254 (053) 22063361-4

Fax: +254(053) 2063365

Email: info@kvda.go.ke

We offer to execute the *[name and identification number of Contract]* in accordance with the Conditions of Contract accompanying this Bid for the Contract Price of *[amount in numbers]*, *[amount in words]* *[name of currency]*.

The Contract shall be paid in Kenyan Shillings.

The advance payment required is: _____.

We accept the appointment of *[name proposed in Bidding Data]* as the Adjudicator.

[or]

We do not accept the appointment of *[name proposed in Bidding Data]* as the Adjudicator, and propose instead that *[name]* be appointed as Adjudicator, whose daily fees and biographical data are attached.

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Bid Security required by the bidding documents and specified in the Bidding Data.

Authorized Signature _____

Name and Title of Signatory _____

Name of Bidder _____

Address _____

B: ARTICLES OF AGREEMENT

This Agreement made this _____ day of _____ 20_____
between _____

of _____
_____ (Hereinafter called “the Employer”) of the one part AND
_____ of

_____ (Hereinafter called “the Contractor”) of the other part.

WHEREAS the Employer is desirous that _____
_____ (hereinafter called
“the Works”) located at _____
_____ be executed by the Contractor and has accepted a Tender by the
Contractor for the execution and completion of such works and remedying of any defects herein,

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contracts hereafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of the Agreement, Viz;
 - (a) The Letter of Acceptance;
 - (b) The said Tender;
 - (c) The Conditions of Contract (Parts I and II);
 - (d) The Specifications;
 - (e) The Drawings; and
 - (f) The Bill of Quantities;
3. In Considerations 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 provision of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and Completion of the Works and remedying of defects therein, the Sum of

_____ (KShs) _____,
(hereinafter referred to as “the Contract Sum”), or such other sum as shall become payable hereunder at the times and in the manner prescribed by the Contract.

¹**AS WITNESS** the hands of the said parties:

Signed by the said Employer: _____

In the presence of:

Name _____

Address _____

Signature _____

Signed by the said Contractor: _____

In the presence of:

Name _____

Address _____

Signature _____

¹ a) The Contract shall be under seal:

(i) When the Articles of Association of a Limited Company which is a party to the Contract so require.

(ii) When either party is a non-trading corporation such as a hospital or school board, or

b) If the Contract is to be executed under seal delete "As Witness the hands of" and insert "Signed and sealed by".

C: TENDER SECURITY FORM

Whereas [Name of the tenderer]

(Hereinafter called “the tenderer”) has submitted its tender dated..... [Date of submission]

Of tender] for the provision of
[Name and/or description of the services] (Hereinafter called “the Tenderer”).....

KNOW ALL PEOPLE by these presents that WE.....

Of.....having registered office at

[Name of procuring entity] (Hereinafter called “the Bank”) are bound unto.....

[Name of procuring entity](Hereinafter called “the procuring entity”) in the sum of
.....

For which payment well and truly to be made to the said Procuring entity, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this_____ day of 20_____.

THE CONDITIONS of this obligation are:

1. If the tenderer withdraws its Tender during the period of tender validity specified by the tenderer on the Tender Form; or
2. If the tenderer, having been notified of the acceptance of its Tender by the Procuring entity during the period of tender validity:
 - (a) fails or refuses to execute the Contract Form, if required; or
 - (b) fails or refuses to furnish the performance security, in accordance with the instructions to tenderers; we undertake to pay to the Procuring entity up to the above amount upon receipt of its first written demand, without the Procuring entity having to substantiate its demand, provided that in its demand the Procuring entity will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the above date.

[Signature of the bank]

(Amend accordingly if provided by Insurance Company)

D: CERTIFICATE OF TENDERER'S SITE VISIT

1. This is to certify that I _____
(Name of Tenderer or his Representative) of the Firm of _____
_____ (name of Firm Tendering) in the company of _____
_____ (Project Engineer/KVDA Representative conducting the visit)
visited the Site in connection with Tender for the

Installation of 250 kw solar grid and drilling of three boreholes in Napuu: TENDER NO:

2. Having previously studied the Tender Documents, I carefully examined the Site.
3. I have made myself familiar with the local conditions and access roads likely to influence the works and the cost thereof.
4. I further certify that I am satisfied with the description of the work and the explanations given by the said Representative and that I understand perfectly the work to be done as specified and implied in the execution of the Contract.

Signed: _____

Date: _____

Name: _____

(Tenderer or his Representative)

Signed: _____

Date: _____

Name: _____

(Representative - Kerio Valley Development Authority)

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

_____ (Address of Employer)

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

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

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

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

This guarantee shall be valid until 28 days after the date of issue of the Certificate of Completion.

Date _____

F: DECLARATION

We underscore the importance of a free, fair and competitive procurement process that precludes fraudulent use. In this respect we have neither offered nor granted, directly or indirectly, any inadmissible advantages to any public servants or other persons in connection with our Tender, nor will we offer or grant any such incentives or conditions in the present procurement process or, in the event that we are awarded the contract, in the subsequent execution of the contract.

We also underscore the importance of adhering to minimum social standards (“Core Labour Standards”) in the implementation of the project. We undertake to comply with the Core Labour Standards ratified by the Republic of Kenya.

We will inform our staff about their respective obligations and about their obligations to fulfill this declaration of understanding and to obey the laws of the Republic of Kenya.

Place, Date		Tenderer
THE CONDITIONS HEREIN BEFORE REFERRED TO		
Definitions	1.1	<ul style="list-style-type: none"> (i) The Employer is the party stipulated in the Appendix to form of Bid (ii) The Engineer is the party stipulated in the Appendix to form of Bid, or any other person appointed by the Employer, and notified to the Contractor, to act in replacement of the Engineer.
Engineers duty and Authority	2.1	<p>The Engineer shall obtain the specific approval of the Employer before taking any of the following actions as specified in part 1:</p> <ul style="list-style-type: none"> (a) Consenting to subletting of any part of the works (b) Certification of any additional cost determined under Clause 12; (c) Determining an extension of time under clause 44; (d) Issuing a variation under Clause 51, except; <ul style="list-style-type: none"> (i) in an emergency situation as reasonably determined by the Engineer; or (ii) if such variations would increase the Contract price by lest than the amount stated in the Appendix to Bid; or (e) Fixing rates or prices under clause under clause 52. <p>‘notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an Emergency occurs affecting the safety of life or the works or of the adjoining property, he may,</p>

without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such works or to do all such things as my, in the opinion of the of the Engineer, be necessary to abet or reduce the risk. The Contractor shall forthwith comply, despite the absence of the approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine the addition to the Contract Sum, in respect of such instruction, in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy of the Employer.

Language and Law	5.1	(a) The language is stipulated in the Appendix to Form of Bid (b) The Law is the Law in the Country stipulated in the Appendix to Form of Bid.
Priority of Contract Documents	5.2	(1) The Contract Agreement (Completed Form of Contract Agreement) (2) The Letter of Acceptance (3) The Bid and Appendix to form of Bid (4) The Conditions of Contract (5) The Technical Specifications (6) The Drawings (7) The priced Bill of Quantities; and (8) Other documents, as listed in the Appendix to Bid.
Contractor's Obligations	8.1	The Contractor will execute and complete the works shown upon the drawings and set out on the accompanying bill of quantities to the reasonable satisfaction of the Employer's Representative. The Contract sum shall be deemed to have been calculated to include all duties and taxes on materials, labour and plant to be used in the works.
Errors in Design	8.5	"The Contractor shall promptly notify the Employer and the Engineer of any error, omission, fault and any other defects in the design or of specification for the works which are discovered when reviewing the Contract Documents or in the process of executing the Works."
Performance Security	10.1	"The Contractor shall provide, at his own expense, Security for his proper performance of the Contract to the Employer within 14 days after the receipt of the Letter of Acceptance. The Performance Security shall be an unconditional bank guarantee in the form provided in Section E of the Tender Documents. The amount of the bank guarantee shall be 10 (ten) percent of the Contract Sum. The Contractor shall notify the Engineer when providing the Performance Security to the Employer. "Without limitation to the provisions of the preceding paragraph, whenever the Engineer determines an addition to the Contract Price as a result of a change in cost and/or legislation or as a result of a variation of the portion of the Contract Sum payable, the Contractor, at the Engineer's written request, shall promptly increase the value of the Performance

		Security by an equal percentage. The Performance Security of a joint venture shall be in the name of the joint venture. ”
Validity of the Performance Security	10.2	<p>The Performance Security shall be valid until a date 28 days from the date of issue of the Taking-Over Certificate. The security shall be returned to the Contractor within 14 days of expiration.</p> <p>Notwithstanding the above, the Performance Security shall not be released until such time as all claims filed against the Contractor resulting from the performance of the Contract, have been settled by the Contractor.</p>
Cost of performance security	10.4	The cost of complying with the requirements of this Clause shall be borne by the Contractor
Program of works	14.1	<p>The Contractor shall submit to the Engineer not later than 7 days from the date of award of the Contract a general description of his proposed arrangements and methods for the execution of the Works. During the execution of the Works, the Contractor shall submit to the Engineer full and detailed particulars of any proposed amendments to the arrangements and methods submitted in accordance with the foregoing.</p> <p>The various operations pertaining to the works shall be carried out in such a progressive sequence as will achieve a continuous and consecutive output of fully completed works within the time limits specified in the Contract.</p>
Revised Programme	14.2	If at any time it should appear to the Engineer that the actual progress of Works does not conform to or could be foreseen to be delayed from the current Contractual Construction Programme to which consent has been given under Sub-clause 14.1, the Contractor shall submit, at the request of the Engineer or immediately after identification of such possibility, a revised programme showing the modifications to such programme to ensure recovery of lost time and completion of the Works within the stipulated Time of Completion.
Contractor's Superintendence	15.1	<p>The Contractor's Superintendence shall not leave the site for a period of more than 24 hours without the Approval of the Engineer; such approval shall not be unnecessarily withheld.</p> <p>The Contractor's Representative shall be competent in speaking, reading and writing English.</p>
Safety, security and protection of the Environment	19.1	Notwithstanding the Contractor's obligation under Sub-Clause-19.1 paragraph (a), (b) and (c) of the Conditions of Contract, the Contractor shall observe the following measures with a view to reducing or elimination of adverse environmental effects by the site works:

		<ul style="list-style-type: none"> (i) All quarries and borrow pits shall be suitably back 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 are not limited to grassing and planting of trees (iii) 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.
Damage to Persons and Property	22.1	<p>(a) Injury to Persons: The Contractor shall be liable for and shall indemnify the Employer against any liability, loss, claims or proceedings whatsoever whether arising in Common Law or under any Local Legislative Acts in respect of personal injuries to persons whether in his employment or not, arising out of or in the course of the execution of the Contract and against all costs and charges incurred in relation to the investigation or settling of such claims.</p> <p>(b) Damage to Property: The Contractor shall be liable for and shall indemnify the Employer in respect of any liability, loss claim or proceedings and for any injury or damage whatsoever arising out of or in the course of the execution of the Contract Works to any property, real or personal, due to any negligence, or omission or default of himself, his agents or his servants or any Sub-Contractor or to any circumstances within his control.</p> <p>(c) The Contractor shall secure the due performance of these indemnities by forthwith entering into proper and sufficient policies of insurance. The cost of insurance shall be borne by The Contractor. The insurance policy shall be drawn in the combined name of the Contractor and the Employer.</p>
Notices and Fees	26.1	The Contractor shall comply with all rules, regulations and by-laws of any Local Authority, Water or Lighting Companies and shall conform to the provisions of any acts of Parliament of the Government of Kenya, relating to the works and he must give all notices required by the said Acts, rules, regulations and by-laws and pay all fees legally demandable.
Engagement of staff and Labour	34.1	The Contractor, in engaging, labour for execution of works, shall give preference to the local community (From Kibera). The ratio of local labour to the total workforce shall not, at anytime, be less than 80% for unskilled labour, 60% for semi skilled labour and 20% for skilled labour.
Rates of Wages and Conditions of Labour	34.2	The Contractor shall pay rates of wages and observe hours and conditions of labour not less favourable than those established in Kenya. In the absence of any rates of wages or conditions of labour so established, the Contractor shall pay rates of wages and observe conditions of labour which are not less favourable than the general level of wages and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

Sanitation on Site	34.6	<p>The Contractor shall provide and maintain adequate toilet facilities at convenient locations on the Site for use by his staff and labour in order to ensure a high standard of cleanliness and hygienic conditions on the Site.</p> <p>These facilities shall be cleaned and maintained daily to the satisfaction of the Engineer. The Contractor shall instruct his staff and labour to use only these facilities.</p> <p>Disposal of sewage shall be as approved by Government health authorities.</p>
Epidemics	34.7	In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or local medical or sanitary authorities, for dealing with and overcoming the same.
Observance by Subcontractors	34.13	The Contractor shall be responsible for the observance by his Subcontractors of the foregoing provisions of this Clause, which shall apply to all persons employed by his Subcontractors, for the purposes of or in connection with the Contract.
Commencement of the Works	41.1	The Contractor shall commence the Works on or about the date indicated in the Appendix to Form of Bid as the date on which possession of the site is given to the Contractor. For purposes of this Contract that date shall be taken to be the commencement date.
Time for Completion	43.1	The Contractor shall proceed with the Works, and complete the same within the time for completion stated in the Appendix and the Letter of Award, subject nevertheless to provisions for extension of time hereinafter contained.
Extension of Time	44.1	If in the opinion of the Employer's Representative the works have been delayed through any cause not under the control of the Contractor, the Employer's Representative shall make a fair and reasonable extension of time for completion of the works.
Report of Delays	47.1	The Contractor shall promptly report in writing to the Engineer, the occurrence of any event or condition that might delay or prevent completion of the Works in accordance with the approved schedule and to indicate steps being taken to minimise the effects or meet the situation.
Defects	49.2	The Contractor shall make good at his own expense any defects, shrinkage, and other faults, which may appear within twelve (12) months from the completion of the works arising in the opinion of the Employer's Representative from poor quality of materials or bad workmanship.
Variations	51.1	The Employer and Contractor agree that no variation required by the Employer's Representative shall vitiate the Contract but that all variations required or authorized by the Employer's Representative shall be measured and valued by the Employer's Representative in consultation with the Contractor. The amount to be allowed on either side in respect of the Variations so ascertained shall be added to or deducted from the

Contract sum as the case may be. The Engineers Authority to make Variations to the Quantity of Works or components of works is up to the percentage as indicated in the Appendix to form Tender.

The term “variation” as used in these Conditions means the alteration or modification of the design, quality or quantity of the Works as shown upon the Contract Drawings and described by or referred to in the Bill of Quantities, and includes the addition, omission or substitution of any work, the alteration of the kind or standard of any of the materials or goods to be used in the Works and the removal from the site of any work materials or goods executed or brought thereon by the Contractor for the purposes of the Works other than work, materials or goods which are not in accordance with the Contract.

No change in the unit rates or prices quoted shall be considered for items included in the schedule of day works, schedule basic items of, or Provisional Sums and items, or for any item in the Bill of Quantities.

Fluctuations	52.3	Allowance is deemed to have been made in the Contract Rates for anticipated fluctuations of price of materials or labour or other elements required for the execution of the Works. The Contract Sum is deemed to have been calculated to include all basic prices of materials inclusive of all duties on materials, the rates of wages and other emoluments and expenses. However, compensation for fluctuation of prices shall be made in the event of changes in Government legislation leading to changes in taxes, levies and the like.
Omissions of Quantities	55.1	Items of Works described in the Bill 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.
Breakdown of lump sum items	57.2	The Contractor shall submit, within 14 days after the receipt of letter of Acceptance, a breakdown of each provisional sum item contained in the Bill of Quantities. The breakdown shall identify the the component unit of the work that makes up the provisional sum item and identify the quantities and rates of the sum price corresponding to each component of the work. The quantities and rates shall be such that the products when totalled shall equal the provisional sum price. This breakdown shall be used to for making progress payment and reporting progress.
Monthly Statement	60.1	<p>The Contractor shall submit a Financial statement to the Engineer at the end of each month, in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable;</p> <ul style="list-style-type: none"> • The value of the Permanent Work executed up to the end of previous month • Such an amount (not exceeding 75 percent of the value) as the Engineer may consider proper on account of materials for permanent work delivered by the Contractor to the site

- 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
- Any other sum to which the Contractor may be entitled under the Contract

If the Engineer disagrees with or cannot verify any part of the statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes and corrections in the statement as may be directed by the Engineer. In cases where there is difference in opinion as to the value of any item, the Engineer's view shall prevail.

Monthly Payment

60.2 Upon written application by the Contractor, at intervals of twenty-eight (28) days the Employer's Representative shall issue within a reasonable time a Interim Payment certificate stating the amount due to the Contractor from the Employer, and the Contractor shall, on presenting any such certificate to the Employer, be entitled to payment therefore within fourteen (14) days from presentation. Interim valuations shall be made whenever the Engineer considers necessary for the purpose of ascertaining the amount to be stated as due in an Interim Certificate.

The Employer will pay to the Contractor the amounts certified less 10% retention. Upon practical completion of the works the Employer Shall pay the Contractor all the monies due less only 5% retention, which shall be retained as a retention fund and held until the Contractor has made good defects in accordance with Clause 10 herein or in any case no sooner than the Defects Liability Period

Payment of retention money

60.3 Upon the issue of the Completion Certificate with respect to the whole of the Works, one half of the Retention Money, or upon the issue of a Taking-Over Certificate with respect to a Section or part of the Permanent Works only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the Permanent Works, shall be certified by the Engineer for payment to the Contractor. The Contractor may substitute the remaining retention money with an on-demand bank guarantee in a form, and from a source, acceptable to the Employer.

Upon the expiration of the Defects Liability Period for the Works, the other half of the Retention Money shall be certified by the Engineer for payment to the Contractor (or return of the remaining security, which replaced the Retention Money). Provided that, in the event of different Defects Liability Periods being applicable to different Sections or parts of the Permanent Works pursuant to Clause 48, the expression "expiration of the Defects Liability Period" shall, for the purposes of this sub-clause, be deemed to mean the expiration of the latest of such periods.

Provided also that if at such time, there shall remain to be executed by the Contractor any work instructed, pursuant to Clauses 49 and 50, in respect of the Works, the Engineer shall be entitled to withhold certification until

completion of such work of so much of the balance of the Retention Money as shall, in the opinion of the Engineer, represent the cost of the work remaining to be executed.

Correction of certificates	60.4	The Engineer may by any Interim payment certificate make any correction or modification in any previous certificate which has been issued by him, and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such works in any interim payment certificate.
Final Statement	60.6	<p>Not later than 15 days after the issue of the Defects Liability, 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;</p> <p>(a) The final value of all work done in accordance with the Contract;</p> <p>(b) Any further sums which the Contractor considers to be due to him.</p> <p>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 reasonably require and shall make such changes in the draft as may be required.</p>
Final Certificate	60.8	<p>Upon acceptance of the Final Statement, 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:</p> <p>(a) The final value of all work done in accordance with the Contract;</p> <p>(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.</p>
Termination of Contract by Either Party	63.4	<p>Either party may give a 14 days written notice to terminate the Contract to the other party if:</p> <p>(a) for whatever reason, it has become impossible for either party to performance its part of the Contract or;</p> <p>(b) the other party has breached the Contract in a manner that entitles the aggrieved party to treat the Contract as repudiated by the party in breach or;</p> <p>(c) there is war or hostile or kindred activities in the country that either (1) make it impossible for either party or both to perform Contractual obligations or (2) would subject either party to loss or expense or;</p> <p>(d) Work is suspended for a prolonged period (exceeding 6 months) for reasons beyond the control of either party.</p> <p>At the expiry of the 28 days' notice, the execution of the Contract shall be terminated and either party shall be entitled to payment for services</p>

rendered or compensation for damages due to breach of Contract, provided the loss or expense can be attributed to the breach of Contract by the party in breach.

Settlement of Disputes

67.1 The Employer's Representative shall, in general, be responsible for administering and interpreting the Contract. In discharging that duty, the Employer's Representative shall be impartial, fair and reasonable.

If however, a dispute arises during or after the execution of the Works in connection with any opinion, instruction, determination, certificate or valuation of the Employer's Representative or any other matter in relation with the execution of the Works, the aggrieved party shall in the first place request the Employer's Representative to review the matter and make a decision.

If the Employer's Representative fails to review and make a decision or if either party is not satisfied with the decision of the Employer's Representative, the aggrieved party may seek the agreement of the other party to refer the matter in dispute to arbitration.

Consequently, the Employer and Contractor hereby agree that if any dispute or difference arises in connection to any matter concerning the Works in the manner explained above, then either party shall forthwith give to the other written notice of such dispute or difference and the same shall be referred to an Arbitrator appointed by the Chairman of the Chartered Institute of Arbitrators (Kenya Branch) whose award shall be final and binding on all parties concerned.

The conduct of the arbitration shall be ad hoc though the arbitrator may elect to apply rules of any arbitral institution. The place of the arbitration shall be in Nairobi, Kenya.

The parties shall however, continue to pursue an amicable solution and may by agreement between them, seek the opinion or assistance of a mediator or disputes review expert as they deem necessary.

If an amicable solution is reached after the appointment of the Arbitrator, then the Arbitrator shall record the agreement reached by the parties, without having to give his reasons for the agreement.

Arbitration

67.3 Any dispute in respect of which either the decision of the Engineer has not become final and binding or amicable solution is not achieved shall be finally settled by an arbitrator to be agreed upon between the parties or failing agreement to be nominated on the application of either party by the appointee designated in the form of Tender for the purpose and any such referee shall be deemed to be a submission to arbitration within the meaning of the Arbitration Laws of the Republic of Kenya.

Taxes and Duties

73.1 The Contractor shall pay any and all duties, taxes and levies as required by the laws and regulations of the Government of Kenya, or any other charges during the period of the Contract. The Contractor shall acquaint himself with the relevant laws and regulations in this matter and include

costs in the rates and prices of various items in his Tender unless the exemption is defined clearly herein.

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1 GENERAL

1.1 General introduction

This contract is for the construction of the proposed 250kw solar grid for Napuu irrigation project and drilling three boreholes for water supply to the farm.

1.2 Location of the works

The proposed project is situated in Turkana County, 4km from Lodwar Town at Napuu . The specific farm is in Nawoitorong sub – location. The project area is accessible from the Kitale – Lodwar .

1.3 Extent of contract

The works to be executed under this Contract comprise:

- Supply and installation of 250 kw comprising of 325 w solar modules complete with 3 phase inverter /controller and smart monitoring system.
- Construction Module mounting Structure
- Supply and installation of hardware and accessories as detailed in BQ
- Drilling and equipping three boreholes
- Any other works as specified in the BQ

1.4 Provision of equipments, material and labour

The contractor shall provide all equipments, transport consumable materials and labour necessary for the satisfactory completion of the works in compliance with the specifications herein. The Engineer reserves the right to inspect plant and materials prior to contractor selection, and may reject plant or material that in his/her opinion is substandard or inappropriate. The contractor shall provide full descriptions of all plants to be deployed for these works. The contractor shall also present method statements describing in detail the proposed approach to work.

The contractor shall provide summary detail of the experience of key personnel to be deployed for these works.

1.5 Occupation of site

The employer will provide land on which the works shall be constructed. The contractor shall be given possession of such parts of the site that he requires for activities related to construction works including storage of raw materials, equipments and setting up of camp during the period of contract provided his operation does not interfere with the daily activities of the local community.

The Contractor shall not enter upon or occupy with men, tools, equipment and materials any land other than the land or right of way provided by the employer

1.6 Diligent performance

The contractor shall at all times perform the Works diligently and in accordance with sound professional practice. He/she shall not proceed from one stage of works to another without the express permission of the Engineer.

Decisions regarding temporary halt, discontinuing of any element or part of any element of these works, or abandonment of these works, shall be discussed jointly

between the contractor and the Engineer before any further actions are authorised by the Engineer. The Engineer's decision shall be final.

The Engineer will require a written submission justifying any steps taken by the Contractor taken without the Engineer's approval. An unsatisfactory explanation shall lead to non-payment for works undertaken without prior agreement, and may be included for consideration as liquidated Damages.

1.7 Units of Measurement

The Contract shall be conducted in the Systems International d'Units (SI) system of units in accordance with the provisions of ISO 31 and ISO 1000.

1.8 British Standards BS

"B.S." followed by the reference number and date of issue where appropriate, shall refer to the latest British standard for the quality and/or workmanship of the items described. Material required to conform to a particular B.S may be obtained from any country provided it complies with the minimum requirements of the relevant B.S.

1.9 Drawings

The project drawings shall comprise

- (a) The drawings listed in *Section I* of the tender documents
- (b) Such other drawings and/or sketches as are issued from time to time by the Engineer to deal with design modifications in response to on-site conditions.

1.10 Record drawing

As the work proceeds the Contractor shall mark up 'As Built' details on a set of prints of the contract Drawings modified to portray the works as actually constructed and issue to the Engineer's representatives for approval within 7 days of completion of the works covered by each drawing.

1.11 Level datum

It shall be the responsibility of the Contractor before commencing work to obtain from the Engineer in writing the values and locations of the benchmarks to be used in these works. All temporary benchmarks shall be referred thereto. The Contractor shall construct such temporary benchmarks as the Engineer may direct and shall agree the levels thereof with the Engineer. The establishment of such temporary benchmarks shall be deemed part of the Contractor's responsibility in setting out the works.

1.12 Setting out

The Contractor shall appoint and employ the necessary qualified and experienced staff to set out the works accurately.

The Contractor shall establish and locate all lines and levels and be responsible for the correct location of all works.

Where directed by the Engineer, the Contractor shall take such levels and dimensions as may be required for the purposes of measurement before disturbance of the ground. These shall be agreed between the Contractor and the Engineer in writing before any ground surface is disturbed or covered up. Any work commenced without taking the

said levels and dimensions shall be measured on the Engineer's recording of their values before disturbance. The Engineer's decision on this matter shall be final.

1.13 Construction and checking of work

The Contractor shall be solely responsible for and shall provide all labour, tools, lifting tackle, and other equipment required for the construction and checking of the works.

No operative shall be allowed to execute any type of work which is normally carried out by a skilled tradesman, unless the operative is thoroughly experienced and proficient in the trade concerned. Supervisors and operatives may be required to demonstrate their proficiency or produce certificates of competence to the satisfaction of the Engineer.

As each part of the work is carried out, it shall be subject to the approval of the Engineer.

1.14 Supervision and labour

The Contractor will be required to maintain a competent supervising Foreman on Site throughout the construction period until completion of the works, and thereafter as may be required during the Defects Liability Period. The Engineer shall give prior approval to the appointment of this Foreman and shall have the authority to withdraw this approval at any time in accordance with the Conditions of Contract.

All staff and labour employed on the works shall be employed in accordance with the labour and employment laws and regulations of the Republic of Kenya.

1.15 Priority to Local Labour

The Contractor shall give priority to the local community when hiring unskilled and skilled labour. The recommended proportion of local labour to the total workforces will be as follows;

- a) Unskilled labour 70%
- b) Semi skilled labour 20%
- c) Skilled labour 10%

1.16 Contractor's site offices, staff, workshops, storage and working areas, communication, etc

The contractor shall be allowed use of the existing fenced site compound to establish the site office, workshops and for storage. Responsibility for the compounds security will however remain with the contractor until handover. The contractor shall advise the Engineer at which of his offices any notices may be served in accordance with the conditions of contract.

1.16.1 LANGUAGE OF CORRESPONDENCE AND RECORDS

All communication from contractor to the Engineer and the Engineer's Representative shall be in English language.

All site books, time sheets, records, notes drawings, documents, specifications etc. shall be in English language

1.16.2 CONTRACTOR'S DUTY STAFF & OFFICES

At least one responsible representative of the contractor shall be immediately available at all times and he shall be on site during normal working hours.

To such representative shall be delegated full authority to confer with Engineer's Representatives or his deputy and to take all steps and to issue all those instructions which may be required in an emergency to ensure the safety of all personnel of the works and of all the Employer's and other property on the site and in the immediate vicinity thereof. The Engineer's Representative may from time to time at his discretion after taking into consideration all the prevailing conditions allow some relaxation of this clause but such relaxation shall be made only with his written permission and subject to any special conditions which he may then require.

The contractor shall maintain at the site, offices for the use of representative and to which written instructions by the Engineer's Representative can be delivered. Any instructions delivered to such offices shall be deemed to have been delivered to the contractor.

1.16.3 ENGINEERS OFFICE ACCOMMODATION, TRANSPORT

The contractor shall make available to the engineer a suitable office with a computer, printer, scanner and officer furniture. The office shall be of permanent construction (walling of bricks of fired blocks with appropriate finishes) and shall comprise of 3 No. rooms each with a minimum floor area of 30m².

In addition the he shall arrange appropriate accommodation place for the engineer and provide a vehicle at site for the exclusive use of the engineer's office. The vehicle shall be a 4 wheel drive, engine capacity of at least 2400cc and a double cabin pickup. All the items outlined in this clause shall revert to the client after the lapse of the contract.

1.16.4 DEMOLITION OF CONTRACTOR'S TEMPORARY STRUCTURES

The Engineer may at any time before the end of the period of maintenance give the contractor notice in writing to demolish and remove those buildings and works which are no longer required, whereupon the title to such buildings and works and materials connected therewith shall revert to the contractor. After the demolition and removal of building and works as required by the Engineer, the contractor shall level, clear, restore and make good the sites and surrounding ground and fill in and compact all latrines, drains, pits and similar works leaving the satisfaction of the Engineer's Representative.

1.16.5 PUBLIC RELATIONS

The contractor shall designate within his site organization competent staff whose responsibility shall be to ensure good relations.

The location of all yards, stores, workshops, offices, etc. shall be agreed beforehand with the Engineer's Representatives and shall be such as to avoid obstruction and nuisance to public and/or the client.

The contractor shall provide and maintain at or near the site suitable and sufficient shelters, mess rooms, washrooms, latrines etc. as are necessary and customary, to the satisfaction of the Engineer and in accordance with the law and regulations of the relevant authorities.

1.17 Definition and use of the Site

1.17.1 DEFINITION OF THE SITE

The Site shall include all those areas of land which, being public or private:

- Are being provided by the Employer for the construction of the permanent works.
- Are being provided by the Employer for temporary works, including camps, offices and stores.
- Are acquired, leased, or operated by the Contractor as borrow pits or spoil tips for the permanent works, including all access roads.

1.17.2 USE OF THE SITE

- Access to the Site is gained from public and private roads. The Contractor shall be responsible for maintaining all existing site roads affected by his work while he is on Site. He shall also be responsible for repairing and making good any damage to these roads. If the Contractor, his subcontractors or suppliers, causes the damage, then the repairs will be at his own cost.
- The Contractor shall be responsible for the construction, maintenance and repair of any temporary works access roads.
- The lands and other places outside the Site, which are the property of or under the control of the Employer, shall not be used except with the approval of the Engineer.
- The Contractor shall promptly remove any vehicle, wagon, barge or vessel or any other obstruction under his control that the Engineer may require to be moved for any purpose. The Contractor shall remove such obstruction promptly upon receiving such instruction and at his own cost, unless the Engineer shall decide otherwise.
- The Contractor shall maintain access for the inspection, operation and maintenance of any of the Employer's assets within the Site or elsewhere.
- The Contractor shall not use any portion of the Site for any purpose not connected with the works unless the written permission of the Engineer has been obtained.
- Except with the written permission of the Engineer, to be given when necessary for the execution of the works, the Contractor's employees will not be permitted to enter any of the Employer's buildings or lands or sites under the control of other contractors or the Engineer. The Contractor shall warn his employees that any person found within such buildings or sites without authority is liable to be removed from the works in accordance with the Conditions of Contract

1.17.3 POSSESSION OF THE SITE

The Contractor shall restrict his activities to those areas of the Site adjacent to the works being executed and shall avoid any encroachment upon lands outside the areas for which possession has been given. Any trespass or damage or any claim arising from such encroachment shall be the Contractor's sole responsibility and he shall hold the Employer indemnified against all claims arising from such trespass or damage.

1.17.4 INTERFERENCE WITH EXISTING WORKS

The Contractor shall not interfere in any way, with any existing works, be it the property of the Employer or of a third party, whether such works has been shown to the Contractor by the Engineer, except where such interference is specifically described as part of the works, either in the Contract or in instructions from the Engineer to take over such works.

1.18 Materials for the works

- All materials shall comply with the appropriate Standard Specifications unless otherwise required hereinafter.

- The Contractor, shall, before placing any order of materials, manufactured articles or machinery for incorporation in the works, submit for the approval of the Engineer the names of the suppliers from whom he proposes to obtain such materials, manufactured articles or machinery, together with a list of the same, giving the origin, quality, weight, strength, description and other relevant details. No materials, manufactured articles or machinery shall be ordered or obtained from any suppliers not approved in writing by the Engineer.
- All materials shall be delivered to the Site a sufficient period of time before they are required for use in the works, to enable the Engineer to take such samples as he may wish for testing and approval.
- Notwithstanding the fact that approval has been given to the source of supply, the Engineer may forbid the use of any materials if, upon delivery, they are found to be defective, or he considers them unsuitable for incorporation in the works. Such rejected materials shall be removed from the site forthwith.
- The Contractor may propose alternative materials of equivalent quality to those specified, and subject to the Engineer's approval, such materials may be used in the works.
- The Contractor shall have no claim against the Employer in respect of any financial loss which he may suffer as a result of the rejection of any such materials, and he shall also bear the cost of removing them from the Site.
- The Engineer shall have the right to inspect materials and plant for the permanent works during the course of manufacture. The Contractor shall arrange for the right of access to manufacturing premises for the Engineer and his staff during normal working hours. The Contractor shall give the Engineer sufficient notice to allow him to observe the testing of any materials for the works at the place of manufacture. The Engineer shall also be given the opportunity to inspect any material or plant in their completed state before packing for transport to the site.
- If requested by the Engineer, the Contractor shall provide the Engineer with copies of orders for the supply of goods or materials required for the works.

1.18.1 REJECTED MATERIALS AND DEFECTIVE WORK

Materials or work which, in the opinion of the Engineer, do not comply with the Specification, shall be classified as rejected materials or defective work, and shall be cut out and removed from the works and replaced as directed by the Engineer.

1.18.2 ALTERNATIVES

The Contractor's main Bid shall comply fully with the Specification.

The Contractor is however at liberty to include alternative materials, items of Plant or methods of construction for which he claims advantages to those indicated in the Specification and Drawings, provided the modes of operation and methods of construction are fully described and are at least equal to those shown on the Drawings or Implied in the Specification.

The Contractor shall submit manufacturer's detailed descriptions of alternatives and he shall draw attention to any aspect of each component that does not fully comply with the requirements of this Specification. These detailed descriptions, including any departure from the requirements of the Specification may, after approval by the Engineer, be included among the Contract Documents and each item shall be in accordance with the description of it. Approval of a manufacturer's description shall not include approval of any departure from the requirements of the Specification unless the Engineer in writing specifically approves the departure.

Where materials, Plant or methods of construction differ from those specified, the Contractor shall submit with his Bid drawings showing any amendments of system design necessary to suit the alternative. The Engineer will either approve these drawings or issue others if he approves the components concerned.

The Engineer however, may not necessarily accept any alternative put forward.

1.19 Existing works and services

The Contractor shall acquaint himself with the positions of all existing works and services including water mains, sewers, storm water drains, and cables for electricity and lighting poles before any excavations are commenced.

The Contractor will be held responsible for any damage, however caused, in the course of the execution of the works, to such existing works and services. Any damage caused shall be made good at the Contractor's expense.

Such existing works and services, where exposed by the execution of the works, shall be properly shored, hung-up and supported to the satisfaction of the Engineer and of the authority concerned. The Contractor shall exercise special care when refilling trenches or other excavations around such existing services. Stop cock boxes, water meters and the like shall not be covered up.

Poles supporting cables and the like adjacent to the works shall be kept securely in place until the works are completed and shall then be made as safe and permanent as before.

Notwithstanding the foregoing requirements and without lessening the Contractor's responsibility, the Contractor shall inform the Engineer immediately any existing works have been exposed and shall comply with any requirements of the authority concerned.

Only when and as directed by the Engineer shall the position of existing works or services be changed by the Contractor to meet the requirements of the proposed work.

The Contractor shall make adequate provision so that when carrying out his work, no interference, damage or pollution is caused to roads and footpaths, or to any mains, drains, sewers, and the like or other parts of the works.

The Contractor shall not store any plant or materials or spoil heaps over existing water mains, or in such positions that interference with access to the mains, control valves and the like is created. Approval by the Engineer to the means of protection employed shall not relieve the Contractor of any responsibility in respect of damage occasioned by his operations.

The laying of pipework, ducts, drains and the like shall be arranged so as to cause as little disruption, to traffic or public movement as possible with the smooth operation of existing works.

When breaking out and making good existing structures, the Contractor shall disturb the existing structures as little as possible. All structures shall be made good with materials similar to those used in the existing works, or such materials which are considered by the Engineer to be of similar appearance and suitable in all other respects.

1.19.1 OVERHEAD POWER LINES

Where work is being carried out in the vicinity of overhead power lines, the Contractor shall be responsible for ensuring that all persons working in such areas are aware of the safe working distances in the vicinity of high voltage overhead power lines especially when cranes or other large masses of steel are in the vicinity of the power lines.

The Contractor's attention is drawn to BS 162, which gives safe clearance for various voltages.

The Contractor shall take all necessary precautions to ensure the safety of his employees and all other persons where work is being carried out near overhead power lines.

1.19.2 EXCAVATION ACROSS ROADS AND TRACKS

Before excavating across any public or private road or track, the Contractor shall give the Engineer seven days notice of his intention to excavate and shall include, in writing, the precautions he proposes to take for the continuance of passage and safety of traffic, and details of the warning signs and lights to be provided and operated. The excavation shall not commence until the written approval of the Engineer has been given.

1.19.3 LIAISON WITH POLICE AND OTHER OFFICIALS

The Contractor shall keep in close contact with the police and other officials in the areas concerned regarding their requirements for the control of workmen, movement of traffic, or other matters and shall provide all assistance and facilities which may be required by such officials in the execution of their duties.

1.19.4 PRESERVATION OF TREES

No tree shall be removed without prior written permission of the Engineer who will limit the removal of trees to the minimum necessary to accommodate the permanent works.

If trees are removed or damaged by the Contractor or his employees, without approval, then the Contractor shall replace such trees.

Replacement trees shall be not less than two years of age, obtained from a reputable nursery and of a species approved by the Engineer.

The Contractor shall plant, water and ensure that the replacement trees are properly established.

1.19.5 PROTECTION FROM WATER

The Contractor shall keep the whole of the works free from water and shall be deemed to have included for all pumping, shoring, temporary drains, sumps and other measures and provisions necessary for such purposes and for clearing away and making good to the satisfaction of the Engineer any damage caused thereby.

1.19.6 PROTECTION AGAINST FIRES

The Contractor is advised that, at all times, it is necessary to guard against fires starting within the Site or in the environs thereof, particularly as the result of the works or from the actions of his employees. The Contractor shall have available, at all times, a trained fire-fighting team provided with adequate fire-fighting equipment and shall deal with all fires on the Site howsoever caused.

1.20 Watching, fencing and lighting

The Contractor shall employ competent watchmen and guard the works both by day and by night.

Any excavations, material dumps, spoil dumps or other obstructions likely to cause injury to any person or thing shall be suitably fenced off and at night marked by red warning lights.

Fences shall consist of at least three 15 mm diameter hemp ropes or 4mm diameter wires, or more if required, stretched tightly between poles, and standards securely planted in solid ground, well clear of the excavation. The poles and standards shall not be more than 15 metres apart, and where circumstances require, they shall be placed closer. Ropes or wires shall be stretched tight approximately 0.4 m, 0.8 m and 1.2 m above the ground. The Engineer may accept banks of spoil instead of fencing, if of suitable height and form.

Fences and spoil banks shall be clearly marked at the ends, all corners, and along the length at intervals of not more than fifteen metres by means of white lime-washed boards, discs, stones or oil drums during the daytime and by red lamps burning at night. Markers shall be freshly lime-washed at regular intervals to ensure that they are white and clean.

If a road is closed, or partly closed to traffic, temporary traffic signs and barricades shall be erected by the Contractor to the satisfaction of the Engineer and the police, or other relevant authority, to give proper warning to traffic and the public. Lettering on road signs shall be black on a yellow background and shall incorporate reflective material. The signs shall be adequately illuminated at night.

1.21 Water and power for use on the works

The Contractor shall be solely responsible for the location, procurement and maintenance of a water supply adequate in quality and quantity to meet his obligations under the Contract.

The Contractor shall be solely responsible for the location and continuity of the supply of water for use on the works. Supplies may be derived from boreholes, rivers and streams, but shall in all cases be to the Engineer's approval. The abstraction of water from any sources shall not interfere with any permanent water supply. The Contractor shall be solely responsible for the transporting of water from its source to the point at which it is required for construction purposes, and in such quantities and quality as to enable the works to proceed without hindrance due to the shortage of adequate water supplies.

The Contractor shall take care to avoid unnecessary use of water and to prevent any water running to waste.

The Contractor shall make his own arrangements for power supplies and shall be solely responsible for the location, procurement and maintenance of a power supply, adequate to meet his obligations under the Contract.

1.22 Telephone and communications

The Contractor shall obtain suitable means of communications during the course of the Contract. The use of radio communications may be permitted but the Contractor shall be responsible for obtaining all the necessary permits and licences.

1.23 Sanitation

The Contractor shall provide adequate sanitation and refuse collection and disposal facilities complying with state laws and local by-laws for all houses offices workshops, and the like, erected on the site, all to the satisfaction of the Engineer.

The toilet facilities provided at the site by the Contractor shall be made available, free of charge, to the employees of the Contractor and any of his subcontractors.

The Contractor shall warn his employees and subcontractors that any employee found fouling the site shall be removed from the site immediately in accordance with the Conditions of Contract.

1.24 First aid and medical services

The Contractor shall provide and maintain all equipment necessary to render first aid in case of accidents, snakebites or other emergencies. This equipment shall be kept in readiness at the sites of the works, at camps and wherever the Contractor's staff may regularly live and work. The Contractor shall ensure that there are persons available at all such places with knowledge of simple first aid procedures and able to administer snakebite treatment.

1.25 Health checks

The Employer may arrange for the taking of swabs, urine and stool samples from all persons who will be working in and around the works, to ensure that all such persons are free from contagious diseases.

The Employer will pay all medical costs incurred in the taking and analyses of these samples. The Contractor shall make his employees available during normal working hours for undergoing the above mentioned health checks. Reasonable notice will be given.

The Contractor shall keep records in respect of all his employees, showing the dates on which health checks have been and will be carried out.

Every employee whom the Contractor intends to engage on the works shall, in addition to being available for the above tests, successfully undertake a test for typhoid and paratyphoid at an approved hospital or medical centre. The medical certificate for each employee shall be submitted to the Engineer before the employee shall be allowed on Site.

1.26 Inspections by the Engineer during the Defects Liability Period

The Engineer will give the Contractor due notice of his intention to carry out any inspection during the defects liability period. The Contractor shall, upon receipt of such notice, arrange for a responsible representative to be present at the times and dates named by the Engineer.

This representative shall render all necessary assistance and shall take note of all matters and things to which the Engineer shall direct his attention.

1.27 Health and safety

1.27.1 GENERAL

The Contractor shall use his best endeavour to ensure, so far as is reasonably practicable and to the satisfaction of the Engineer, the health, safety and welfare at work of his

employees, including those of his Subcontractors, and of all other persons on the Site. His responsibilities shall include:

- i. Provision and maintenance of safe and properly illuminated Contractor's Equipment;
- ii. Establishment of safe and well-illuminated systems of working;
- iii. Provision of protective clothing and equipment;
- iv. Establishment of first aid stations, staffed and equipped to provide information, instruction, training and supervision on all aspects of safety and health on site;
- v. Appointing as Safety Officer one of his senior staff who shall have specific knowledge of safety regulations and have had experience of safety precautions on similar works and who shall advise the Contractor on all aspects of safety and health on Site;
Provision and maintenance of safe access to all work areas on the Site;
- vi. Provision of adequate sanitary facilities and maintenance of these in a clean and hygienic state for use by all persons employed by the Employer, Engineer, Contractor or other contractors on the Site;
- vii. Measures to control flies, mosquitoes and pests in both working and recreational areas including chemical spraying, if necessary, in compliance with the rules and regulations of the Employer;
- viii. Reporting details of any accident to the Site Safety Officer as soon as possible after its occurrence;
- ix. Reasonable prevention of non-site personnel from entering the work areas.

1.27.2 SAFETY EQUIPMENT AND TRAINING

The Contractor shall provide:

- All necessary breathing apparatus, safety harnesses and any other equipment required to ensure safe working of all his personnel on Site;
- Test certificates for all safety equipment;
- Proof that all relevant personnel have received appropriate training.

1.27.3 HEALTH AND SAFETY PLAN

The Contractor is required to produce a health and safety plan covering the hazards that may apply during the Contract, the rules and standards to be used in assessing risk and in undertaking work and the methods that he will employ to ensure compliance with his plan.

The Health and Safety Plan shall include details of the following:

- Details of all potential risks and the proposals for dealing with such hazards;
- Controls to regulate risks that occur during all construction, testing and commissioning activities;
- Measures to avoid health risk in connection with the use, handling, storage and transportation of hazardous and harmful substances;
- Safety equipment and training proposals in respect of equipment referred to above.

1.28 Sign boards

Before the erection of any signboards or posters by the Contractor, the Contractor shall obtain the approval of the Employer and the Engineer to the size, location and wording of such sign boards or posters.

1.29 Building regulations

All buildings erected by the Contractor upon the Site and campsite or sites and the layout of the buildings shall comply with the Laws of the Land and all local by-laws as far as they are applicable.

1.30 Progress photographs

Photographs showing the progress of the works shall be taken by a competent photographer every month from positions to be selected by the Engineer.

Special photographs showing particular features of the works or matters of interest concerning the works or their surroundings shall also be taken from time to time as and when required by the Engineer.

Photographs shall not be less than 120 mm x 90 mm and shall be inscribed with the date when taken and a brief description or title.

All negatives shall be numbered; retained on the site and on completion of the works the negatives shall become the property of the Employer.

An item is included in the Bill of Quantities for the cost of such photographs.

1.31 Contractor's tracked equipment

The Contractor's tracked equipment may not be run on any public or private road without the written permission of the owner or authority concerned.

1.32 Site meetings

The Contractor shall be obliged to attend all site meetings at the appointed time. Site meetings would be held on a monthly basis or at any other duration as may be communicated by the engineer.

1.33 Pollution

During the execution of the works, the Contractor shall ensure that no pollution of existing watercourses is allowed to take place because of his activities. The Contractor shall take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the republic or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

1.34 Site clearance

On completion of the works, the Contractor shall clear the site and remove all temporary buildings, equipment and debris. The Contractor shall level off and grade all areas used for haul roads and all building, store and workshop areas. The whole of the site shall be left in a clean and tidy condition.

Section H

Preamble to Bills of Quantities

Section H –Bills of Quantities

(A) PREAMBLE TO BILL OF QUANTITIES

H.1 - GENERAL PRINCIPLES

- H.1.1 This Preamble is deemed to form part of the Bill of Quantities.
- H.1.2 The Bill of Quantities is to be read in conjunction with all the other documents comprising the Tender Documents at the tender stage and the Contract Documents after award of the Contract.
- H.1.3 Appropriate provisions of this Preamble shall also apply to the measurement of completed work in conjunction with the relevant Notes on Measurement.

H.2 - DEFINITIONS

- H.2.1 The following words and expressions have the meanings hereby assigned to them unless specifically stated otherwise.
- H.2.2 "Conditions of Contract" shall be as defined elsewhere in the Documents.
- H.2.3 "Work" includes work to be carried out, goods, materials and services to be supplied, and the liabilities, obligations and risks to be undertaken by the Contractor under the Contract.
- H.2.4 "Expressly required" means work which is shown on the Drawings, described in the Specification or ordered by the Engineer as a specific requirement pursuant to the Contract.
- H.2.5 "Bill of Quantities" means the list of items giving brief identifying descriptions and estimated quantities of the work comprising the Contract and shall include this Preamble.
- H.2.6 "Daywork" refers to the method of valuing work on the basis of time spent by the workmen, the materials used and the plant employed.
- H.2.7 "Work Classification" means the alphabetical Work Classification set out herein.
- H.2.8 "Original Surface" means the ground level before any work under the Contract has been carried out.
- H.2.9 "Final Surface" means the surface indicated on the Drawings to which excavation is to be carried out.
- H.2.10 "Commencing Surface" means:
- In relation to a single item in the Bill of Quantities, the surface of the ground before any work covered by that item has been carried out;
- In relation to a group of items in the Bill of Quantities for work in different materials in an excavation or a bored, drilled or driven hole, the surface of the ground before any work covered by any item in that group has been carried out.
- H.2.11 "Excavated Surface" means, the surface to which excavation included in the work covered by the relevant item is to be carried out.

- H.2.12 Expressions such as "depth 2-4 m" in bill items shall apply to operations within a range of depths which includes all depths exceeding 2 m but not exceeding 4 m. Thus the smaller dimension is excluded but the larger dimension is included.
- H.2.13 Where "(provisional)" appears after a work item description this means that a rate and amount are required for the quantity entered although the necessity for the work was uncertain at the time of preparing the document.
- H.2.14 "Supply" shall be deemed to include delivery to the Site and unloading to store unless expressly stated otherwise.

H.3 - WORK CLASSIFICATIONS AVAILABLE

(Not Applicable)

H.4 - ARRANGEMENT OF THE BILL OF QUANTITIES

Principal Quantities

- H.4.1 If any estimated total principal quantities of the Permanent Works are given in the Instructions to Tenderers or elsewhere in the Tender Documents, they are solely to assist Tenderers in making a rapid initial assessment of the general scale of the Contract but shall not have any contractual significance.

Mode of Description

- H.4.2 To avoid unnecessary length, item descriptions will generally identify the component of the Works and not the tasks to be carried out by the Contractor, e.g.
An item will be described as "Mild steel bar reinforcement diameter 20 mm", rather than as "Supply, deliver, cut, bend and fix mild steel bar reinforcement to BS 4449 diameter 20 mm".
- H.4.3 Where the work identified by an item is specifically limited, the limitation will be stated in the item description, e.g.
"Fix only hand railing supplied by others under item

Day works: Labour and Materials

- H.4.4 After each of the Provisional Sums there will be an item where the tenderer may insert a percentage addition to be added to the basic expenditure under the relevant item. In the case of the Provisional Sum for Plant the tendered percentage shall be applied only when the Plant used on dayworks has to be specially hired by the Contractor.
- H.4.5 Any dayworks carried out by sub-contractors shall be paid as for dayworks by the Contractor except that dayworks carried out by Nominated Sub-Contractors may be subject to a separate schedule as directed by the Engineer when issuing instructions for placing a Nominated Sub-Contract.

Headings and Sub-Headings

- H.4.6 Each Part of the Bill of Quantities will be given a heading and groups of items within each part may be given sub-headings. Headings and sub-headings shall be read as part of the item descriptions to which they apply and will normally be repeated at the start of each new page which lists items to which they apply.

Itemization and Description

- H.4.7 Descriptions will identify the work covered by the respective items, but the nature and extent of the work is to be ascertained from the other Tender Documents, which shall be read in conjunction with the Preamble and Notes on Measurement.
- H.4.8 Full detail or description may be omitted from an item description provided that, if necessary to aid clarity, an equivalent reference to the Drawings or Specification is given in its place.
- H.4.9 Where a normal item description seems insufficient to identify clearly the particular work covered by the item, additional description will have been given to identify the work by reference to its location or other physical features shown on the Drawings or described in the Specification.

Ranges of Dimensions

- H.4.10 Where within one operation material has to be removed from an increasing depth as the operation proceeds and the words "in range" are included against dimensions in the item description, e.g. "in range 2-4 m", this means that there are separate items for measurement and payment of other ranges of depth during the course of that operation. For the above example, work at depths of 2 m or less, at 2- 4 m and at depths exceeding 4 m would be billed under separate items. If all the work had a final depth of 2-4 m there would be separate items for 2-4 m and for depths not exceeding 2 m. It is unlikely that this will be applied to items other than certain items in Classes B, C, E and F.

Where the words "in range" do not appear as described above, this means that the whole operation from zero depth to final depth will all be paid under one item at one rate per unit of work. If all the work had a final depth of 2-4 m, there would be only one item and the range stated in the description would refer to the final depth of the operation. Similar work elsewhere would be measured and paid under other items where the final depth either exceeds 4 m or does not exceed 2 m.

Provisional Sums

- H.4.11 A Provisional Sum for a general overall contingency allowance will, if required, be given in the Bill Summary as described later in this Section.
- H.4.12 Provisional Sums for particular items of work will be given in the general items of Class A within the relevant Part of the Bill of Quantities.
- H.4.13 The item descriptions against Provisional Sums for particular items of work will distinguish work where the use of a Nominated Sub-Contractor was envisaged at the time of preparing the Tender Documents.
- H.4.14 Whenever the Bill includes Provisional Sums for particular items of work for which it is stated that payment is envisaged by dayworks if such work is necessary, the Provisional Sum shall be deemed to include all the percentage additions for dayworks.

Quantities

- H.4.15 The quantities inserted in the Bill are, wherever possible, computed net from the Tender Drawings, unless otherwise required in the Notes on Measurement or elsewhere in the Documents. Quantities have been rounded up or down where appropriate.

The Tenderer must recognise that the billed quantities represent estimated quantities subject to variations on each item, and no claim shall be made for deficiency or over-run therein, actual or relative. Accordingly, while the Tenderer must complete his Tender using the estimated quantities shown, he shall do so on the understanding that these estimated quantities are only intended to give general guidance to the Tenderer, and to enable tenders to be compared on a uniform basis.

Ground and Excavation Levels

H.4.17 The following shall apply except where there is a specific reference to the contrary in the relevant Notes on Measurement:

- The Commencing Surface will be identified in the description of each item for work involving excavation, boring or driving when the Commencing Surface is not also the Original Surface.
- The Excavated Surface will be identified in the description of each item for work involving excavation when the Excavated Surface is not also the Final Surface.

Bill Summary

H.4.18 Provision is made for the amounts inserted on each page to be totalled. Where appropriate the page totals within each Part of the Bill of Quantities are carried to a summary of each Part. The page or Part totals, as appropriate, are carried to the Bill Summary.

H.4.19 The total of the pages or Parts will comprise the Bill Total.

H.4.20 A Provisional Sum for a general contingency (the General Contingency Allowance) will, if required, be given in the Bill Summary following the Bill Total, usually computed as a percentage thereof.

H.4.21 The Tender Sum is the Bill Total plus the General Contingency Allowance, if any

H.5 - COMPLETION AND PRICING OF THE BILL OF QUANTITIES BY THE TENDERER

Insertion of Rates and Prices

H.5.1 Rates and prices shall be inserted in the Rate column of the Bill of Quantities, and elsewhere as instructed, in the currency and number of decimal places as directed in the Instructions to Tenderers.

H.5.2 In inserting tendered rates and prices in the Bill of Quantities, the Tenderer thereby offers to perform the relevant items of work at those rates and prices, and declares that every rate and price which he submits in his Tender:

- (a) Has been derived in a reasonable fashion;
- (b) Properly reflects the cost of doing the portion of the work to which that price or unit price pertains; and
- (c) Is inclusive of everything necessary to perform and complete in accordance with the Tender Documents that portion of the Work to which the price or unit price pertains including, without limiting generality, all supervision, labour, maintenance, equipment,

supplies, materials, facilities, overhead, profit and contingent expenses of every kind except as otherwise specifically provided for in the Tender Documents.

H.5.3 Page or Part totals, as appropriate, shall be carried to the Bill Summary.

Relationship to Other Documents

H.5.4 Certain clauses in the Conditions of Contract or Specification may be mentioned in the item descriptions contained in the Bill of Quantities but where no clause is mentioned the Contractor shall not be relieved of any of his obligations under the Contract. In general, a specification reference will be the first clause principally relating to the item but not necessarily the only clause.

H.5.5 The various prices and rates to be inserted in the Bill of Quantities are together to be the full inclusive value of the work described, including all costs and expenses which may be required in and for the construction of the work described, together with all risks, liabilities and obligations set forth or implied in the Tender Documents.

H.5.6 General Directions and descriptions of work and materials given elsewhere are not necessarily repeated in the Bill of Quantities and reference is to be made to the Tender Drawings, Specification and other relevant documents for this information.

H.5.7 Operations included in a billed rate are generally listed only where it is felt necessary to differentiate between the content of a number of items, each of which covers a different part of a whole process. The use of the word "including" may be taken to highlight a particular operation but shall not mean that no other operations need be included in the rate. It follows that no claim for additional payment will be considered if based merely on the proposition that not all necessary operations within any item are included in any description or discussion. Thus, all necessary operations listed in or implied by the Specification and Drawings including supply, handling and fixing will be deemed to be included in the rates irrespective of whether some, all or none are specifically mentioned in the Bill, except where the item description gives a limit, e.g. "Fix only handrailing supplied by others under Item".

H.5.8 Rates shall include for testing where specified except where testing is billed separately.

Adjustment of Total

H.5.9 If provision is not made in the Bill Summary for the tenderer to adjust the Bill Total but the Tenderer nevertheless finds it essential to do so during the last phase of the tendering process and offers an Adjustment, this fact (but not the amount of the Adjustment) shall be noted on the Bill Summary page. The amount of the Adjustment shall be stated in a letter accompanying the Tender, shall be a lump sum, not a percentage, and will not be varied on account of cost escalation.

H.5.10 Any additions or deductions in respect of an Adjustment Item shall be made by lump sum instalments on each interim certificate in the proportion that the total otherwise certifiable bears to the Bill Total in the Tender, and shall not exceed the amount of the Adjustment. If, however, by the date of issue of the Taking-Over Certificate for the whole of the Works any balance of the Adjustment is outstanding, the balance shall be added to or deducted from the retention monies then due to the Contractor.

Procedure during Assessment of Tenders

H.5.11 The tenderer shall not alter or otherwise qualify the printed text of the Bill of Quantities unless so instructed by a tender addendum etc. Any alterations or qualifications made without such authority will be ignored during evaluation and the text of the Bill as provided will be used.

H.5.12 If there are any arithmetic discrepancies between a tendered rate and the corresponding amount in the Bill, the rate shall always be taken as correct during the assessment of tenders.

H.5.13 Items contained in the Bill of Quantities against which no rate or price is entered by the tenderer will be deemed to be covered by other prices or rates in the Bill.

Re-measurement

H.5.14 Because, as already stated, the quantities are estimated quantities derived from preliminary drawings and are not therefore to be taken as exact quantities to be executed by the Contractor in fulfilment of his obligations under the Contract, the value of the whole work executed to the satisfaction of the Engineer shall be ascertained by re-measurement and valuation.

No allowance in measurement for payment will be made for wastage of materials.

Breakdown of Provisional Sums

Subject to the provisions of clause 57.2 of the Conditions of Contract, the tenderer should take note that the successful tenderer will be required to provide detailed breakdowns for all provisional sum prices inserted by it against bill items including all such items.

Section H –Bills of Quantities

BILL OF QUANTITIES

PROPOSED INSTALLATION OF 250 KW SOLAR GRID AND DRILLING 3 BOREHOLES					
IN NAPUU II IRRIGATION PROJECT					
ITEM	DESCRIPTION	UNIT	QTY	RATE	Amount
1	<u>Preliminaries and General items</u>				
	Supervision(provisional)	LS			2,000,000
	Material adjustment(provisional)	LS			1,500,000
	Erection of a signpost as directed (provisional)	LS			40,000
1.1	Mobilization of drilling unit to site, erect, dismantle and demobilize on completion of three boreholes at the same farm.	LS	1		
1.2	Provide all other plant, equipment and supervisory staff	LS	1		
A	Sub Total				
2	<u>Drilling and Borehole Development</u>				
2.1	Provide for drilling additives and water for all requirements	Ls	1		
2.2	Drilling of borehole minimum diameter 215mm from ground level until stable formation is encountered	m	50		
2.3	Ditto item 2.2 but between 50 - 150m	m	100		
2.4	Extra over for borehole drilling below 150m (provisional)	m	50		
	Casings and screens				
2.5	Supply & install 14" surface casing and retrieve on completion	m	10		

2.6	Supply and install 6" diameter borehole carbonized Steel Plain Casings class - B	m	125		
2.7	Supply and install 6" diameter borehole carbonized Steel Slotted Casings class B	m	25		
2.8	Extra over for casing 6" diameter carbonized steel pipe	m	50		
2.9	Supply and install well graded gravel pack (size 2-4mm entire borehole)	ton	12		
	Development				
2.1	Physical and chemical development of the borehole	Hr	6		
2.11	Grout between the casing and borehole for top 10m	Item	1		
	Aquifer testing				
2.12	Undertake constant discharge test to determine borehole parameters	Hrs	24		
2.13	Undertake water level observation and record recovery measurements of completed well	Hr	6		
2.14	Physical and Chemical Analysis of water	Item	1		
2.15	Install well head, well cap serial number and well apron of dimensions 1.0mx1.0mx1.0m	Ls	1		
2.16	Logging of samples at 2m intervals and preparation of Borehole Completion Report to WRA standards.	Ls	1		
B	SUB - TOTAL				
3	Equipping of Borehole				

3.1	Supply deliver to site and install a suitable submersible pump set complete with compatible motor, cables and compatible electrical control panel comprising of low level, overload, and power failure relays, main circuit breakers ammeter and voltmeter, Star/Delta starter, auto/manual switch start/stop button, run/trip lights fully protected as per item 2.12	item	1		
C	SUB TOTAL				
D	SUB-TOTAL(drilling and equipping B+C)				
E	Total for 3 Boreholes (DX3)				
4	Installation of 250 KW Solar Grid - Connected System				
4.1	Supply, deliver and install 325 watts solar modules (polycrystalline) with 250 KW inverter grid tied. The works to include module mounting structure, fasteners, cables, junction boxes, accessories, earthing kits, lightning kit and powers controllers. See attached schedule of proposed BOM)	LS	1		
F	SUB TOTAL				
	GRAND TOTAL A+E+F				

1. Bidders to describe details of proposed module structure in their bid by use of drawings or pictorials
2. Attached is the schedule of proposed bill of materials for the 250 kw solar grid

Summary of Bills of Quantities

Bill Number	Description	Number of Pages
Bill N0.A	Preliminaries and General item	
Bill No. E:	Drilling and equipping 3 Boreholes	
Bill No. F:	250 kw solar grid assembly	
Bill No. 3:		

Evaluation criteria

a) Mandatory Requirements

No	Requirement	Compliance
1.	Copy of Registration/incorporation certificate to show that the applicant is a registered company and legally authorized to do business in Kenya	Must meet
2.	Valid Tax compliance certificate	Must meet
3.	Valid Business Permit	Must meet
4.	Submission of a valid registration certificate issued by the National Construction Authority (NCA) for category NCA 7 or superior for Building works category .	Must meet
5	Valid Ministry of Water and Irrigation License and Energy regulatory Authority License on electrical/solar works	Must meet
6.	KRA PIN Certificate	Must meet
7.	Duly filled Self Declaration Form not to engage on Corruption /Fraudulent practices	Must meet
8.	Duly filled and signed Certificate of Site Visit/Pre-bid meeting	Must meet
9.	Duly filled form of tender	Must meet
10	Power of attorney of signatory of Bid	Must meet
11	Current CR 12 from registrar of companies	Must meet
12.	All bids Submitted must be serialized /Paginated	Must meet
NOTE: Tenderers who will not meet ANY of the above mandatory requirements will not be evaluated further.		

Technical Evaluation. Technical requirements will be scored as indicated below:-

TECHNICAL EVALUATION SCORE			
ITEM		DESCRIPTION	POINT SCORE SCALE
I		EXPERIENCE	Max 45
	a	General Experience in construction works (Irrigation) Evidence of Availability of critical equipment	0-5 0-10

	b	Specific experience in related works Company past similar works experience of drilling of boreholes and solar installations works in the last 3 years of not less than Kenya shillings twenty million and above each. Provide proof of similar works in terms of copies of contracts agreements, LPO, completion certificates or Interim completion certificates of not less than 70% complete. <ul style="list-style-type: none"> • Three or more similar works – 30 Marks • Two similar works – 20 Marks • One similar work – 10 Marks • None – 0 Marks 			0-30
2		KEY PERSONNEL			Max 35
		Project manager (Max 7marks)	Qualification	Degree	2.5
				Post Graduate	4
			Relevant Experience	10 years and above	3
				5-10 years	1
		Site Agent Engineer (Max 5.5marks)	Relevant Qualification	Degree	2
				Higher National Diploma	1.5
			Relevant Experience	8 years and above	2
				6-8 years	1.5
				3-5 years	1
		Hydro geologist with license (Max 4.5marks)	Relevant Qualification	Degree	2
				Diploma	1.5
			Relevant Experience	5 years and above	1.5
				Below 5 years	1.0
		Site Foreman (Max 3.0marks)	Qualification	Degree	1.5
				Diploma	1.0
			Relevant Experience	10 years and above	1.5

				Below 10 years	1.0
		Electrical Engineering Engineer/Technician with license (Max 3.0marks)	Relevant Qualification	Degree	1.5
				Diploma	1.0
			Relevant Experience	10 years and above	1.5
				7-9 years	1.0
				3-6 years	0.5
3		Financial capacity		Maximum	20
		Provide audited accounts for past three years			5-15
		Evidence of access to credit lines and availability of other financial resources			1-5

4.WORK METHODOLOGY		Max 15
a)	Program of works	0- 5
b)	Detailed Methodology	0- 5
c)	Methodology on safety during the construction period	0-5
TOTAL		MAX 15
Minimum Technical Score		80

250KW Solar Grid - Connected System										
Sr.no	Item Description		Tech. Detail	Qty.	UOM	Brand		Remarks		
Main Parts										
1	Solar Module - Polycrystalline		325 Watt	770	Nos	Goldi, Waaree or equivalent	14x55 string			
2	Solar Inverter Grid Tied		50 KW - 3 Phase	5	Nos	Delta, Solis or Equivalent	50 kw Double MPPT			
Module Mouting Structure										
3	Modual Mounting Support		TEL-PRJ-1502-D0-013-01-00		Nos			500x1960mm		
4	Base pipe 20 Ft.		TEL-PRJ-1502-D0-013-02-00		Nos			40x40x 6mm		
5	Rcc Base Fitting Clamp		TEL-PRJ-1502-D0-013-03-00		Nos			590x 30x3mm		
6	Rcc Base		TEL-PRJ-1502-D0-013-03A-00		Nos			300x300x 100mm		
7	Base Fitting Clamp		TEL-PRJ-1502-D0-013-05-00		Nos			210x30x3mm		
8	Clamp Module fitting		TEL-PRJ-1502-D0-013-04A-00		Nos			50x30x 3mm		
Hardware										
9	Hardware SS 304 Bolt Hex M8x25mm		M10x25mm SS		Nos			Structure Fitting		
10	Hardware SS 304 Nut Hex M8		M10 SS		Nos			Structure Fitting		
11	Hardware SS 304 Washer Flat M8		M10 SS		Nos			Structure Fitting		
12	Hardware SS 304 Washer spring M8		M10 SS		Nos			Structure Fitting		
13	Hardware SS 304 Bolt Hex M6 X 25mm		M6 X 25mm SS		Nos			Module Mouting Fitting		
14	Hardware SS 304 Nut Hex M6		M6 SS		Nos			Module Mouting Fitting		
15	Hardware SS 304 Washer Flat M6		M6 SS		Nos			Module Mouting Fitting		
16	Hardware SS 304 Washer spring M6		M6 SS		Nos			Module Mouting Fitting		
17	Hardware MS Zinc plated Jesty Khilla 1.5 Inch		Zinc plated		Kg			Clamp Fitting		
18	Hardware MS Zinc plated Clamp 1"		Zinc plated		Nos			Strip & pipe Fitting		
Cables										
19	Cable Cu.Solar Cable 1 Core 4 SQ MM-Red		Copper	700	Mtr	Polycab/Neskeb/RR or equiv.		For Panel to Inverter		
20	Cable Cu.Solar Cable 1 Core 4 SQ MM-Black		Copper	700	Mtr	Polycab/Neskeb/RR or equiv.				
21	Cable Cu.Solar Cable 1 Core 4 SQ MM-Green		Copper	200	Mtr	Polycab/Neskeb/RR or equiv.		For Panel Earthing		
22	Cable Cu. Flexible 4 Core 35 SQ MM		Copper	50	Mtr	Havells/RR/Neskeb or Equiv.		Inverter to MCB (AC)		
23	Cable Al. Armourd 4Core 195 SQ MM		Alluminium	350	Mtr	Havells/RR/Neskeb or Equiv.		MCB to Evacution		
Main Junction Box										
24	MJB BOX		50 KW - 3 Phase	5	Nos	Schenider/Heckels or Equiv.		For AC Combiner		
25	ACDB BOX		50 KW - 3 Phase	5	Nos	Schenider/Heckels or Equiv.		For AC Combiner		
Accessories										
26	Cable Tie Black/white		Nylon UV Protected - 200 mm	1000	Nos	KSS/Elmex or Equiv.		For Fitting Purpose		
27	GI Wire		G.I Wire		kg					
28	MC4 Connector Male - Female Set			250	Set	Elmex or Equiv.				
29	Insulation Tape Red		18mm-0.125mm x8mtr	10	Nos	Any Standard				
30	Insulation Tape Black		18mm-0.125mm x8mtr	10	Nos	Any Standard				
31	Insulation Tape Blue		18mm-0.125mm x8mtr	10	Nos	Any Standard				
32	Insulation Tape Yellow		18mm-0.125mm x8mtr	10	Nos	Any Standard				
33	UPVC Pipe 1"		UPVC 32mm	500	10 fit	Any Standard				
34	UPVC Elbow 1"			250	Nos	Any Standard				
35	UPVC TEE 1"/UPVC Coupler 1"			250/100	Nos	Any Standard				
36	lug for cable connection/ SS & Alluminium		SS & Alluminium	45/30	Nos	Any Standard				
Earthing kit & Lighting kit										
38	Earthing Rod		1" Dia - 5 feet Length	6	Nos			For Protection Lighting Strook		
39	Earth Pit PCC		100x100 MM	6	Nos					
40	Earthing Strip GI		GI 25x3mm	50	Kg					

41	Lighting Arester		Copper	1	Nos			
42	GI Pipe M 25 dia X10		GI 25Dia x 10Ft	1	Nos			
43	Sleeve 40MM		2 feet long	1	Nos			
44	Bakelite Clamp		(RED)	50	Nos			
45	Roll Plug			100	Nos			
46	Hardware MS Zinc plated Screw M10 X 50mm		M10 X 50mm	100	Nos			
47	RMU		Delremo	5	Nos			For Remote Monitoring
48	Sim card		online monitoring	5	Nos			
49	Power controller (For management)		Power controll Unit for solar power controlled while load under solar generation	1	Nos	Delta		For Protection against
50	Cable rack AND cover		Fiber Optic material with electric shock insulated 150 *50*2 mm & 300*50*2 mm	100	Mtr			For Ac Cable Laying