

BIDDING DOCUMENT

for

Procurement of Single Phase Pre-Paid Meters and Miniature Circuit Breakers for The Last Mile Connectivity Project (AFD/EU) (e-Procurement System)

1. SUPPLY OF SINGLE PHASE PRE-PAID METERS

2. SUPPLY OF MINIATURE CIRCUIT BREAKERS

IPC No: KP1/6E.3/PT/2/18/A65

Project: KENYA POWER DISTRIBUTION LAST MILE CONNECTIVITY PROJECT

Purchaser: KENYA POWER & LIGHTING CO. LTD

Country: KENYA

Issued on: 24th April 2018

Table of Contents

PART 1 – BIDDING PROCEDURES	1
Section I. Instructions to Bidders	
Section II. Bid Data Sheet (BDS)	23
SECTION III. EVALUATION AND QUALIFICATION CRITERIA	
Section IV. Bidding Forms	38
SECTION V. ELIGIBILITY CRITERIA	59
Section VI. AFD Policy - Corrupt and Fraudulent Practices-Social and Environmental Responsibility	61
PART 2 – SUPPLY REQUIREMENTS	63
Section VII. Schedule of Requirements	64
PART 3 - CONTRACT	73
SECTION VIII. GENERAL CONDITIONS OF CONTRACT	74
SECTION IX. SPECIAL CONDITIONS OF CONTRACT	
SECTION X. CONTRACT FORMS	98

PART 1 – Bidding Procedures

Section I. Instructions to Bidders

Table of Clauses

Α.		GENERAL	4
	1.	Scope of Bid	4
2	2.	Source of Funds	4
3	3.	CORRUPT AND FRAUDULENT PRACTICES	4
2	4.	ELIGIBLE BIDDERS	4
5	5.	ELIGIBLE GOODS AND RELATED SERVICES	5
в.		CONTENTS OF BIDDING DOCUMENTS	6
(6.	Sections of Bidding Documents	6
-	7.	CLARIFICATION OF BIDDING DOCUMENTS	7
8	8.	Amendment of Bidding Document	7
C.		PREPARATION OF BIDS	7
ç	9.	Cost of Bidding	7
1	10.	Language of Bid	7
1	11.	DOCUMENTS COMPRISING THE BID	7
1	12.	BID SUBMISSION FORM, BIDDING FORMS AND STATEMENT OF INTEGRITY AND PRICE SCHEDULES	.8
1	13.	Alternative Bids	8
1	14.	BID PRICES AND DISCOUNTS	8
1	15.	CURRENCIES OF BID AND PAYMENT	10
1	16.	DOCUMENTS ESTABLISHING THE ELIGIBILITY AND CONFORMITY OF THE GOODS AND RELATED SERVICES	10
1	17.	DOCUMENTS ESTABLISHING THE ELIGIBILITY AND QUALIFICATIONS OF THE BIDDER	12
1	18.	Period of Validity of Bids	12
1	19.	BID SECURITY	13
2	20.	Format and Signing of Bid	.14
D.		SUBMISSION AND OPENING OF BIDS	15
2	21.	Sealing and Marking of Bids	15
2	22.	Deadline for Submission of Bids	15
2	23.	LATE BIDS	15
2	24.	WITHDRAWAL, SUBSTITUTION, AND MODIFICATION OF BIDS	15
2	25.	BID OPENING	16
Ε.		EVALUATION AND COMPARISON OF BIDS	.17
2	26.	CONFIDENTIALITY	17
_	27.	CLARIFICATION OF BIDS	17
2	28.	Deviations, Reservations, and Omissions	18
2	29.	DETERMINATION OF RESPONSIVENESS	.18
3	30.	NONCONFORMITIES, ERRORS AND OMISSIONS	18
3	31.	CORRECTION OF ARITHMETICAL ERRORS	19
3	32.	CONVERSION TO SINGLE CURRENCY	19
3	33.	Margin of Preference	19
3	34.	EVALUATION OF BIDS	19
3	35.	COMPARISON OF BIDS	21

	36.	QUALIFICATION OF THE BIDDER	21
	37.	PURCHASER'S RIGHT TO ACCEPT ANY BID, AND TO REJECT ANY OR ALL BIDS	21
F.		AWARD OF CONTRACT	21
	38.	Award Criteria	21
	39.	Purchaser's Right to Vary Quantities at Time of Award	21
	40.	NOTIFICATION OF AWARD	21
	41.	SIGNING OF CONTRACT	22
	42.	Performance Security	22

Section I. Instructions to Bidders

A. General

1.	Scope of Bid	1.1	In connection with the Invitation for Bids, specified in the Bid Data Sheet (BDS) , the Purchaser, as specified in the BDS , issues these Bidding Documents for the Procurement of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this International Procurement Competition (IPC) are specified in the BDS .
		1.2	Throughout these Bidding Documents:
			(a) The term "in writing" means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt;
			(b) If the context so requires, "singular" means "plural" and vice versa; and
			(c) "Day" means calendar day.
2.	Source of Funds	2.1	The Purchaser specified in the BDS has applied for or received financing (hereinafter called "funds") from the Agence Française de Développement (hereinafter called "the AFD/EU"), toward the project named in BDS . The Purchaser intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
3.	Corrupt and Fraudulent	3.1	The AFD requires compliance with its policy regarding corrupt and fraudulent practices as set forth in Section VI.
	Practices	3.2	In further pursuance of this policy, Bidders shall permit and shall cause its agents (where declared or not), sub-contractors, sub-consultants, service providers or suppliers and to permit the AFD to inspect all accounts, records and other documents relating to the submission of the application, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the AFD.
4.	Eligible Bidders	4.1	A Bidder may be a firm that is a private entity, a state-owned entity- subject to ITB 4.3- or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
		4.2	A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to

have a conflict of interest for the purpose of this bidding process, if the Bidder:

- (a) Directly or indirectly controls, is controlled by or is under common control with another Bidder; or
- (b) Receives or has received any direct or indirect subsidy from another Bidder; or
- (c) Has the same legal representative as another Bidder; or
- (d) Has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
- (e) Participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
- (f) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods that are the subject of the bid; or
- (g) Any of its affiliates has been hired (or is proposed to be hired) by the Purchaser for the Contract implementation; or
- (h) Has a close business or family relationship with a professional staff of the Purchaser (or of the project implementing agency, or of a recipient of a part of the funds) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the AFD/EU throughout the procurement process and execution of the contract.
- 4.3 The AFD/EU's eligibility criteria to bid are described in Section V, Eligibility criteria.
- 4.4 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the execution of a Bid–Securing Declaration.
- 4.5 A Bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
- 5. Eligible Goods and Related Services to be supplied under the Contract and financed by the AFD/EU may have their origin in any country in accordance with Section V, Eligibility Criteria.

- 5.2 For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term "origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Documents

6. Sections of 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all **Bidding** the Sections indicated below, and should be read in conjunction with **Documents** any Addenda issued in accordance with ITB 8.

PART 1 - Bidding Procedures

- Section I. Instructions to Bidders (ITB); •
- Section II. Bidding Data Sheet (BDS);
- Section III. Evaluation and Qualification Criteria;
- Section IV. Bidding Forms; •
- Section V. Eligibility Criteria;
- Section VI. AFD Policy Corrupt and Fraudulent Practices and Social and Environmental Responsibility;

PART 2 - Supply Requirements

Section VII. Schedule of Requirements; •

PART 3 - Contract

- Section VIII. General Conditions of Contract (GCC); •
- Section IX. Special Conditions of Contract (SCC); •
- Section X. Contract Forms. •
- 6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Documents.
- Unless obtained directly from the Purchaser, the Purchaser is not 6.3 responsible for the completeness of the Bidding Documents, responses to requests for clarification or Addenda to the Bidding Documents in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

11. Documents

Bid

Comprising the

- 7. Clarification of 7.1 A Bidder requiring any clarification of the Bidding Documents shall **Bidding** contact the Purchaser in writing at the Purchaser's address specified in **Documents** the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than 14 (fourteen) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified in the BDS, the Purchaser shall also promptly publish its response at the web page identified in the BDS. Should the clarification result in changes to the essential elements of the Bidding Documents, the Purchaser shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.
- 8. Amendment of Bidding
 Bidding
 Document
 8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addenda.
 - 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Purchaser in accordance with ITB 6.3. The Purchaser shall also promptly publish the addendum on the Purchaser's web page in accordance with ITB 7.1.
 - 8.3 To give Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2.

C. Preparation of Bids

- **9. Cost of Bidding** 9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid 10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.
 - 11.1 The Bid shall comprise the following:
 - (a) Bid submission Form and the Bidding Forms in accordance with ITB 12;
 - (b) Completed schedules, in accordance with ITB 12 and 14;
 - (c) Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;

- Alternative bids, if permissible, in accordance with ITB 13; (d)
- (e) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2:
- (f) Statement of Integrity, Eligibility and Social and Environmental Responsibility duly signed, in accordance with ITB 12;
- Documentary evidence in accordance with ITB 17 establishing (g) the Bidder's qualifications to perform the contract if its Bid is accepted;
- Documentary evidence in accordance with ITB 17 establishing (h) the Bidder's eligibility to bid;
- (i) Documentary evidence in accordance with ITB 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
- (i) Documentary evidence in accordance with ITB 16 and 29, that the Goods and Related Services conform to the Bidding Documents;
- Any other document required in the BDS. (k)
- 11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.
- The Bidder shall furnish in the Bid Submission Form information on 11.3 commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.
- **12. Bid Submission** 12.1 The Bid Submission Form, the Bidding Forms and the Statement of Integrity and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.4. All blank spaces shall be filled in with the information requested.
 - 13.1. Unless otherwise specified in the BDS, alternative bids shall not be considered.
 - The prices and discounts quoted by the Bidder in the Bid Submission 14.1 Form and in the Price Schedules shall conform to the requirements specified below.
 - 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.

Form, Bidding Forms and Statement of **Integrity and Price Schedules**

- **13.** Alternative Bids
- 14. Bid Prices and **Discounts**

- 14.3 The price to be quoted in the Bid Submission Form shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Bid Submission Form.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, **unless otherwise specified in the BDS.** A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 29. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise **specified in the BDS**, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are opened at the same time.
- 14.7 The term CIP, DDP and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, **as specified in the BDS**.
- 14.8 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The disaggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V, Eligibility Criteria. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligibility Criteria. Prices shall be entered in the following manner:
 - (a) For Goods manufactured in the Purchaser's Country:
 - (i) The price of the Goods quoted CIP named place of destination, including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods; and
 - (ii) Any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the contract is awarded to the Bidder.

- (b) For Goods manufactured outside the Purchaser's Country, to be imported:
 - (i) The price of the Goods, quoted CIP named place of destination, in the Purchaser's Country, as specified in the BDS; and
 - (ii) Any Purchaser's Country sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder.
- (c) For Goods manufactured outside the Purchaser's Country, already imported:
 - (i) The price of the Goods, quoted CIP named place of destination, excluding the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;
 - (ii) All custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported in the Purchaser's country, payable on the Goods, if the Contract is awarded to the Bidder;
 - (iii) Any Purchaser's Country sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
- (d) For Related Services specified in Section VII Schedule of <u>Requirements:</u>
 - (i) The price of each item comprising the Related Services (exclusive of any applicable taxes);
 - (ii)All custom duties, sales and other taxes applicable in the Purchaser's country, payable on the Related Services, if the Contract is awarded to the Bidder.
- 15. Currencies of Bid and Payment
 15.1 The currency(ies) of the bid and the currency(ies) of payments shall be as specified in the BDS. The Bidder shall quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in the currency of the Purchaser's country, unless otherwise specified in the BDS.
 - 16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
 - 16.2 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the
- 16. Documents Establishing the Eligibility and Conformity of the Goods and Related Services

documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.

- 16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.
- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

18. Period of

Validity of Bids

17. Documents
 Establishing the Eligibility and Qualifications of the Bidder
 17.2
 17.1 To establish Bidder's their eligibility in accordance with ITB 4, Bidders shall complete the Bid Submission Form, included in Section IV, Bidding Forms.
 17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's

satisfaction:

- (a) That, if required in the BDS, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;
- (b) That, if required in the BDS, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- (c) That the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.
- 18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.
 - 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.
 - 18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:
 - (a) In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS**;
 - (b) In the case of adjustable price contracts, no adjustment shall be made;
 - (c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

- 19. Bid Security19.1 The Bidder shall furnish as part of its bid, either a Bid-Securing Declaration or a bid security, as specified in the BDS, in original form and, in the case of a bid security, in the amount and currency specified in the BDS.
 - 19.2 A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.
 - 19.3 If a bid security is specified pursuant to ITB 19.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option:
 - (a) An unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company);
 - (b) An irrevocable letter of credit;
 - (c) A cashier's or certified check; or
 - (d) Another security **specified in the BDS**;

from a reputable source from an eligible country as specified in Section V, Eligibility Criteria. If the unconditional guarantee is issued by a financial institution located outside the Purchaser's Country, the issuing financial institution shall have a correspondent financial institution located in the Purchaser's Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Purchaser prior to bid submission. The bid security shall be valid for twenty-eight (28) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

- 19.4 If a Bid Security is specified pursuant to ITB 19.1, any bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Purchaser as non-responsive.
- 19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 42.
- 19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.
- 19.7 The Bid Security may be forfeited, or the Bid Securing Declaration executed:
 - (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, or any extension thereto provided by the Bidder; or
 - (b) If the successful Bidder fails to:

- (i) Sign the Contract in accordance with ITB 41; or
- (ii) Furnish a performance security in accordance with ITB 42.
- 19.8 The Bid Security or Bid-Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the Bid Security or Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.
- 19.9 If a bid security is **not required in the BDS**, pursuant to ITB 19.1, and:
 - (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, or any extension thereto provided by the Bidder; or
 - (b) If the successful Bidder fails to: sign the Contract in accordance with ITB 41; or furnish a performance security in accordance with ITB 42;

the Purchaser may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time **as stated in the BDS**.

- 20. Format and Signing of Bid20.1The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the bid, in the number specified in the BDS and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
 - 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.
 - 20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, then the Bid shall be signed by every member of the proposed JV.
 - 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

- 21. Sealing and The Bidder shall enclose the original and all copies of the bid, including 21.1 **Marking of Bids** alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY". These envelopes containing the original and the copies shall then be enclosed in one single envelope.
 - 21.2 The inner and outer envelopes shall:
 - (a) Bear the name and address of the Bidder;
 - Be addressed to the Purchaser in accordance with ITB 22.1; (b)
 - Bear the specific identification of this bidding process indicated (c) in ITB 1.1: and
 - (d) Bear a warning not to open before the time and date for bid opening.
 - 21.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
- 22. Deadline for Bids must be received by the Purchaser at the address and no later than 22.1 Submission of the date and time specified in the BDS. When so specified in the BDS, Bids bidders shall have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the electronic bid submission procedures specified in the BDS.
 - The Purchaser may, at its discretion, extend the deadline for the 22.2 submission of bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
 - 23.1. The Purchaser shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- 24. Withdrawal, 24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been Substitution, and submitted by sending a written notice, duly signed by an authorized **Modification of** representative, and shall include a copy of the authorization (the power Bids of attorney) in accordance with ITB 20.2. The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
 - Prepared and submitted in accordance with ITB 20 and 21 (except (a) that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION"; and

23. Late Bids

- (b) Received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 22.
- 24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.
- 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.
- 25. Bid Opening 25.1 Except as in the cases specified in ITB 23 and 24, the Purchaser shall publicly open and read out in accordance with ITB 25 all bids received by the deadline (regardless of the number of bids received), at the date, time and place **specified in the BDS** in the presence of Bidders' designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted, in accordance with ITB 22.1, shall be as **specified in the BDS**.
 - 25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only bids that are opened and read out at Bid opening shall be considered further.
 - 25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Prices, per lot (contract) if applicable, including any discounts and alternative bids; the presence or absence of a Bid Security or Bid-Securing Declaration, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative bids read out at Bid opening shall be considered for evaluation. The Bid Submission Form and the Price Schedules are to be initialed by a minimum of three representatives of the Purchaser attending bid opening. The Purchaser shall neither discuss the merits of any bid nor reject any bid (except for late bids, in accordance with ITB 23.1).
 - 25.4 The Purchaser shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot

(contract) if applicable, including any discounts, and alternative bids; and the presence or absence of a Bid Security or Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

- 26. Confidentiality26.1 Information relating to the examination, evaluation, and comparison of the bids, and qualification of the Bidders and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with the bidding process until information on Contract Award is communicated to all Bidders in accordance with ITB 40.
 - 26.2 Any attempt by a Bidder to influence the Purchaser in the examination, evaluation, and comparison of the bids, and qualification of the bidders, or contract award decisions may result in the rejection of its Bid.
 - 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it shall do so in writing.
- 27. Clarification of Bids
 27.1 To assist in the examination, evaluation, comparison of the bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid, given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB 31.
 - 27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Purchaser's request for clarification, its Bid may be rejected.

28. Deviations, **Reservations**, and Omissions

- 28.1 During the evaluation of bids, the following definitions apply:
 - (a) "Deviation" is a departure from the requirements specified in the **Bidding Documents**;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

29. Determination of **Responsiveness**

Errors and Omissions

- The Purchaser's determination of a bid's responsiveness is to be based 29.1 on the contents of the bid itself, as defined in ITB 11.
 - 29.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
 - (a) If accepted, would:
 - (i) Affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (ii) Limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or
 - (b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
 - The Purchaser shall examine the technical aspects of the bid submitted in 29.3 accordance with ITB 16, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.
 - 29.4 If a bid is not substantially responsive to the requirements of the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- **30.** Nonconformities, 30.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonmaterial nonconformities in the Bid.
 - 30.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid.

31. Correction of

Errors

Arithmetical

Failure of the Bidder to comply with the request may result in the rejection of its Bid.

- 30.3 Provided that a bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.
- 31.1 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
 - (a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
 - 31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1 shall result in the rejection of the Bid.
- rsion to32.1For evaluation and comparison purposes, the currency(ies) of the BidCurrencyshall be converted in a single currency as specified in the BDS.
 - 33.1 **Unless otherwise specified in the BDS**, a margin of preference shall not apply.
 - 34.1 The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
 - 34.2 To evaluate a Bid (evaluation will be done for Items or Lots (contracts), as **specified in the BDS**), the Purchaser shall consider the following:
 - (a) The Bid Price as quoted in accordance with clause 14;
 - (b) Price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
 - (c) Price adjustment due to discounts offered in accordance with ITB 14.4;

- 32. Conversion to Single Currency
- 33. Margin of Preference
- 34. Evaluation of Bids

- (d) Price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;
- (e) Converting the amount resulting from applying (a) to (d) above, if relevant, to a single currency in accordance with ITB 32;
- (f) The additional evaluation factors as specified in Section III, Evaluation and Qualification Criteria.
- 34.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 34.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Bid Submission Form, is specified in Section III, Evaluation and Qualification Criteria
- 34.5 The Purchaser's evaluation of a bid will exclude and not take into account:
 - (a) In the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
 - (b) In the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes, which will be payable on the Goods if the contract is awarded to the Bidder;
 - (c) In the case of Related Services, customs duties and sales and other similar taxes that will be payable on the Related Services if the contract is awarded to the Bidder;
 - (d) Any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 34.6 The Purchaser's evaluation of a bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids, unless otherwise **specified** in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in Section III, Evaluation and Qualification Criteria.
- 34.7 If the bid, which results in the lowest Evaluated Bid Price, is significantly lower than the Purchaser's estimate, the Purchaser shall require the Bidder to produce detailed price analyses for any or all items of the Price Schedules, to demonstrate the internal consistency of those prices with the supply requirements and the method and schedule

proposed. If one or several inconsistencies are evidenced, the bid shall be declared non-compliant and rejected.

- 35. Comparison of Bids35.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 34.2 to determine the lowest evaluated bid.
- 36. Qualification of the Bidder
 36.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
 - 36.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.
 - 36.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.
- 37. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids
 37.1 The Purchaser reserves the right to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

- **38. Award Criteria** 38.1 Subject to ITB 37.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 39. Purchaser's Right to Vary Quantities at Time of Award
 39.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages specified in the BDS, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.
- 40. Notification of Award
 40.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Purchaser will pay the Supplier in consideration of the supply of Goods (hereinafter and in the Conditions of Contract Forms called "the Contract Price"). At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding.

- 40.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 40.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected.
- 41.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.
 - 41.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
 - 41.3 Notwithstanding ITB 41.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the AFD that signing of the Contact Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.
- Within twenty-eight (28) days of the receipt of notification of award 42.1 from the Purchaser, the successful Bidder shall furnish the Performance Security Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Purchaser. A foreign institution providing a bond shall have a correspondent financial institution located in the Purchaser's Country.
 - Failure of the successful Bidder to submit the above-mentioned 42.2 Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security or execution of the Bid-Securing Declaration. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

41. Signing of Contract

42. Performance

Section II. Bid Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

Pre-Paid Meters and Miniature Circuit Breakers The number, identification and names of the lots (contracts) comprising are: Item Item Description Quantitie (Pieces) 1. Supply of Single Phase Pre-Paid Meters 197,494 2. Miniature Circuit Breakers 394,988 ITB 2.1 The name of the Project is: KENYA POWER DISTRIBUTION LAST CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100	ITB Clause Reference	A. General				
ITB 1.1 The name and identification number of the IPC are: Procurement of Singl Pre-Paid Meters and Miniature Circuit Breakers The number, identification and names of the lots (contracts) comprising are: Item Item Description Quantitie No. [Pieces] 1. Supply of Single Phase Pre-Paid Meters 197,494 2. Miniature Circuit Breakers 394,988 ITB 2.1 The name of the Project is: KENYA POWER DISTRIBUTION LAST CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100	ITB 1.1	The number of the Invitation for Bids is: KP1/6E.3/PT/2/18/A65				
Pre-Paid Meters and Miniature Circuit Breakers The number, identification and names of the lots (contracts) comprising are: Item Item Description Quantitie (Pieces) 1. Supply of Single Phase Pre-Paid Meters 197,494 2. Miniature Circuit Breakers 394,988 ITB 2.1 The name of the Project is: KENYA POWER DISTRIBUTION LAST CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100	ITB 1.1	The Purchaser is: KENYA POWER & LIGHTING COMPANY LTD				
No. (Pieces) 1. Supply of Single Phase Pre-Paid Meters 197,494 2. Miniature Circuit Breakers 394,988 ITB 2.1 The name of the Project is: KENYA POWER DISTRIBUTION LAST CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100	ITB 1.1	The number, identification and names of the lots (contracts) comprising this IPC				
2. Miniature Circuit Breakers 394,988 ITB 2.1 The name of the Project is: KENYA POWER DISTRIBUTION LAST CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100		No. (Pieces)				
CONNECTIVITY PROJECT B. Contents of Bidding Documents ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100						
ITB 7.1 For clarification of bid purposes only, the Purchaser's address is: Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100	ITB 2.1	The name of the Project is: KENYA POWER DISTRIBUTION LAST MILE CONNECTIVITY PROJECT				
Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100		B. Contents of Bidding Documents				
Nairobi, Kenya Telephone: +254-711-031821 or +254-711-031736 Electronic mail address: <u>JNjehia@kplc.co.ke</u> and copy to <u>BAngima@kplc.co.ke</u>	ITB 7.1	Attention; Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Limited, Stima Investment I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100 Nairobi, Kenya Telephone: +254-711-031821 or +254-711-031736 Electronic mail address: JNjehia@kplc.co.ke and copy to				

ITB 7.1	Web page : <u>www.kplc.co.ke</u>
	C. Preparation of Bids
ITB 9	Bid document detailing the requirements shall be obtained by downloading from the KPLC website (www.kplc.co.ke). No Bid documents will be issued from any KPLC office.
ITB 10.1	The language of the bid is English. All correspondence exchange shall be in the English language. Language for translation of supporting documents and printed literature is English.
ITB 11.1 (k)	 The Bidder shall submit the following additional documents in its bid: Manufacturer's authorizations in case the bidder is not a manufacturer Manufacturers shall have ISO 9001:2008 or equivalent quality assurance certificate. A copy of such certificate shall be submitted with the bid. Technical Particulars/characteristics duly completed and signed by the bidder per Annex A of the Technical Specifications. Type Tests certificates from accredited Laboratories as required in the Technical Specifications The accreditation certificate for the testing laboratory to ISO/ IEC 17025 Bidders shall provide additional information such as brochures/catalogues/drawings describing in detail the proposed items. The Manufacturer's Declaration of Conformity to reference standards. Statement of compliance to tender specifications (indicate deviations if any and supporting documents in the bid) Documentary Evidence indicating manufacturers Supplies record and as stipulated in Section III of the Evaluation criteria (a) List of manufacturer's name, address and contact person as well as its location. (b) Details of the supply contracts: (c) The Client's name, address and contact person as well as its location.
	• Manufacturer's warranty as stipulated in Section III – Evaluation Criteria.

	 Audited Financial stipulated statements for the last five (5) years and as stipulated in Section III of the Evaluation criteria If a Bidder is not a Manufacturer, they shall demonstrate that they have successfully completed at least four (4) contracts of similar goods in the past five (5) years. Submission of Meter Samples is not required at bid submission stage. However, the successful bidder shall submit Meter Samples as required under Technical Specifications for Single Phase Split Prepayment Meters (KP1-6C-4-1-TSP-14-011-02) for testing and approval before manufacture. 					
ITB 13.1	Alternative Bids <u>shall not</u> be considered.					
ITB 14.5	The prices quoted by the Bidder <i>shall not</i> be adjustable.					
ITB 14.6	 (a). Prices quoted for shall correspond at least to 100% (Meters and Miniature Circuit) of the items specified. (b). Prices quoted for each item shall correspond at least to 100% of the quantities specified for this item. 					
ITB 14.7	 The Incoterms edition is Incoterms 2010. However, the definition of the place a date associated with "delivery" is modified as follows: (a) Under "CIP" Incoterms defines "delivery" as the place and date whe risk transfers from the seller to the buyer; (b) In these Bidding Documents, when using "CIP" and not referring the transfer of risk, the term "delivery" shall be interpreted as the date and place where the Goods and Related Services arrive at the name place of destination, and this date should be reflected in the Deliver and Completion Schedule. 					

ITB 14.8 (b) (i)	Named Place of Destination: Final destination named on the Delivery and Completion Schedule in Section VI (KPLC Nairobi South Stores at Industrial Area, NAIROBI)				
ITB 14.8 (d)	the Supplier shall be responsible for cle	For Goods manufactured outside the Purchaser's country, to be Imported, he Supplier shall be responsible for clearance of the items. However, KPLC shall issue an exemption letter for the following;			
	.Custom Duties				
	2. Import Declaration Fees				
	3.Value Added Tax(VAT)				
	4. Railway Development Levy (RDL)				
	forwarding charges for Mombasa Port points. The clearing and forwarding Price Schedule for Goods manufa	e bidders shall include in their bid the agency fees for clearing and warding charges for Mombasa Port, inland container depots and border nts. The clearing and forwarding charges shall be included in the ce Schedule for Goods manufactured outside the Purchaser's intry, to be Imported as part of Column 8.			
ITB 15.1	The prices shall be quoted by the bidder in: KSH and/or EUR (\in)				
	The Bidder <i>is</i> required to quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in that currency.				
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): N/A				
ITB 17.2 (a)	Manufacturer's authorization is: <i>Required</i>				
ITB 17.2 (b)	After sales service is: Not Required. However, eighteen months warranty is required as stipulated in the special conditions of contract (SCC 28.3)				
ITB 18.1	The bid validity period shall be 120 days.				
ITB 18.3 (a)	The bid price shall be adjusted by the following factor: <i>N</i> / <i>A</i>				
ITB 19.1	A Bid Security <u>is</u> required.				
	A Bid-Securing Declaration <i>is not</i> required.				
	If a bid security shall be required, the amount and currency of the bid security shall be:				
	Tender No	Minimum Bid Security in (€) or an equivalent amount in a freely convertible currency.			
	KP1/6E.3/PT/2/18/A65	KP1/6E.3/PT/2/18/A65 175,000			
ITB 19.3 (d)	Other types of acceptable securities: <i>None</i>				

ITB 19.9	N/A				
ITB 20.1	Bids shall be submitted electronically				
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of:				
	- A Power of Attorney established in the name of the signatory of the bid and his sample signature appended on it.				
	D. Submission and Opening of Bids				
ITB 22.1	Completed Bids are to be saved as PDF documents marked "Procurement of Single Phase Pre-Paid Meters and Miniature Circuit Breakers for Kenya Power Distribution Last Mile Connectivity Project KP1/6E.3/PT/2/18/A65" and submitted in the appropriate KPLC E-procurement Web Portal found on the KPLC website (www.kplc.co.ke) so as to be received on or before 19 th June 2018 at 10.00 am. (Note: This is a Central Office Tender; submissions should <u>STRICTLY be</u> done to Central Office KPLC E-procurement portal).				
	The deadline for bid submission is: Date: 19 th June 2018 Time: 10:00am				
	(Bidders may access/download guidelines on E-procurement registration and submission from KPLC website (<u>www.kplc.co.ke</u>)).				
	<i>i.e. Public Information</i> → <i>Tenders</i> → <i>Supplier Manuals</i>				
	NB: Document Size Limit: Each PDF/Scanned document shall not exceed 100MB. However, there is no limit as to the number of such documents that may be uploaded.				
ITB 22.1	Bidders <i>shall</i> submit their bids electronically.				
ITB 25.1	Bids will be opened electronically.				
	The bid opening shall take place at:				
	Street Address: Stima Plaza, Kolobot Road, Parklands Floor/Room number: <i>Auditorium</i> City: <i>Nairobi</i> Country: Kenya Date: 19th June 2018				

	Time: 10.30 a.m East Africa Time.				
	E. Evaluation and Comparison of Bids				
ITB 32.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in different currencies into a single currency is: <i>KSH (Kenya Shilling)</i>				
	The source of exchange rate shall be: CENTRAL BANK OF KENYA				
	The date for the exchange rate shall be Tender Closing Date (19 th June 2018)				
ITB 33.1	A margin of domestic preference <u>shall not</u> apply.				
ITB 34.2	Evaluation will be done for: Both Items that will constitute one contract				
	F. Award of Contract				
ITB 38	38.1 Contract award shall be to the lowest evaluated bid that offers lowest sum for both items.				
	38.2 Standstill period shall be fourteen (14) calendar days counted from the date of award notification/regrets.				
ITB 39.1	The maximum percentage by which quantities may be increased is: 15%				
	The maximum percentage by which quantities may be decreased is: 15%				

Section III. Evaluation and Qualification Criteria

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser may use to evaluate a bid and determine whether a Bidder has the required qualifications. No other criteria shall be used.

Contents

1.	EVALUATION (ITB 34)	. 30
2.	QUALIFICATION (ITB 36)	. 31
3.	DOMESTIC PREFERENCE (ITB 33)	. 37

1. Evaluation (ITB 34)

1.1 Evaluation Criteria (ITB 34.6)

The Purchaser's evaluation of Bids for Goods may take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.8, one or more of the following factors as specified in ITB Sub-Clause 34.2 (f), using the following criteria and methodologies.

(a) **Delivery Schedule**

The Goods specified in the List of Goods are required to be delivered within the acceptable time range (after the earliest and before the final date, both dates inclusive) specified in Section VII, Delivery Schedule. No credit will be given to deliveries before the earliest date, and an adjustment of 0.5% of the bid price per week will be added, for evaluation purposes only, to the bid price of bids offering deliveries later than the latest delivery date.

1.2. Contract Award (ITB 34.4)

The Purchaser shall award **a single contract** to the lowest evaluated Bid price and meets the post-qualification criteria (this Section III, 2. Qualification (ITB 36)).

2. Qualification (ITB 36)

After determining the lowest-evaluated bid in accordance with ITB 35.1, the Purchaser shall carry out the postqualification of the Bidder in accordance with ITB 36, using only the requirements specified. Requirements not included in the tables below shall not be used in the evaluation of the Bidder's qualifications. In addition, the supply experience if the bidder is not a manufacturer also has to be met, if the bidder is not a manufacture and submits bid with manufacturer's authorization form.

	Eligibility ar	nd Qualification Criteria			ce Requirements		Documentation
No.	Subject	Requirement	Single	All Parties	Joint Venture (existing or intended)All PartiesEach MemberOne Member		Submission
			Entity	Combined			Requirements
1. Eli	igibility						
1.1	Nationality	Nationality in accordance with ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Bid Submission Form
1.3	AFD/EU Eligibility	Being eligible for AFD/EU financing, as described in ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Covenant of Integrity (appendix to Bid Submission Form)
1.4	State-owned Entity	Meets conditions of ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

	Eligibility an	d Qualification Criteria	Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or All Parties Each Member		intended) One Member	Submission
				Combined	Each Miember	One Wiember	Requirements
2. Hi	storical Contrac	t Non-Performance	·				
2.1	History of Non- Performing Contracts	Termination of a contract ¹ did not occur as a result of Supplier default in the past 5 years.	Must meet requirement ²	Must meet requirements	Must meet requirement ²	N/A	Form CON-2
2.2	Suspension Based on Execution of Bid Securing Declaration by the Purchaser or withdrawal of the Bid within Bid validity	Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB 4.4 or withdrawal of a Bid pursuant ITB 19.9.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Bid Submission Form
2.3	Pending Litigation	All pending litigation shall in total not represent more than one hundred percent (100%) of the Bidder's net worth and shall be treated as resolved against the Bidder.	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

¹ Non-performance shall include all terminations of contracts where (a) non-performance was not challenged by the supplier, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the supplier. Non-performance shall not include contracts where Purchasers decision was overruled by the dispute resolution mechanism. ² This requirement also applies to contracts executed by the Bidder as JV member.

	Eligibility a	nd Qualification Criteria		Complian	ce Requirements		Documentation
	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			
No.				All Parties	Each Member	One Member	Submission
				Combined			Requirements
3. Fii	nancial Situation	n and Performance					
3.1	Financial	Submission of audited balance	Must meet	N/A	Must meet	N/A	Form FIN – 3.1, with
	Capabilities	sheets or if not required by the	requirement		requirement		attachments
		law of the Bidder's country, other					
		financial statements acceptable to					
		the Purchaser, for the last five (5)					
		years to demonstrate the current					
		soundness of the Bidder's					
		financial position based on the					
		following criteria:					
		a) liquidity ratio ≥ 1.1					
		((Current Assets) / (Current					
		$Liabilities) \ge 1.1$					
		b) indebtedness ratio $\leq 80\%$					
		((Total Liabilities) x 100 / (Total					
		Assets) ≤ 80%)]					
3.2	Average	Minimum average annual	Must meet	Must meet	Must meet	Must meet forty	Form FIN – 3.2
	Annual	supplier turnover of EUR .	requirement	requirement	twenty-five	percent (40%)	
	Supplier Turnover	20,000,000 calculated as total			percent (25%) of the	of the	
	Turnover	certified payments received for contracts in progress and/or			requirement	requirement	
		completed within the last 5			requirement		
		years, divided by 5 years					

Eligibility and Qualification Criteria				Complian	Documentation		
No.	Subject	Requirement	Single	Joint Venture (existing or intended) All Parties Each Member One Member			er Submission
			Entity	Combined			Requirements
	perience		I	1		T	1
4.1	Similar Experience	A minimum number of similar ³ contracts specified below that have been satisfactorily and substantially ⁴ completed as Supplier, or joint venture member ⁵ , between 1st January 2013 and January 2018. -One (1) Contract of minimum value of Eur. 16,000,000 or Two (2) contracts, each of minimum value of Eur. 8,000,000	Must meet requirement	Must meet requirement ⁶	N/A	N/A	Form EXP 4.1

³ The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Schedule of Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

⁴ Substantial completion shall be based on 80% or more completed under the contract.

⁵ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement.

⁶ In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

4.2 <u>SPECIFIC EXPERIENCE</u>

(A) If the Bidder is a Manufacturer:

(i) Experience Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

- (a) The Bidder shall have minimum of five years' experience in manufacturing the meters /MCBs (Miniature circuit breakers). In the event of Joint Venture, the party who will supply goods must meet this requirement.
- (b) The Bidder shall submit the type test reports and certificates from the relevant International or National Testing/Standards Authority or ISO/IEC 17025 accredited independent laboratory for goods being bid for i.e. meters/ MCBs. In the event of Joint Venture, the party who will supply goods must meet this requirement.
- (c) The Bidder shall furnish documentary evidence to demonstrate that the Bidder has supplied similar goods during the last five years. In the event of a joint venture all parties combined must meet this requirement.

Note: Where the Bidder is not from the purchaser's country, then the Bidder shall furnish documentary evidence to demonstrate that it has supplied at least equal quantities of the same size and type of Single Phase Pre-paid meters and Miniature Circuit Breakers (as tabulated below) outside the country of the Bidder during the last five years:

Item No.	Description	Quantity
1	Single Phase Prepaid Meters	197,494
2	Miniature Circuit Breakers (MCBs)	394,988

(ii) Supply Capacity

The Bidder shall be required to provide the following information in the format shown below in order to determine the available capacity. This information shall be certified by an auditor that certified the financial statements of the Bidder. The Purchaser reserves the right to verify this information before contract award. Details provided in this form must reflect the actual supply capacity of the bidder. Any inconsistency in the capacity declaration may lead to rejection of the bids. The Contracts received from January 1, 2013 till date of invitation for bid shall be included in the table below to demonstrate

that bidder meets at least quantities indicated for each item in the table below in any one of the last five years:

Contract #	Employer	Order	Ordered	Supplied	Supplied	Supplied	Supplied	Supplied	Supplied	Balance to
	Name	No.	Quantity	in 2013	in 2014	in 2015	in 2016	in 2017	in 2018	be
										supplied as
										on bid
										submission
										date
	1	Total		<u></u>				<u></u>	<u></u>	

CAPACITY DECLARATION FORM

The Bidder shall meet the avalable bid capacity which will be calculated as under:

```
Available Bid capacity = ( A*N*3 - B )
where
```

A = Maximum annual quantity supplied in any one of past five years (2013, 2014, 2015, 2016 and 2017)

N = Number of years prescribed for completion of the supply for which bids are invited (1.5 Years (18 months) in this bidding)

B = Balance Quantity to be supplied as on bid submission date for any ongoing orders.

Notes:

- 1. The Bidder shall have an **available supply capacity equivalent to the quantities required in each item**, based on the above formula
- 2. The quantity will be rounded off to next thousand.

In the event of a joint venture, all parties combined must meet this requirement.

1. The Supply Capacity quantity will be rounded off to next thousand.

In the event of a Joint Venture, all parties combined must meet this requirement.

The following supporting documents are required to be submitted in the Bid to support Bidder's supply Capacity information:

- (a) Certified true copies of the contracts/purchase orders to support the data provided in the table above including acceptance certificates. The contract copies shall also have following details:
- (b) The Client's name, address and contact person's phone number and email address
- (c) The contract amount

(B) If the Bidder is not a manufacturer:

If a Bidder is not a manufacturer, but is offering the Goods on behalf of the Manufacturer under Manufacturer's Authorization Form (Section IV, Bidding Forms), the Bidder shall demonstrate the qualifications below in (i) and (ii):

- (i) <u>The Manufacturer who provided the Manufacturer's authorization shall demonstrate</u> and meet Experience Capacity and supply capacity as given above ((A) (i) & (ii))
- (ii) <u>Supply Capacity if the bidder is not a manufacturer</u>

In addition, the Bidder shall demonstrate and provide evidence that the Bidder has supplied at **least sixty (60) percent of the quantities required in each item** based on the above formula (Available bid capacity) in any one of the last five years. In the event of a Joint Venture all parties combined must meet the requirement

3. Domestic Preference (ITB 33)

N/A

Section IV. Bidding Forms

Table of Forms

BID SUBMISSION FORM	39
STATEMENT OF INTEGRITY, ELIGIBILITY AND SOCIAL AND ENVIRONMENTAL RESPONSIBILITY	41
FORM ELI-1.1: BIDDER INFORMATION FORM	44
FORM ELI-1.2: BIDDER'S JV INFORMATION FORM	45
FORM CON-2: HISTORICAL CONTRACT NON-PERFORMANCE, PENDING LITIGATION AND LITIGAT	
FORM FIN-3.1: FINANCIAL SITUATION AND PERFORMANCE	48
FORM FIN-3.2: AVERAGE ANNUAL TURNOVER	50
FORM EXP-4.1: EXPERIENCE	51
PRICE SCHEDULE FORMS	53
Price and Completion Schedule - Related Services – (Not Applicable)	56
FORM OF BID SECURITY (BANK GUARANTEE)	57
MANUFACTURER'S AUTHORIZATION	58

Bid Submission Form

[The Bidder shall prepare his Bid Submission Form on a Letterhead paper specifying his name and address]

		Date: IPC No.: Invitation for Bid No.: Alternative No.:
To:		
We,	, the und	dersigned, declare that:
(a)		ve examined and have no reservations to the Bidding Documents, including Addenda issued ordance with Instructions to Bidders (ITB 8);
(b)	We ha	ve no conflict of interest in accordance with ITB 4.2;
(c)		ve not been suspended nor declared ineligible by the Purchaser based on execution of a Bid ng Declaration in the Purchaser's country in accordance with ITB 4.4;
(d)		Fer to supply in conformity with the Bidding Documents and in accordance with the Delivery alle specified in the Schedule of Requirements the following Goods:;
(e)	The to	tal price of our Bid, excluding any discounts offered in item (f) below is:
	i)	In case of only one lot, total price of the Bid
	ii) iii)	In case of multiple lots, total price of each lot In case of multiple lots, total price of all lots (sum of all lots)
(f)	The di	scounts offered and the methodology for their application are:
	i) ii)	The discounts offered are: The exact method of calculations to determine the net price after application of discounts is shown below:
(g)	submis	d shall be valid for a period of days from the date fixed for the bid ssion deadline in accordance with the Bidding Documents, and it shall remain binding upon may be accepted at any time before the expiration of that period;
(h)	If our l	bid is accepted, we commit to obtain a performance security in accordance with ITB 42 of lding Documents;

(i) We are not participating, as a Bidder, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;

- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (k) We understand and accept that the Purchaser reserves the right to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders; and
- (1) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

Name of the Bidder*______ Name of the person duly authorized to sign the Bid on behalf of the Bidder**______

Title of the person signing the Bid	
Signature of the person named above	
Date signed	_ day of

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder **: Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

Statement of Integrity, Eligibility and Social and Environmental Responsibility

Reference name of the bid or proposal: _____ (The "Contract")

To: _

(The "Contracting Authority")

- 1. We recognise and accept that Agence Française de Développement ("AFD") only finances projects of the Contracting Authority subject to its own conditions which are set out in the Financing Agreement which benefits directly or indirectly to the Contracting Authority. As a matter of consequence, no legal relationship exists between AFD and our company, our joint venture or our suppliers, contractors, subcontractors, consultants or subconsultants. The Contracting Authority retains exclusive responsibility for the preparation and implementation of the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.
- 2. We hereby certify that neither we nor any other member of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants are in any of the following situations:

2.1) Being bankrupt, wound up or ceasing our activities, having our activities administered by the courts, having entered into receivership, reorganisation or being in any analogous situation arising from any similar procedure;

2.2) Having been:

a. convicted, within the past five years by a court decision, which has the force of *res judicata* in the country where the Contract is implemented, of fraud, corruption or of any other offense committed during a procurement process or performance of a contract (in the event of such conviction, you may attach to this Statement of Integrity supporting information showing that this conviction is not relevant in the context of this Contract);

b. subject to an administrative sanction within the past five years by the European Union or by the competent authorities of the country where we are constituted, for fraud, corruption or for any other offense committed during a procurement process or performance of a contract (in the event of such sanction, you may attach to this Statement of Integrity supporting information showing that this sanction is not relevant in the context of this Contract);

c. convicted, within the past five years by a court decision, which has the force of *res judicata*, of fraud, corruption or of any other offense committed during the procurement process or performance of an AFD-financed contract;

2.3) Being listed for financial sanctions by the United Nations, the European Union and/or France for the purposes of fight-against-terrorist financing or threat to international peace and security;

2.4) Having been subject within the past five years to a contract termination fully settled against us for significant or persistent failure to comply with our contractual obligations during contract performance, unless this termination was challenged, and dispute resolution is still pending or has not confirmed a full settlement against us;

2.5) Not having fulfilled our fiscal obligations regarding payments of taxes in accordance with the legal provisions of either the country where we are constituted or the Contracting Authority's country;

2.6) Being subject to an exclusion decision of the World Bank and being listed on the website <u>http://www.worldbank.org/debarr</u> (in the event of such exclusion, you may attach to this Statement of Integrity supporting information showing that this exclusion is not relevant in the context of this Contract);

2.7) Having created false documents or committed misrepresentation in documentation requested by the Contracting Authority as part of the procurement process of this Contract.

3. We hereby certify that neither we, nor any of the members of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants are in any of the following situations of conflict of interest:

3.1) Being an affiliate controlled by the Contracting Authority or a shareholder controlling the Contracting Authority, unless the stemming conflict of interest has been brought to the attention of AFD and resolved to its satisfaction;

3.2) Having a business or family relationship with a Contracting Authority's staff involved in the procurement process or the supervision of the resulting Contract, unless the stemming conflict of interest has been brought to the attention of AFD and resolved to its satisfaction;

3.3) Being controlled by or controlling another bidder or consultant, or being under common control with another bidder or consultant, or receiving from or granting subsidies directly or indirectly to another bidder or consultant, having the same legal representative as another bidder or consultant, maintaining direct or indirect contacts with another bidder or consultant which allows us to have or give access to information contained in the respective applications, bids or proposals, influencing them or influencing decisions of the Contracting Authority;

3.4) Being engaged in a consulting services activity, which, by its nature, may be in conflict with the assignments that we would carry out for the Contracting Authority;

3.5) In the case of procurement of goods, works or plants:

- i. Having prepared or having been associated with a consultant who prepared specifications, drawings, calculations and other documentation to be used in the procurement process of this Contract;
- ii. Having been recruited (or being proposed to be recruited) ourselves or any of our affiliates, to carry out works supervision or inspection for this Contract;
- 4. If we are a state-owned entity, and to compete in a procurement process, we certify that we have legal and financial autonomy and that we operate under commercial laws and regulations.
- 5. We undertake to bring to the attention of the Contracting Authority, which will inform AFD, any change in situation with regard to points 2 to 4 here above.
- 6. In the context of the procurement process and performance of the corresponding contract:

6.1) We have not, and we will not engage in any dishonest conduct (act or omission) deliberately indented to deceive others, to intentionally conceal items, to violate or vitiate someone's consent, to make them circumvent legal or regulatory requirements and/or to violate their internal rules in order to obtain illegitimate profit;

6.2) We have not, and we will not engage in any dishonest conduct (act or omission) contrary to our legal or regulatory obligations or our internal rules in order to obtain illegitimate profit;

6.3) We have not promised, offered or given and we will not promise, offer or give, directly or indirectly to (i) any Person who holds a legislative, executive, administrative or judicial mandate within the State of the Contracting Authority regardless of whether that Person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the Person occupies, (ii) any other Person who performs a

public function, including for a State institution or a State-owned company, or who provides a public service, or (iii) any other person defined as a Public Officer by the national laws of the Contracting Authority's country, an undue advantage of any kind, for himself or for another Person or entity, for such Public Officer to act or refrain from acting in his official capacity;

6.4) We have not promised, offered or given and we will not promise, offer or give, directly or indirectly to any Person who occupies an executive position in a private sector entity or works for such an entity, regardless of the nature of his/her capacity, any undue advantage of any kind, for himself or another Person or entity for such Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations;

6.5) We have not, and we will not engage in any practice likely to influence the contract award process to the detriment of the Contracting Authority and, in particular, in any anti-competitive practice having for object or for effect to prevent, restrict or distort competition, namely by limiting access to the market or the free exercise of competition by other undertakings;

6.6) Neither we nor any of the members of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants shall acquire or supply any equipment nor operate in any sectors under an embargo of the United Nations, the European Union or France;

6.7) We commit ourselves to comply with and ensure that all of our suppliers, contractors, subcontractors, consultants or subconsultants comply with international environmental and labour standards, consistent with laws and regulations applicable in the country of implementation of the Contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties. Moreover, we shall implement environmental and social risks mitigation measures when specified in the environmental and social commitment plan (ESCP) provided by the Contracting Authority.

7. We, as well as members of our joint venture and our suppliers, contractors, subcontractors, consultants or subconsultants authorise AFD to inspect accounts, records and other documents relating to the procurement process and performance of the contract and to have them audited by auditors appointed by AFD.

Name: _____

In the capacity of: _____

Duly empowered to sign in the name and on behalf of⁷:

Signature:

Dated:

⁷ In case of joint venture, insert the name of the joint venture. The person who will sign the application, bid or proposal on behalf of the applicant, bidder or consultant shall attach a power of attorney from the applicant bidder or consultant.

Form ELI-1.1: Bidder Information Form

Date:	
IPC No. and title:	
Pageofpag	es
Bidder's name	
In case of Joint Venture (JV), name of each member:	
Bidder's actual or intended country of constitution:	
[indicate country of Constitution]	
Bidder's actual or intended year of constitution:	
Bidder's legal address [in country of constitution]:	
Bidder's authorized representative information	
Name:	
Address:	
Telephone/Fax numbers:	
E-mail address:	
1. Attached are copies of original documents of	
□ Articles of Constitution (or equivalent documents of association) of the legal entity na above;	amed
□ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1;	
□ In case of state-owned enterprise or institution, in accordance with ITB 4.3 docur establishing:	nents
a) Legal and financial autonomy;b) Operation under commercial law;c) Establishing that the Bidder is not dependent agency of the Purchaser.	
2. Included are the organizational chart, a list of Board of Directors, and the beneficial owner	ship.

Form ELI-1.2: Bidder's JV Information Form

(to be completed for each member of Bidder's JV)

	IP	C No. and title: $\underline{\qquad}_{c}$	
	Page	of	pages
Bidder's JV name:			
JV member's name:			
JV member's country of constitution:			
JV member's year of constitution:			
JV member's legal address in country of constitution:			
JV member's authorized representative information			
Name:			
Address:			
Telephone/Fax numbers:			
E-mail address:			
1. Attached are copies of original documents of			
□ Articles of Constitution (or equivalent docume	ents of asso	ciation) of the legal e	entity named above;
□ In case of a state-owned enterprise or instituti	on, docum	ents establishing:	
a) Legal and financial autonomy;			
b) Operation in accordance with comm	ercial law;	and	
c) Absence of dependent status, in acco			
2. Included are the organizational chart, a list of Board			ownership.

Form CON-2: Historical Contract Non-Performance, Pending Litigation and Litigation History

(to be completed by the Bidder and by each member of the Bidder's JV)

	der's Name: Date:	
JV Member's Nam	le	
IPC No. and title: _		
Page	of	pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria

□ Contract non-performance did not occur since 1st January *[insert current year number less 5]* specified in Section III, Evaluation and Qualification Criteria, subclause 2.1.

□ Contract(s) not performed since 1st January *[insert current year number less 5]* specified in Section III, Evaluation and Qualification Criteria, subclause 2.1

Year	Non- performed portion of contractContract Identification		Total Contract Amount (current value, currency, exchange rate and EUR equivalent)	
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/ number, and any other identification]	[insert amount]	
		Name of Purchaser: [insert full name]		
		Address of Purchaser: [insert street/city/country]		
		Reason(s) for non-performance: [indicate main reason(s)]		

Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements

□ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, subclause 2.3.

Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, subclause 2.3 as indicated below.

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), EUR Equivalent (exchange rate)
		Contract Identification:Name of Purchaser:Address of Purchaser:Matter in dispute:Party who initiated the dispute:Status of dispute:	

Form FIN-3.1: Financial Situation and Performance

Bid	der's Name:	
]	Date:	
JV Member's Nam	le	
IPC No. and title:		
Page	of	pages

1. Financial data

Type of Financial information in	Historic information for previous			us	_years,	
(currency)	(amount in currency, currency, exchange rate*, EUR equivalent)					
	Year 1	Year 2	Year 3	Year4	Year 5	
Statement of Financial Position	(Information	from Baland	ce Sheet)			
Total Assets (TA)						
Total Liabilities (TL)						
Total Equity/Net Worth (NW)						
Current Assets (CA)						
Current Liabilities (CL)						
Working Capital (WC)						
	Information	from Income	e Statement			
Total Revenue (TR)						
Profits Before Taxes (PBT)						
Cash Flow Information						
Cash Flow from Operating Activities						

*Refer to ITB 15 for the exchange rate

2. Financial documents

The Bidder and its parties shall provide copies of financial statements for _______years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) Reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member);
- (b) Be independently audited or certified in accordance with local legislation;
- (c) Be complete, including all notes to the financial statements;
- (d) Correspond to accounting periods already completed and audited.
- \Box Attached are copies of financial statements⁸ for the ______ years required above and complying with the requirements.

⁸ If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Form FIN-3.2: Average Annual Turnover

Bidd	er's Name:	
D	ate:	
JV Member's Name		
IPC No. and title:		
Page	of	pages

		Annual turnover data					
Year	Amount	Exchange rate	EUR equivalent				
	Currency						
[indicate year]	[insert amount and indicate currency]						
Average Annual Turnover *							

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

Form EXP-4.1: Experience

Bidder's Legal Name:	Date:
JV Member's Legal Name:	IPC No.:
	Page of pages

Similar Contract No [insert specific number] of [total number of contracts] required	Information	
Contract Identification	 	
Award date Completion date	 	
Role in Contract		
Total contract amount	 	EUR equivalent
If member in a JV, specify participation in total contract amount	EUR equivalent_	
Purchaser's Name:	 	
Address: Telephone/fax number: E-mail:		

Form EXP – 4.1 (cont.) Experience (cont.)

Bidder's Legal Name:	 Page	of	pages
JV Member's Legal Name:			

Similar Contract No [insert specific number] of [total number of contracts] required	Information
Description of the similarity in accordance with Sub-Factor 4.1 or 4.2 of Section III:	
Amount	
Physical size	
Complexity	
Methods/Technology	
Other Characteristics	

Price Schedule Forms

[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]

Price Schedule 1: Goods Manufactured Outside the Purchaser's Country, to be Imported

(Gro	oup C bids, goods to be imported)						Date: IPC No: KP1/6E.3/PT/2/18/A65	
Cur	rencies in accordance with ITB Sub-Clause	15	4	5	6	7	8	9
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price CIP Mombasa in accordance with ITB 14.8(b)(i)	CIP Price per line item (Col. 5x6)	Price per line item for inland transport and other services required in the purchaser's country to convey the goods to their final destination (KPLC Nairobi South Store) including agency fees for clearing and forwarding charges at Mombasa port/border points	Total Bid Price without taxes and duties per Line item (Col.7+8)
1	Single Phase Pre-Paid Meters (<i>KP1/6C/4/1/TSP/14/11-02</i>)			29,046			KPLC Eldoret Store	
2	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			58,092			KPLC Eldoret Store	
3	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)			39,583			KPLC Kisumu Store	
4	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			79,166			KPLC Kisumu Store	
5	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)			36,692			KPLC Kisii Store	
6	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			73,384			KPLC Kisii Store	
7	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)			38,135			KPLC Nakuru Store	
8	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			76,270			KPLC Nakuru Store	
9	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)			20,752			KPLC Nyeri Store	
10	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			41,504			KPLC Nyeri Store	
11	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)			33,286			KPLC Mombasa Store	
12	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)			66,572			KPLC Mombasa Store	
					Total Bid	Price		

Name of Bidder.....

Signature of Bidder

Date.....

	Purchaser's Cour	ntry		(Group A	A and B b	pids)		Date:		
				Currence	ies in acc	ordance with ITB 15		IPC No: KP1/6E.3	/PT/2/18/A65	
1	2	3	4	5	6	7	8	9 10		
Line Item N°	Description of Goods	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price EXW	Total EXWprice per line item (Col. 4×5)	Price per line item for inland transport and other services required in the purchaser's country to convey the goods to their final destination (KPLC Nairobi South Store) including agency fees for clearing and forwarding charges at Mombasa port/border points	Cost of local labor, raw materials and components from with origin in the Purchaser's Country % of Col. 5	Sales and other taxes payable per line item if Contract is awarded (in accordance with ITB 14.8(a)(ii)	Total Price per line item (Col. 6+7+9)	
1	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		29,046			KPLC Eldoret Store				
2	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		58,092			KPLC Eldoret Store				
3	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		39,583			KPLC Kisumu Store				
4	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		79,166			KPLC Kisumu Store				
5	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		36,692			KPLC Kisii Store				
6	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		73,384			KPLC Kisii Store				
7	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		38,135			KPLC Nakuru Store				
8	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		76,270			KPLC Nakuru Store				
9	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		20,752			KPLC Nyeri Store				
10	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		41,504			KPLC Nyeri Store				
11	Single Phase Pre-Paid Meters (KP1/6C/4/1/TSP/14/11-02)		33,286			KPLC Mombasa Store				
12	Miniature Circuit Breaker(1P+1N) 63A 230/400V 50HZ (<i>KP1/3CB/TSP/11/010</i>)		66,572			KPLC Mombasa Store				
								Total Price		

Price and Completion Schedule - Related Services – (Not Applicable)

Currencies in accordance with IT				with ITB 15	Date:	
	[/2/18/A65					
1	2	3	4	5	6	7
Service N°	Description of Services (excludes inland transportation and other services required in the Purchaser's country to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price	Total Price per Service (Col. 5*6 or estimate)
				Total Bid Price		

Name of Bidder Date Date

Form of Bid Security (Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

_

We have been informed that _______ (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of ______ under Invitation for Bids No. ______ ("the IFB").

Furthermore, we understand that, according to the Beneficiary's conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of ______ (_____) upon receipt by us of the Beneficiary's first demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- (a) Has withdrawn its Bid during the period of bid validity set forth in the Applicant's Bid Submission Form ("the Bid Validity Period"), or any extension thereto provided by the Applicant; or
- (b) Having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the bidding process; or (ii) twenty-eight days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

_____[signature(s)]

Manufacturer's Authorization

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS**.]

Date: [insert date (as day, month and year) of Bid Submission] IPC No.: [insert number of bidding process] Alternative No.: [insert identification No if this is a Bid for an alternative]

To: [insert complete name of Purchaser]

WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us:

[insert name and or brief description of the Goods],

and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]

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

Title: [insert title]

Dated on ______ day of ______, ____ [insert date of signing]

Section V. Eligibility Criteria

Eligibility in AFD/EU-Financed Procurement

- Financing allocated by the AFD/EU to a Contracting Authority has been entirely untied since 1st January 2002. To the exception of any equipment or any sector which is subject to an embargo by the United Nations, the European Union or France, all goods, works, plants, consulting services and non-consulting services are eligible for the AFD/EU financing regardless of the country of origin of the supplier, contractor, subcontractor, consultant or subconsultant inputs or resources used in the implementation processes. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.
- 2. Natural or legal persons (including all members of a joint venture or any of their suppliers, contractors, subcontractors, consultants or subconsultants) shall not be awarded an AFD/EU-financed contract if, on the date of submission of an application, a bid or a proposal, or on the date of award of a contract, they:

2.1) Are bankrupt or being wound up or ceasing their activities, are having their activities administered by the courts, have entered into receivership, or are in any analogous situation arising from a similar procedure;

2.2) Have been:

a. convicted, within the past five years by a court decision, which has the force of *res judicata* in the country where the contract is implemented, of fraud, corruption or of any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this conviction is not relevant in the context of this contract;

b. subject to an administrative sanction within the past five years by the European Union or by the competent authorities of the country where they are constituted, for fraud, corruption or for any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this sanction is not relevant in the context of this contract;

c. convicted, within the past five years by a court decision, which has the force of *res judicata*, of fraud, corruption or of any other offense committed during the procurement process or performance of an AFD/EU-financed contract;

2.3) Are listed for financial sanctions by the United Nations, the European Union and/or France for the purposes of fight-against-terrorist financing or threat to international peace and security;

2.4) Have been subject within the past five years to a contract termination fully settled against them for significant or persistent failure to comply with their contractual obligations during contract performance, unless this termination was challenged, and dispute resolution is still pending or has not confirmed a full settlement against them;

2.5) Have not fulfilled their fiscal obligations regarding payments of taxes in accordance with the legal provisions of either the country where they are constituted or the Contracting Authority's country;

2.6) Are subject to an exclusion decision of the World Bank and are listed on the website <u>http://www.worldbank.org/debarr</u>, unless they provide supporting information together with their Covenant of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this exclusion is not relevant in the context of this contract;

2.7) Have created false documents or committed misrepresentation in documentation requested by the Contracting Authority as part of the procurement process of this Contract.

3. State-owned entities may compete only if they can establish that they (i) are legally and financially autonomous, and (ii) operate under commercial law. To be eligible, a state-owned entity shall establish to the AFD/EU's satisfaction, through all relevant documents, including its Charter and other information the AFD/EU may request, that it: (i) is a legal entity separate from their state (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to their state, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt.

Section VI. AFD Policy - Corrupt and Fraudulent Practices– Social and Environmental Responsibility

1. <u>Corrupt and Fraudulent Practices</u>

The Contracting Authority and the suppliers, contractors, subcontractors, consultants or subconsultants must observe the highest standard of ethics during the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.

By signing the Statement of Integrity, the suppliers, contractors, subcontractors, consultants or subconsultants declare that (i) "it did not engage in any practice likely to influence the contract award process to the Contracting Authority's detriment, and that it did not and will not get involved in any anti-competitive practice", and that (ii) "the procurement process and the performance of the contract did not and shall not give rise to any act of corruption or fraud".

Moreover, the AFD requires including in the Procurement Documents and AFD/EU-financed contracts a provision requiring that suppliers, contractors, subcontractors, consultants or subconsultants will permit the AFD/EU to inspect their accounts and records relating to the procurement process and performance of the AFD/EU-financed contract, and to have them audited by auditors appointed by the AFD/EU.

The AFD/EU reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- (a) Reject a proposal for a contract award if it is established that during the selection process the bidder or consultant that is recommended for the award has been convicted of corruption, directly or by means of an agent, or has engaged in fraud or anti-competitive practices in view of being awarded the Contract;
- (b) Declare misprocurement when it is established that, at any time, the Contracting Authority, the suppliers, contractors, subcontractors, consultants or subconsultants their representatives have engaged in acts of corruption, fraud or anti-competitive practices during the procurement process or performance of the contract without the Contracting Authority having taken appropriate action in due time satisfactory to the AFD/EU to remedy the situation, including by failing to inform the AFD/EU at the time they knew of such practices.

The AFD/EU defines, for the purposes of this provision, the terms set forth below as follows:

- (a) Corruption of a Public Officer means:
 - (i) The act of promising, offering or giving to a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity; or
 - (ii) The act by which a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity.
- (b) A Public Officer shall be construed as meaning:
 - (i) Any person who holds a legislative, executive, administrative or judicial mandate (within the country of the Contracting Authority) regardless of whether that person was nominated or

elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the person occupies;

- (ii) Any other person who performs a public function, including for a State institution or a Stateowned company, or who provides a public service;
- (iii) Any other person defined as a Public Officer by the national laws of the country of the Contracting Authority.
- (c) Corruption of a private person means:
 - (i) The act of promising, offering or giving to any person other than a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations; or
 - (ii) The act by which any person other than a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations;
- (d) Fraud means any dishonest conduct (act or omission), whether or not it constitutes a criminal offence, deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate consent, to circumvent legal or regulatory requirements and/or to violate internal rules in order to obtain illegitimate profit.
- (e) Anti-competitive practices mean:
 - (i) Any concerted or implied practices which have as their object or effect the prevention, restriction or distortion of competition within a marketplace, especially where they (i) limit access to the marketplace or free exercise of competition by other undertakings, (ii) prevent free, competition-driven price determination by artificially causing price increases or decreases, (iii) restrict or control production, markets, investments or technical progress; or (iv) divide up market shares or sources of supply;
 - (ii) Any abuse by one undertaking or a group of undertakings which hold a dominant position on an internal market or on a substantial part of it;
 - (iii) Any practice whereby prices are quoted or set unreasonably low, the object of which is to eliminate an undertaking or any of its products from a market or to prevent it from entering the market.

2. <u>Social and Environmental Responsibility</u>

In order to promote sustainable development, the AFD seeks to ensure that internationally recognised environmental and social standards are complied with. Candidates for AFD/EU-financed contracts shall consequently undertake in the Statement of Integrity to:

- (i) Comply with and ensure that all their subcontractors or subconsultants comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;
- (ii) Implement environmental and social risks mitigation measures when specified in the environmental and social management plan (ESMP) provided by the Contracting Authority.

PART 2 – Supply Requirements

Section VII. Schedule of Requirements

Contents

1.	LIST OF GOODS AND DELIVERY SCHEDULE	65
2.	LIST OF RELATED SERVICES AND COMPLETION SCHEDULE	69
3.	TECHNICAL SPECIFICATIONS	70
4.	DRAWINGS	71
5.	INSPECTIONS AND TESTS	72

1. List of Goods and Delivery Schedule

1.	1. LIST OF GOODS AND DELIVERY SCHEDULE										
	Description of Goods	Quantity	Physical unit	Final Destination as specified	Delivery Date						
				in BDS	Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date [to be provided by the bidder]				
1	Single Phase	8,714	Piece	KPLC Eldoret	6 Months after date of contract signature	9 Months after date of contract signature					
	Prepaid Meters	8,714	Piece	Stores	9 months after date of contract signature	12 Months after date of contract signature					
		11,618	Piece		12 months after date of contract signature	18 Months after date of contract signature					
		11,875	Piece	KPLC Kisumu	6 Months after date of contract signature	9 Months after date of contract signature					
		11,875	Piece	Stores	9 months after date of contract signature	12 Months after date of contract signature					
		15,833	Piece		12 months after date of contract signature	18 Months after date of contract signature					

		11,008	Piece	KPLC Kisii Stores	6 Months after date of contract signature	9 Months after date of contract signature	
		11,008	Piece		9 months after date of contract signature	12 Months after date of contract signature	
		14,677	Piece		12 months after date of contract signature	18 Months after date of contract signature	
		11,441	Piece	KPLC Nakuru Stores	6 Months after date of contract signature	9 Months after date of contract signature	
		11,441	Piece		9 months after date of contract signature	12 Months after date of contract signature	
		15,254	Piece		12 months after date of contract signature	18 Months after date of contract signature	
		6,226	Piece	KPLC Nyeri	6 Months after date of contract signature	9 Months after date of contract signature	
		6,226 Piece Stores		Stores	9 months after date of contract signature	12 Months after date of contract signature	
		8,301	Piece		12 months after date of contract signature	18 Months after date of contract signature	
		9,986	Piece	KPLC Mombasa	6 Months after date of contract signature	9 Months after date of contract signature	
		9,986	Piece	Stores	9 months after date of contract signature	12 Months after date of contract signature	
		13,314	Piece		12 months after date of contract signature	18 Months after date of contract signature	
2	Miniature Circuit	17,428	Piece		6 Months after date of contract signature	9 Months after date of contract signature	

Breakers (MCBs)	17,428	Piece	KPLC Eldoret Stores KPLC Kisumu Stores	9 months after date of contract signature	12 Months after date of contract signature	
	23,237	Piece		12 months after date of contract signature	18 Months after date of contract signature	
	23,750	Piece		6 Months after date of contract signature	9 Months after date of contract signature	
	23,750	Piece		9 months after date of contract signature	12 Months after date of contract signature	
	31,666	Piece		12 months after date of contract signature	18 Months after date of contract signature	
	22,015	Piece	KPLC Kisii Stores	6 Months after date of contract signature	9 Months after date of contract signature	
	22,015	Piece		9 months after date of contract signature	12 Months after date of contract signature	
	29,354	Piece		12 months after date of contract signature	18 Months after date of contract signature	
	22,881	Piece	KPLC Nakuru Stores	6 Months after date of contract signature	9 Months after date of contract signature	
	22,881	Piece		9 months after date of contract signature	12 Months after date of contract signature	
	30,508	Piece		12 months after date of contract signature	18 Months after date of contract signature	
	12,451	Piece	KPLC Nyeri Stores	6 Months after date of contract signature	9 Months after date of contract signature	
	12,451	Piece		9 months after date of contract signature	12 Months after date of contract signature	

		16,602	Piece		12 months after date of contract signature	18 Months after date of contract signature	
		19,972	Piece	KPLC Mombasa Stores	6 Months after date of contract signature	9 Months after date of contract signature	
		19,972	Piece		9 months after date of contract signature	12 Months after date of contract signature	
		26,629	Piece		12 months after date of contract signature	18 Months after date of contract signature	

2. List of Related Services and Completion Schedule

- Not Applicable

[This table shall be filled in by the Purchaser. The Required Completion Dates should be realistic, and consistent with the required Goods Delivery Dates]

Service	Description of Service	Quantity ¹	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
[insert Service No]	[insert description of Related Services]	[insert quantity of items to be supplied]	[insert physical unit for the items]	[insert name of the Place]	[insert required Completion Date(s)]
	[Training]				
	[Servicing and maintenance]				
	[List of spare parts]				
	[List of consumables]				

1. If applicable

3. Technical Specifications

- 3.1 Single Phase Prepaid Meters Technical Specifications
- 3.2 Miniature Circuit Breakers (MCBs) Technical Specifications

4. Drawings

These Bidding Documents includes [insert "the following" or "no"] drawings.

[If documents shall be included, insert the following List of Drawings]

	List of Drav	vings
Drawing Nr.	Drawing Name	Purpose

5. Inspections and Tests

The following inspections and tests shall be performed: [As per the Technical Specifications attached]

PART 3 - Contract

Section VIII. General Conditions of Contract

Table of Clauses

1.	DEFINITIONS	76
2.	CONTRACT DOCUMENTS	77
3.	FRAUD AND CORRUPTION	77
4.	INTERPRETATION	77
5.	LANGUAGE	78
6.	JOINT VENTURE, CONSORTIUM OR ASSOCIATION	78
7.	ELIGIBILITY	78
8.	NOTICES	78
9.	GOVERNING LAW	78
10.	SETTLEMENT OF DISPUTES	79
11.	INSPECTIONS AND AUDIT BY THE AFD/EU	79
12.	SCOPE OF SUPPLY	79
13.	DELIVERY AND DOCUMENTS	79
14.	SUPPLIER'S RESPONSIBILITIES	79
15.	CONTRACT PRICE	79
16.	TERMS OF PAYMENT	80
17.	TAXES AND DUTIES	80
18.	PERFORMANCE SECURITY	80
19.	COPYRIGHT	81
20.	CONFIDENTIAL INFORMATION	81
21.	SUBCONTRACTING	82
22.	SPECIFICATIONS AND STANDARDS	82
23.	PACKING AND DOCUMENTS	82
24.	INSURANCE	83
25.	TRANSPORTATION	83
26.	INSPECTIONS AND TESTS	83
27.	LIQUIDATED DAMAGES	84
28.	WARRANTY	84

29.	PATENT INDEMNITY	85
30.	LIMITATION OF LIABILITY	86
31.	CHANGE IN LAWS AND REGULATIONS	86
32.	FORCE MAJEURE	87
33.	CHANGE ORDERS AND CONTRACT AMENDMENTS	87
34.	EXTENSIONS OF TIME	88
35.	TERMINATION	88
36.	ASSIGNMENT	89
37.	EXPORT RESTRICTION	89

Section VIII. General Conditions of Contract

- **1. Definitions** 1.1 The following words and expressions shall have the meanings hereby assigned to them:
 - (a) "AFD" means the Agence Française de Développement;
 - (b) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein;
 - (c) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto;
 - (d) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract;
 - (e) "Day" means calendar day;
 - (f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract;
 - (g) "GCC" means the General Conditions of Contract;
 - (h) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract;
 - (i) "Purchaser's Country" is the country specified in the Special Conditions of Contract (SCC);
 - (j) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the **SCC**;
 - (k) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract;
 - (1) "SCC" means the Special Conditions of Contract;
 - (m) "Subcontractor" means any natural person, private or state entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier;

- (n) "Supplier" means the natural person, private or state entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement;
- (o) "The Project Site," where applicable, means the place named in the **SCC**.
- 2. Contract 2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.
- **3. Fraud and Corruption** 3.1 The AFD requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix 1 to the SCC.
- **4. Interpretation** 4.2 If the context so requires it, singular means plural and vice versa.
 - 4.3 Incoterms
 - (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms;
 - (b) The terms CIP and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the **SCC** and published by the International Chamber of Commerce in Paris, France.
 - 4.4 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.5 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

- 4.6 Nonwaiver
 - (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract;

- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.
- 4.7 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

- 5. Language
 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.
 - 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.
- 6. Joint Venture, Consortium or Association
 6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
- 7. Eligibility
 7.1 All Goods and Related Services to be supplied under the Contract and financed by the AFD/EU shall have their origin in any eligible source as specified in the SCC. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.
- 8. Notices 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form with proof of receipt.
 - 8.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 9. Governing Law 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's Country, unless otherwise specified in the SCC.

10.	Settlement of Disputes	10.1	The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
		10.2	If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC .
		10.3	Notwithstanding any reference to arbitration herein,
			(a) The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
			(b) The Purchaser shall pay the Supplier any monies due the Supplier.
11.	Inspections and Audit by the AFD/EU	11.1	The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep accurate and systematic accounts and records, in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.
		11.2	The Supplier shall permit, and shall cause its Subcontractors and consultants to permit, the AFD/EU and/or persons appointed by the AFD/EU to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the AFD/EU if requested by the AFD/EU.
12.	Scope of Supply	12.1	The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.
13.	Delivery and Documents	13.1	Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.
14.	Supplier's Responsibilities	14.1	The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.
15.	Contract Price	15.1	Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices

16.

quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the **SCC**.

- Terms of16.1The Contract Price, including any Advance Payments, if applicable,
shall be paid as specified in the SCC.
 - 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered, and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.
 - 16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
 - 16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the bid price is expressed.
 - 16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the **SCC**, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the **SCC**, for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.
- **17. Taxes and Duties** 17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.
 - 17.2 For goods manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
 - 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country as specified in the SCC, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
 - **18.1** The Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC**.
 - 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
 - 18.3 The Performance Security shall be denominated in the currency(ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the

18. Performance Security Purchaser in the SCC, or in another format acceptable to the Purchaser.

- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC**.
- 19. Copyright19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential The Purchaser and the Supplier shall keep confidential and shall not, 20.1Information without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.
 - 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.
 - 20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:
 - (a) The Purchaser or Supplier need to share with the AFD or other institutions participating in the financing of the Contract;
 - (b) Now or hereafter enters the public domain through no fault of that party;
 - (c) Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
 - (d) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
 - 20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto

prior to the date of the Contract in respect of the Supply or any part thereof.

- 20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.
- **21. Subcontracting** 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
 - 21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and 22.1 Technical Specifications and Drawings Standards

- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VII, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin;
- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser;
- (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.
- 23. Packing and Documents
 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their named place of destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' named place of destination and the absence of heavy handling facilities at all points in transit.
 - 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional

82

requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

- 24. Insurance 24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.
- **25. Transportation** 25.1 Unless otherwise specified in the **SCC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
 - 25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
 - (a) Performance or supervision of on-site assembly and/or start-up of the supplied Goods;
 - (b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - (d) Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - (e) Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
 - 25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
 - 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC.
 - 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, and/or at the Goods' named place of destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
 - 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and

26. Inspections and Tests expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.
- 27. Liquidated Damages
 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.
- **28.** Warranty 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent

improvements in design and materials, unless provided otherwise in the Contract.

- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of named place of destination.
- 28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the named place of destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- **29. Patent Indemnity** 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
 - (a) The installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
 - (b) The sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.
- 30.1 Except in cases of criminal negligence or willful misconduct,
 - (a) The Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
 - (b) The aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement
- **31.** Change in Laws and Regulations 31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is

30. Limitation of Liability

located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

- 32. **Force Majeure** 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
 - 32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
 - If a Force Majeure situation arises, the Supplier shall promptly notify 32.3 the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
 - The Purchaser may at any time order the Supplier through notice in 33.1 accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:
 - Drawings, designs, or specifications, where Goods to be (a) furnished under the Contract are to be specifically manufactured for the Purchaser;
 - (b) The method of shipment or packing;
 - The place of delivery; and (c)
 - (d) The Related Services to be provided by the Supplier.
 - If any such change causes an increase or decrease in the cost of, or the 33.2 time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight

33. **Change Orders** and Contract Amendments

(28) days from the date of the Supplier's receipt of the Purchaser's change order.

- 33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
- 33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- 34. Extensions of Time
 34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.
 - 34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 27, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.
 - **Termination** 35.1 Termination for Default

35.

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) If the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
 - (ii) If the Supplier fails to perform any other obligation under the Contract; or
 - (iii) If the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those

88

undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

- 35.2 Termination for Insolvency
 - (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.
- 35.3 Termination for Convenience
 - (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective;
 - (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) To have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.
- 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.
- 37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the AFD that it has completed all formalities in a timely manner, including applying for permits, authorizations and
- 36. Assignment
- 37. Export Restriction

licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

Section IX. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(i)	The Purchaser's country is:KENYA
GCC 1.1(j)	The Purchaser is: KENYA POWER & LIGHTING COMPANY LTD
GCC 1.1 (o)	The Named Place of Destination is: <i>Kenya Power & Lighting Company Limited Stores</i> , variously located in Kenya.
GCC 4.2	The meaning of the trade terms shall be as prescribed by Incoterms.
	The version edition of Incoterms shall be Incoterms 2010.
	However, the definition of the place and date associated with "delivery" is modified as follows:
	(a) Under "CIP" Incoterms defines "delivery" as the place and date where risk transfers from the seller to the buyer.
	(b) In this Bidding Document, when using "CIP" and not referring to the transfer of risk, the term "delivery" shall be interpreted as the date and place where the Goods and Related Services arrive at the named place of final destination, and this date shall be reflected in the Delivery Schedule.
GCC 5.1	The governing and communication language shall be English
GCC 7.1	N/A
GCC 8.1	For <u>notices</u> , the Purchaser's address shall be:
	Attention:
	Contract Project Manager (AFD/EU) The Kenya Power and Lighting Company Stima Sacco Building I, 3 rd Floor Kolobot Road, Parklands P.O Box 30099 - 00100 Nairobi, Kenya Telephone: +254-711-031821 or +254-711-031736 Electronic mail address: JNjehia@kplc.co.ke and a copy to BAngima@kplc.co.ke

GCC 9.1	The governing law shall be the law of: KENYA
GCC 10.2	The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows:
	(a) Contract with foreign Supplier:
	GCC 10.2—All disputes arising in connection with the present Contract shall be finally settled under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with said Rules.
	(b) Contracts with Supplier national of the Purchaser's country:
	In the case of a dispute between the Purchaser and a Supplier who is a national of the Purchaser's country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Purchaser's country.
GCC 13.1	For Goods supplied from abroad:
	Upon shipment, the Supplier shall notify the Purchaser and the Insurance Company by cable or by electronic way previously agreed between parties the full details of the shipment, including Contract number, description of Goods, quantity, the mode of transport, the bill of lading number and date, place of loading, date of shipment, place of discharge, etc. The Supplier shall mail the following documents to the Purchaser, with a copy to the Insurance Company:
	 (i) Copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
	 (ii) Original and ONE copy of the negotiable, clean, on-board bill of lading marked "freight prepaid" and ONE copy of nonnegotiable bill of lading;
	(iii) Copies of the packing list identifying contents of each package;
	(iv) Insurance certificate;
	(v) Manufacturer's or Supplier's warranty certificate;
	(vi) Inspection certificate, issued by the nominated inspection agency, and the Supplier's factory inspection report; and
	(vii) Certificate of origin.
	The above documents shall be received by the Purchaser at least two weeks before arrival of the Goods at the place of arrival and, if not received, the Supplier will be responsible for any consequent expenses.
	For Goods from within the Purchaser's country:
	Upon delivery of the Goods to the transporter, the Supplier shall notify the Purchaser and mail the following documents to the Purchaser:
	(i) copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;

	(ii) delivery note, railway receipt, or truck receipt;
	(iii) Manufacturer's or Supplier's warranty certificate;
	(iv) inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and
	(v) certificate of origin.
	The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.
GCC 15.1	The prices charged for the Goods supplied and the related Services performed Shall not be adjustable.
GCC 16.1	GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:
	Payment for Goods supplied from abroad:
	Payment of foreign currency portion shall be made in (EUR) in the following manner:
	 (i) Advance Payment: Ten (10) percent of the Contract Price shall be paid within sixty (60) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and in the form provided in the bidding documents or another form acceptable to the Purchaser;
	 (ii) On Shipment: Eighty (80) percent of the Contract Price of the Goods shipped shall be paid through direct payment within sixty (60) days, and/or upon submission of documents specified in GCC Clause 13.1. The quantities shipped shall be as per Delivery Schedule. Payment shall be for the specified quantities as per the delivery period.
	 (iii) On Acceptance: Ten (10) percent of the Contract Price of Goods received shall be paid within sixty (60) days of receipt of the Goods upon submission of claim supported by the acceptance certificate issued by the Purchaser.
	Payment of local currency portion shall be made in <u>Ksh</u> within sixty (60) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.
	Payment for Goods and Services supplied from within the Purchaser's country:
	Payment for Goods and Services supplied from within the Purchaser's country shall be made in Ksh , as follows:
	(i) Advance Payment: Ten (10) percent of the Contract Price shall be paid within Sixty (60) days of signing of the Contract against upon submission of claim and a bank guarantee for the equivalent amount and in the form

	provided in the bidding documents or another form acceptable to the Purchaser;
	 (ii) On Delivery: Eighty (80) percent of the Contract Price shall be paid within sixty (60) days on receipt of the Goods and upon submission of the documents specified in GCC Clause 13. The quantities shipped shall be as per Delivery Schedule. Payment shall be for the specified quantities as per the delivery period.
	(iii) On Acceptance: The remaining ten (10) percent of the Contract Price shall be paid to the Supplier within Sixty (60) days after the date of the acceptance certificate for the respective delivery issued by the Purchaser.
TGCC 16.1	Payment to the Supplier of the amounts due in each currency shall be made into the following bank accounts:
	[insert bank account details at the time of contract signing]
GCC 16.5	The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 60 days.
	The interest rate for payments in foreign currency that shall be applied is <i>LIBOR</i> (6 Months Average).
	The interest rate for payments in local currency that shall be applied is the <i>prevailing Central Bank of Kenya Treasury Bill Rate</i> .
GCC 17.3	The following taxes, duties and fees exemptions apply to the Contract: <i>Custom duties, Value Added Tax, Import Declaration Fee and Railway Development Levy</i>
GCC 18.1	The amount of the Performance Security shall be: 10% of the Contract Value
GCC 18.3	The Performance Security shall be in the form of: <i>A Bank Guarantee</i> . The Performance security shall be denominated in the currencies of payment of the Contract, in accordance with their portions of the Contract Price .
GCC 18.4	Discharge of the Performance Security shall take place: 30 days following the completion of the supplier's performance obligations including warranty
GCC 23.2	The packing, marking and documentation within and outside the packages shall be: as indicated in Clause 6 of the Technical Specifications - (Marking, Labelling and Packing) and attached to the order.
GCC 24.1	The insurance coverage shall be as specified in the Incoterms.
GCC 25.1	Responsibility for transportation of the Goods shall be as specified in the Incoterms.
GCC 25.2	Incidental services to be provided are: N/A

GCC 26.1	The inspections and tests shall be: as indicated in the Technical Specifications
GCC 26.2	The Inspections and tests shall be conducted by three (3) KPLC Staff at Manufacturer's Place.
	The cost of inspection and tests shall be borne by the bidder. The cost Exclude costs of travel & accommodation from Kenya to the Nearest Airport to Manufacturer's facility which shall be borne by KPLC.
GCC 27.1	The liquidated damage shall be: 0.5% per week
GCC 27.1	The maximum amount of liquidated damages shall be: 10%
GCC 28.3	The period of validity of the Warranty shall be: 365 days
	For purposes of the Warranty, the named place(s) of destination(s) shall be:
	Various KPLC Stores in Kenya
	OR
	(b) Pay liquidated damages to the Purchaser with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be 10% of the Contract Sum.
GCC 28.5 and	The period for repair or replacement shall be: 45 days.
GCC 28.5 and GCC 28.6	The period for repair of replacement shall be: 45 days.

Appendix 1 to Special Conditions of Contract - Corrupt and Fraudulent Practices Policy and Social and Environmental Responsibility

1. <u>Corrupt and Fraudulent Practices</u>

The Contracting Authority and the suppliers, contractors, subcontractors, consultants or subconsultants must observe the highest standard of ethics during the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.

By signing the Statement of Integrity, the suppliers, contractors, subcontractors, consultants or subconsultants declare that (i) "it did not engage in any practice likely to influence the contract award process to the Contracting Authority's detriment, and that it did not and will not get involved in any anti-competitive practice", and that (ii) "the procurement process and the performance of the contract did not and shall not give rise to any act of corruption or fraud".

Suppliers, contractors, subcontractors, consultants or subconsultants permit the AFD/EU to inspect their accounts and records relating to the procurement process and performance of the AFD/EU-financed contract, and to have them audited by auditors appointed by the AFD/EU.

The AFD/EU reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- (a) Reject a proposal for a contract award if it is established that during the selection process the bidder or consultant that is recommended for the award has been convicted of corruption, directly or by means of an agent, or has engaged in fraud or anti-competitive practices in view of being awarded the Contract;
- (b) Declare misprocurement when it is established that, at any time, the Contracting Authority, the suppliers, contractors, subcontractors, consultants or subconsultants their representatives have engaged in acts of corruption, fraud or anti-competitive practices during the procurement process or performance of the contract without the Contracting Authority having taken appropriate action in due time satisfactory to the AFD/EU to remedy the situation, including by failing to inform the AFD/EU at the time they knew of such practices.

The AFD/EU defines, for the purposes of this provision, the terms set forth below as follows:

- (a) Corruption of a Public Officer means:
 - (i) The act of promising, offering or giving to a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity; or
 - (ii) The act by which a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity.
- (b) A Public Officer shall be construed as meaning:
 - (i) Any person who holds a legislative, executive, administrative or judicial mandate (within the country of the Contracting Authority) regardless of whether that person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the person occupies;

- (ii) Any other person who performs a public function, including for a State institution or a Stateowned company, or who provides a public service;
- (iii) Any other person defined as a Public Officer by the national laws of the country of the Contracting Authority.
- (c) Corruption of a private person means:
 - (i) The act of promising, offering or giving to any person other than a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations; or
 - (ii) The act by which any person other than a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations;
- (d) Fraud means any dishonest conduct (act or omission), whether or not it constitutes a criminal offence, deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate consent, to circumvent legal or regulatory requirements and/or to violate internal rules in order to obtain illegitimate profit.
- (e) Anti-competitive practices mean:
 - (i) Any concerted or implied practices which have as their object or effect the prevention, restriction or distortion of competition within a marketplace, especially where they (i) limit access to the marketplace or free exercise of competition by other undertakings, (ii) prevent free, competition-driven price determination by artificially causing price increases or decreases, (iii) restrict or control production, markets, investments or technical progress; or (iv) divide up market shares or sources of supply;
 - (ii) Any abuse by one undertaking or a group of undertakings which hold a dominant position on an internal market or on a substantial part of it;
 - (iii) Any practice whereby prices are quoted or set unreasonably low, the object of which is to eliminate an undertaking or any of its products from a market or to prevent it from entering the market.

2. <u>Social and Environmental Responsibility</u>

In order to promote sustainable development, the AFD seeks to ensure that internationally recognised environmental and social standards are complied with. Candidates for AFD/EU-financed contracts shall consequently undertake in the Statement of Integrity to:

- (a) Comply with and ensure that all their subcontractors or subconsultants comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;
- (b) Implement environmental and social risks mitigation measures when specified in the environmental and social management plan (ESMP) provided by the Contracting Authority.

Section X. Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

Table of Forms

LETTER OF ACCEPTANCE	99
CONTRACT AGREEMENT	100
PERFORMANCE SECURITY (BANK GUARANTEE)	102
ADVANCE PAYMENT SECURITY	103

Letter of Acceptance

[letterhead paper of the Purchaser]

To: [name and address of the Supplier]

Subject: Notification of Award Contract No.

This is to notify you that your Bid dated _____[insert date] for execution of the [insert name of the contract and identification number, given in the SCC] for the Contract Price of as [insert amount in numbers and words and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our institution.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose the Performance Security Form included in Section X, Contract Forms, of the Bidding Documents.

Authorized Signature:	
Name and Title of Signatory:	
Name of Institution:	

Attachment: Contract Agreement

[date]

Contract Agreement

THIS AGREEMENT made

the [insert number] day of [insert: month], [insert: year].

BETWEEN

- (1) [insert complete name of Purchaser], a [insert description of type of legal entity, for example, an agency of the Ministry of of the State of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}] and having its principal place of business at [insert address of Purchaser] (hereinafter called "the Purchaser"), and
- (2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [insert Contract Price in words and figures, expressed in the Contract currency (ies)] (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.
 - (a) The Letter of Acceptance;
 - (b) The Bid Submission Form and Appendix to Bid Submission Form (including the signed Statement of Integrity);
 - (c) The Addenda Nos.____ (if any);
 - (d) Special Conditions of Contract;
 - (e) General Conditions of Contract;
 - (f) The Specification (including Schedule of Requirements and Technical Specifications);
 - (g) The completed Bidding Forms (including Price Schedules);
 - (h) Any other document listed in GCC as forming part of the Contract.
- 3. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

- 4. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
- 6. The address of the Employer for notice purposes pursuant to GCC 1.3 is:
- 7. The address of the Contractor for notice purposes pursuant to GCC 1.3 is:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: [insert signature] In the capacity of [insert title or other appropriate designation] In the presence of [insert identification of official witness]

For and on behalf of the Supplier

Signed: [insert signature of authorized representative(s) of the Supplier] In the capacity of [insert title or other appropriate designation] In the presence of [insert identification of official witness] Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Performance Security (Bank Guarantee)

Beneficiary: [Insert name and Address of Purchaser]

Date: [Insert date of issue]

PERFORMANCE GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

WHEREAS......(hereinafter called "the Supplier") has undertaken, in pursuance of your Tender Number.....(reference number of the Tender) and its Tender dated(insert Supplier's date of Tender taken from the Tender Form) to supply(description of the goods) (hereinafter called "the Tender).. Furthermore, we understand that, according to the conditions of the Tender, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (______) *[insert amount in words]*,¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, $2...^2$, and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

¹*The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

²Insert the date twenty-eight days after the expected completion date as described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [Insert name and Address of Purchaser]

Date: [Insert date of issue]

ADVANCE PAYMENT GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that [insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Applicant") has entered into Contract No. [insert reference number of the contract] dated [insert date] with the Beneficiary, for the execution of [insert name of contract and brief description of Goods and related Services] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____)*[insert amount in words]¹* upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) Has used the advance payment for purposes other than toward delivery of Goods; or
- (b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount,

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.

has been certified for payment, or on the *[insert date⁹]*., whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

APPENDIX I – SINGLE PHASE PRE-PAID METER SPECIFICATIONS

N	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
V.A.	SPECIFICATION FOR SINGLE-	Issue No.	1-02
7	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -	Revision No.	0
Konva Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of	2017-10-12
Kenya Power	Communication Between MCU and UI	J Issue Page 0 of 33	
	Prepayment Din-rail Mounting Static Wa ier (PLC) as Medium of Communication E (MCU) and User Interface Unit (UII	etween Measurem	
	ier (PLC) as Medium of Communication E	etween Measurem	
	ier (PLC) as Medium of Communication E	etween Measurem	
	ier (PLC) as Medium of Communication E	etween Measurem	
	ier (PLC) as Medium of Communication E (MCU) and User Interface Unit (UR	etween Measurem	
	ier (PLC) as Medium of Communication E (MCU) and User Interface Unit (UI A Document of the Kenya Power & October 2017	etween Measurem D-Specification Lighting Co. Ltd	
Power Line Carri	ier (PLC) as Medium of Communication E (MCU) and User Interface Unit (UI A Document of the Kenya Power & October 2017	etween Measurem D-Specification Lighting Co. Ltd	ent and Control Unit

	TITLE:	Doc. No.	KP1/6C/4/1/TSP/1
Y	SPECIFICATION FOR SINGLE-	Issue No.	1-02
Kenya Power	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT - HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU		
		Revision No.	0
		Date of Issue	2017-10-12
		Page 1 of 33	
1 2 Electronic copy (po	Manager, Standards Supply Chain Manager (Procureme if) on Kenya Power server (http://172.16.1.		php?ff [:] older[d-23)
Suggestions for im Department are weld Copyright, Users are	©KENYA POWER & LIGHTING COM reminded that by virtue of Section 25 of th	fications shall addressed to th IPANY LIMIT te Copyright Act	ED t, Cap 12 of 2001 of th
Suggestions for im Department are weld Copyright, Users are Laws of Kenya, cop this Act, no KPLC S	f progress in the industry, KPLC speci- provements to approved specifications a come. ©KENYA POWER & LIGHTING COM reminded that by virtue of Section 25 of the yright subsists in all KPLC Standards and e itandard produced by KPLC may be reprodu- permission from the Managing Director &	fications shall addressed to th addressed to th IPANY LIMIT te Copyright Act xcept as provide uced, stored in re CEO, KPLC.	ED t, Cap 12 of 2001 of the
Suggestions for im Department are weld Copyright, Users are Laws of Kenya, cop this Act, no KPLC S means without prior	f progress in the industry, KPLC speci- provements to approved specifications a come. ©KENYA POWER & LIGHTING COM reminded that by virtue of Section 25 of the yright subsists in all KPLC Standards and e itandard produced by KPLC may be reprodu- permission from the Managing Director &	fications shall addressed to th IPANY LIMIT te Copyright Act except as provide uced, stored in re CEO, KPLC.	ED t, Cap 12 of 2001 of th d under Section 26 of etrieval system by any

~		TITLE:			Doc. No.	KP1/6C/4/1/TSP/14
Kenya Power			SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -		Issue No.	1-02
		RAIL M			Revision No.	0
		ENERG	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU			2017-10-12
		Commu				
0.2 Am	endment	Record				
Rev No.	Date	Record	Description of	Prepared b	y	Approved by
	(YYYY DD)	/-MM-	Change	(Name & S	ignature)	(Name & Signature)
0	2017-1	0-10	New Issue	Daniel Okul	12 A A	
				Peter Wanyo		Dr. Eng. Peter Kimemi
				Eng. Peter N Eng. Rapha		
ssued by: Head	of Section,	Standard	Development		Salaran olar selara salaran s	Department, Standards
ssued by: Head igned:	F.	Standard	Development	Signed	Salaran olar selara salaran s	Department, Standards

<u>_</u>	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14
T	SPECIFICATION FOR SINGLE-	Issue No.	1-02
7	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -	Revision No.	0
ALCORD NUCLEON	HOUR METERS FOR ACTIVE		-
Kenya Power	ENERGY- Using PLC as Medium of Communication Between MCU and UI	U Date of Issue Page 3 of 33	2017-10-12
Table of Control			
Table of Conter	115		1
	cord		
	PERPARA		
	REFERENCES		
	AND ABBREVIATIONS		
	VTS		
4.1 Operating C	Conditions		
4.2 Design and	construction requirements		
4.3 Electrical R	tequirements		
4.4 Interoperab	ility Requirements		
4.5 Quality Ma	nagement System		
5 TESTS AND IN	SPECTIONS		
6 MARKING AN	ID PACKING		
7 DOCUMENTA	TION		
8 INFORMATIO	N AND WARRANTY (IN CASE OF T	ENDER AWARD)	
ANNEX A (Normati	ive):Guaranteed Technical Particulars		24
ued by: Head of Section,		thorized by: Head of ned:	Department, Standards

A	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
/*	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1-02
7	RAIL MOUNTING STATIC WATT -	Revision No.	0
Kenya Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of Issue	2017-10-12
	Communication Between MCU and UI	Page 4 of 33	
Department, all of requirements for si The Specification e energy, using Pow Control Unit (MCU The Specification i does not purport to 1. SCOPE This Specification Prepayment Meter consumption at a n The Specification Technical Particula The Specification Watt-Hour Prepay responsibility of m practice and adhere meters for KPLC.	has been prepared by the Customer Servic The Kenya Power & Lighting Company Li ngle-phase DIN-rail mounting split prepay stablishes uniform requirements for Single er Line Carrier (PLC) as the means of c J) and User Interface Unit(UIU). s intended for use by KPLC in procurement include provisions of a contract. applies to newly manufactured, Single-Pl s for direct connection in measurement ominal frequency of 50 Hz. also covers inspections and tests of the r rs to be filled, signed by the manufacturer stipulates the minimum requirements for ment Meters acceptable for use in the anufacturer to ensure adequacy of the des- nce to standards, specifications and applic	mited (abbreviated ment meters for a e-Phase Split Prepro ommunication bet ent of single phase hase Din-Rail Mor t of alternating cl neters as well as and submitted for r Single-Phase Di Company (KPL) ign, good workma cable regulations in	as KPLC). It lays down ctive energy. ayment Meters for active ween Measurement and prepayment meters and anting Static Watt-Hour arrent electrical energy schedule of Guaranteed tender evaluation. n-Rail Mounting Static C) and it shall be the nship, good engineering a the manufacture of the

1.	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/			
/×	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1			
-	RAIL MOUNTING STATIC WATT -	Revision No.	0			
Kenya Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UI	Date of Issue Page 5 of 33	2017-10-12			
2. NORMATI	VE REFERENCES					
Specification. Unles	ards contain provisions, which through re is otherwise stated, the latest Editions (nents of this Specification take preceden	including amendn				
IEC 60695-2-1	Fire Hazards Testing-Part 2-Test Methods-Section 1/sheet: Glow-wire end-product test and guidance					
IEC 61000-4-5	Electromagnetic Capability, Te Surge immunity test	Electromagnetic Capability, Testing and measurement Techniques, Surge immunity test				
IEC 61010-1:2010	Safety requirements for electri and laboratory use-Part 1: Gene		measurement, control,			
IEC 61140:2016	Protection against electric she equipment	Protection against electric shock-common aspects for installation and equipment				
IEC 61358	Acceptance inspection for direct	tly connected met	ers			
IEC 61358:1996	Acceptance inspection for direct for active energy (class 1 & 2)	t connected AC st	atic Watt hour meter			
IEC 61557	Electrical safety in low voltage 1,500V d.c. – Equipment fo protective measures-Part 1: Ger	r Testing, measu	ring or monitoring of			
IEC 60529	Degrees of protection provided	by Enclosures (IP	Code)			
IEC 62052-11:2003	Electricity Metering equipment Test Conditions- PART 11: Me		equirements, Tests and			
IEC 62053-21:2003	Electricity metering equipment 21: Static meters for active energy		Requirements - Part			
IEC 62055-31:2005	Electricity metering – Payment – Static payment meters for act					
IEC 62056-21	Electrical metering equipment Static Meters for active energy		requirements -Part 21:			
ed by: Head of Section,	Standard Development Aut	horized by: Head of	Department, Standards			
ned:	Sig	ied:	-6-			
e: 2017-10-12		e: 2017-10-12				

)r			KP1/6C/4/1/TSP/14/ 1-02
	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1
4000000	RAIL MOUNTING STATIC WATT -	Revision No.	0
Kenya Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU	Date of Issue Page 6 of 33	2017-10-12
IEEE1901.2	Standard for Low Frequency (I Line Carrier for Smart Grid App	less than 500 kH	z) Narrow Band Power
SANS1524-1:2004	Electricity prepayment Systems	Part 1: Prepaym	ent meters.
3. DEFINITI	ONS AND ABBREVIATIONS		
	this Specification, the Terms, Definitions d shall include the following:	and Abbreviation:	s given in the Reference
DC	Direct Current		
DLMS/COS	SEM Device Language Message Sp Energy Metering	ecification/Comp	anion Specification for
Hz	Hertz		
KPLC	Kenya Power & Lighting Comp	any Limited	
kV	Kilovolt		
KWH	Kilowatt-hour		
LCD	Liquid crystal display		
LED	Light emitting diode		
MCU	Measurement and Control Unit		
MDMS	Meter Data Management Systen	1	
OFDM	Orthogonal Frequency Division	Multiplexing	
PLC	Power Line Carrier		
SRE	Significant Reverse Energy		
STS	Standard Transfer Specification		
UIU	User Interface Unit		
ssued by: Head of Sectio	n, Standard Development Aut	torized by: Head of	Department, Standards
Signed: Mr. C.	Sign	ed:	De

	-	TITLE:		Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
	14	SPECIFICATION FOR SINGL PHASE SPLIT PREPAYMENT		Issue No.	1
		RAIL MOUNTING STATIC WATT -	Revision No.	0	
Keny	a Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Media Communication Between MCU	m of	Date of Issue	2017-10-12
				Page 7 of 33	
4.	REQUIREM	ENTS			
41.0	Operating Con	ditions			
		ivironmental Conditions			
The n condit		suitable for continuous outdoor	operation	in tropical cli	nate with the following
	Altitude:	Up to 2,200m above sea			
	Temperature: Humidity:	Average of 30° C with a Up to 95%	minimun	n of -1°C and m	aximum of +55° C
d)	Pollution:	Pollution level III ('Hea	vy')		
4.1.2	System Char	acteristics			
	4.1.2.1. The rr	teter will be connected to an over	rhead or u	inderground ear	thed system
	4.1.2.2 The no	ominal voltage (Un) is 230 volts,	50Hz.		
4.2 D	esign and Con	struction Requirements			
4.2.1	General Requ	tirements			
421	The Measure	ement and Control Unit (MCU) s	hall be of	DIN rail mount	ine with locking clin. to
Time	fit to a 35 m		tian be bi	171.4 ran moun	ing with locking cup, to
	2 The MCU ar	nd User Interface Unit (UIU) sha	ll commu	nicate via Powe	r Line Carrier(PLC) for
4.2.1.2	a distance no	ot less than one hundred (100) me	eters.		
4.2.1.2					ted Prepayment Meter.
	3 The meters s	hall be constructed as Single-Pha	ase 2-Win	e Direct-Connec	
4.2.1.		hall be constructed as Single-Pha all have terminals as in Figure 1.			eter shall be Bottom-in,
4.2.1.	The meter sh Bottom-Out	all have terminals as in Figure 1. and with Line-in Neutral-In termi	The conr inals at the	nections to the m c base level to al	low racking of the meter
4.2.1.	The meter sh Bottom-Out on a test ben	all have terminals as in Figure 1. and with Line-in Neutral-In termi ch. The meter terminals shall ha	The conr inals at the ve a prote	ections to the m base level to al ection cover with	low racking of the meter h sealable Nickel-plated
4.2.1.	The meter sh Bottom-Out on a test ben steel screws	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and	The conr inals at the ve a prote f ingress	ections to the n e base level to al ection cover with of water. The p	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.	The meter sh Bottom-Out on a test ben steel screws	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag	The conr inals at the ve a prote f ingress	ections to the n e base level to al ection cover with of water. The p	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.	The meter sh Bottom-Out on a test ben steel screws transparent a	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag	The conr inals at the ve a prote f ingress	ections to the n e base level to al ection cover with of water. The p	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.	The meter sh Bottom-Out on a test ben steel screws transparent a	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag	The conr inals at the ve a prote f ingress	ections to the n e base level to al ection cover with of water. The p	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.	The meter sh Bottom-Out on a test ben steel screws transparent a	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag	The conr inals at the ve a prote f ingress	ections to the n e base level to al ection cover with of water. The p	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.4	The meter sh Bottom-Out on a test ben steel screws transparent a illustrated in	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag	The conr inals at the ve a prote f ingress te of all th	nections to the m e base level to al ection cover with of water. The p te terminals. The	low racking of the meter h sealable Nickel-plated rotection cover shall be
4.2.1.4	The meter sh Bottom-Out on a test ben steel screws transparent a illustrated in	all have terminals as in Figure 1, and with Line-in Neutral-In termi ch. The meter terminals shall ha to protect against tampering and nd shall ensure adequate coverag Figure 1.	The conr inals at the ve a prote f ingress te of all th	ections to the methods to all ection cover with of water. The provident of the terminals. The provident of the terminal of	low racking of the meter h sealable Nickel-plated rotection cover shall be e connections shall be as

		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
	Y	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1
	1	RAIL MOUNTING STATIC WATT -	Revision No.	0
Konv	Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of	2017-10-12
Kenya	TOWEI	Communication Between MCU and UIU	Page 8 of 33	
4.2.1.5 4.2.1.6	The MCU (mm; and m The MCU I body excep The meter opened, the clauses (a)	rminals Configuration dimensions shall not exceed: Height – 17 eter base shall be on the width side where body shall be ultrasonically sealed for life t for the termination of cables. shall have terminal cover open detection load shall be disconnected. The mechani to (c) below: MCU shall be supplied with loading switt nal cover when MCU is not activated by c	the Din rail mout and there shall be mechanism. One sm shall be design tch in open mode	nt shall be located. to o screws on the MCU the the terminal cover is ned to operate as in sub- and installer can open de (token).
	termi	ful cover milen incov to not nem men of c		and a fact hand the allowed has
	 (b) After loadin (c) After the te opene 	installation of MCU, the installer will inp ng switch and activate terminal cover oper commissioning token is put into the MC rminal cover shall lead to tamper. When ed, MCU will disconnect immediately. When ened, MCU will detect and record the e	n detection function (U and loading sw n MCU has powe ten MCU has no p	n. witch closes, opening of rr and terminal cover is ower and terminal cover
Issued by: F	 (b) After loadin (c) After the te opene is opene resum 	installation of MCU, the installer will inp ng switch and activate terminal cover oper commissioning token is put into the MC rminal cover shall lead to tamper. When ed, MCU will disconnect immediately. Whe ened, MCU will detect and record the e- nes.	a detection function (U and loading sw n MCU has powe then MCU has no p went and disconn	n. witch closes, opening of rr and terminal cover is ower and terminal cover
Issued by: F	 (b) After loadin (c) After the te opene is opene resum 	installation of MCU, the installer will inp ng switch and activate terminal cover oper commissioning token is put into the MC rminal cover shall lead to tamper. When ed, MCU will disconnect immediately. Whe ened, MCU will detect and record the e- nes.	a detection function CU and loading sw n MCU has powe ten MCU has no p went and disconn horized by: Head of	on. witch closes, opening of er and terminal cover is ower and terminal cover ect immediately power

		TITLE:	Doc. No.		KP1/6C/4/1/TSP/14/ 1-02
/	ŧ,	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No) .	1
7	RAIL MOUNTING STATIC WATT - Revis		- Revision	No.	0
Kenya	Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of Issue		2017-10-12
		Communication Between MCU and U	Page 9 d	of 33	
4.2.1.8	not to allo extremes. The meter	s terminal illustrated in Figure 1 shall	ire, vermin, du have holes and	st, che I screv	micals and temperature vs of Moving-cage type
4.2.1.10	terminals Terminal	brass or nickel-plated brass for high shall be of suitable rating to carry cont holes shall be of at least 10-mm diame n, Neutral-in terminal holes to meter by	inuously 125% ter and 15mm i	Imax. in dep	th. The dimension from
4.2.1.11	The meter	's terminal screw inserts shall be seala	ble with utility	wire s	eals.
4.2.1.12	The meter standard.	rs protection class shall be Class II	Double insula	ited) a	s per IEC 61140:2016
4.2.1.13	retention [s shall have a non-volatile memory cap beriod of not less than 10 years or for t thout an electrical supply being supplie	he certified life	e of th	
4.2.1.14	credit regi	s shall have register codes to indicate i ster, power fail counter, last credit toke Il be available on the UIU display.			
4.2.1.15	The princi	pal unit for the measured values shall	be the kilowatt-	-hour (kWh).
4.2.1.16		shall have a means of reading the ere for testing purposes.	dit register to	within	a resolution of at least
4.2.1.17	The meter swapped.	rs shall detect significant reverse ener	gy (SRE) when	n the l	ine and load wires are
4.2.1.18	The meter	s shall continue to operate correctly an	d decrement cr	edit di	uring SRE detection.
4.2.1.19	The meter	s shall have LED indicators for testing	and indication	ofkW	/h consumption.
4.2.1.20		rs shall have an optical communica information stored inside the meter thr			
4.2.1.21	and Meter	s shall use PLC communication mode Data Management System (MDMS) te of 97% using real time, bidirectiona	o a minimum	distan	ce of 1000 meters with
Issued by: He	ad of Section	Standard Development /	uthorized by: He	ead of I	Department, Standards
Signed:	4	P. 8	igned:	6	2-6-
Date: 2017-10	-12	1	ate: 2017-10-12		

		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/
1		SPECIFICATION FOR SINGLE-	Issue No.	1-02
Ţ	-	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT	Revision No.	. 0
Kenya	Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and U	Date of Issue Page 10 of 3	2017-10-12
			-	
4.2.1.22		shall comply with IEEE1901.2 using O nodulation at frequency band up to 500		
4.2.1.23		s shall be compliant with the Device L on for Energy Metering (DLMS/COSI		
4.2.1.24		s shall work under Postpaid Mode or heter specific token or optical commun		switch of mode shall be
4.2.1.25		s shall be supplied together with three e t shall not be possible to reprogram the		
4.2.1.26		shall conform to the degree of prot shall be so designed to ensure protection		
4.2.1.27	polycarbor	enclosure shall be made of UV-stab nate that complies with IEC 60695-2-1 and mechanical strength with minimum	glow wire test. The	material shall be of good
4.2.2		lity Requirements		
		lity Requirements at and Control Unit (MCU)		
	easuremen The M0		cally interrupt the	load circuit on the expiry
4.2.2.1 M	easuremen The M0 of credi	it and Control Unit (MCU)		
4.2.2.1 M 4.2.2.1.1	The MC of credi	it and Control Unit (MCU) CU shall have a load switch to automat t balance.	load circuit after to	oken top up.
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2	easuremen The MC of credi The loa The me The me	it and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the	load circuit after to equirements given i	oken top up. in IEC 62053-21:2003.
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2 4.2.2.1.3	The MC of credi The loa The loa The me Light E	at and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the ter load switch shall comply with the r ters shall be able to indicate absence of mitting Diode (LED) ters shall disconnect the load if power	load circuit after to equirements given i presence of contin	oken top up. in IEC 62053-21:2003. nuous power by use of an
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2 4.2.2.1.3 4.2.2.1.4	easuremen The MC of credi The loa The me Light E The me normali The me	at and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the ter load switch shall comply with the r ters shall be able to indicate absence of mitting Diode (LED) ters shall disconnect the load if power	load circuit after to equirements given i presence of contin ailure is detected a limit setting that s	oken top up. in IEC 62053-21:2003. nuous power by use of an ind connect the load after shall disconnect the load
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2 4.2.2.1.3 4.2.2.1.4 4.2.2.1.5	easuremen The MC of credi The loa The me Light E The me normali The me	at and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the ter load switch shall comply with the r ters shall be able to indicate absence of mitting Diode (LED) ters shall disconnect the load if power zation. ters shall have a programmable power	load circuit after to equirements given i presence of contin ailure is detected a limit setting that s	oken top up. in IEC 62053-21:2003. nuous power by use of an ind connect the load after shall disconnect the load
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2 4.2.2.1.3 4.2.2.1.4 4.2.2.1.5 4.2.2.1.6	The MC of credi The loa The loa The me Light E The me normali The me once ex	tt and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the ter load switch shall comply with the r ters shall be able to indicate absence of mitting Diode (LED) ters shall disconnect the load if power zation. ters shall have a programmable power ceeded and reconnect once the load fal	load circuit after to equirements given i presence of contin ailure is detected a limit setting that s Is below the set lim	oken top up. in IEC 62053-21:2003. nuous power by use of an ind connect the load after shall disconnect the load
4.2.2.1 M 4.2.2.1.1 4.2.2.1.2 4.2.2.1.3 4.2.2.1.4 4.2.2.1.5 4.2.2.1.6	The MC of credi The loa The loa The me Light E The me normali The me once ex	tt and Control Unit (MCU) CU shall have a load switch to automat t balance. d switch shall automatically restore the ter load switch shall comply with the r ters shall be able to indicate absence of mitting Diode (LED) ters shall disconnect the load if power zation. ters shall have a programmable power ceeded and reconnect once the load fal Standard Development	load circuit after to equirements given i presence of contin ailure is detected a limit setting that s Is below the set lim	oken top up. in IEC 62053-21:2003. mous power by use of an ind connect the load after shall disconnect the load it.

\v		TITLE: SPECIFICATION FOR SINGLE-	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
V		PHASE SPLIT PREPAYMENT DIN		1
AND DECIDE		RAIL MOUNTING STATIC WATT HOUR METERS FOR ACTIVE		
Kenya Po	ower	ENERGY- Using PLC as Medium of Communication Between MCU and		2017-10-12
4.2.2.1.7		CU shall have an LED indicator to sl proportional to current rate of consur		nsumption. The pulse rate
4.2.2.1.8		CU shall have a diagnostic LED to ind CU and the UIU.	cate the presence of	of communication between
4.2.2.1.9		CU shall continue metering and deer mications interface or the UIU.	ement credit, reg	ardless of the state of the
4.2.2.1.10	The Liv	ve and Neutral shall be DC immune co	mplying with requ	irements of IEC 61036.
4.2.2.1.11	equippo relays s and the	MCU shall support two elements dou ed with two 100A relays (loading swi shall operate simultaneously. In case the Neutral circuit, the MCU will take is easure on the higher current without di	ch) both in Live a tere is an imbaland as a tamper even	nd Neutral circuits. These the between the Live circuit t and record it. The MCU
4.2.2.1.12	prograr prograr provide 100,000	CU shall come fitted with an SCSS nming and interrogating the meter, nming probes and software (1 each f ed with the meter sample for evaluation 0 meters shall have 100 sets of probes CAAA9 ports.	Two (2) sets or or optical and SC n. For the winning	of data interrogating and SSCAAA9 ports) shall be g bidders, each delivery of
4.2.2.1.13	height) meter s stored i	CU shall be supplied together with a pl mm and material similar to that of a serial number shall be engraved on the n a magnetic medium with capability of a redundant digits shall be added to the	redit card indicati card together wit of being read out w	ng the meter number. The h its bar code version and
4.2.2.1.14	The M	CU shall be with Nil units pre-loaded (i.e. 0 (Zero) kWh)	
4.2.2.2	User II	nterface Unit (UIU)		
4.2.2.2.1		U shall comply with 20-digit Standa nms. All correctly entered tokens shall		
	of Section	Standard Development	Authorized by: Head	of Department, Standards
Issued by: Head of				
Issued by: Head of Signed:	-C.		ligned:	2-6-

1.		TITLE:		Doc. No.	KP1/6C/4/1/TSP/14
1		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN		Issue No.	1
1	RAIL MOUNTING STATIC WATT - Revision No		Revision No.	0	
Kenya Po	wer	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of		Date of	2017-10-12
nonya re		Communication Between MCU and	UIU	Issue Page 12 of 33	3
4.2.2.2.2	The UI	U's Keypad shall be user friendly with	a Liq	uid Crystal Dis	splay (LCD) for numeric
		isplay and language independent picto all have a wide viewing angle of 45 d	~		
4.2.2.2.3	integers numeric	U display shall have at least seven is and two decimals. The UIU display s is information display of all meter inf tive kwh, tamper mode etc.	hall in	addition have	icons; icon information;
4.2.2.2.4	The LC than 4.5	D shall have the height of the display mm.	charae	cters for the nu	meric values not be less
4.2.2.2.5		U keypad shall be of 12-key, internati ekspace" keys.	onal st	andard layout	including "information"
4.2.2.2.6		U enclosure material shall be UV-s nt as per IEC 60695-2-1.	table	polycarbonate/	ABS blend with flame
4.2.2.2.7	The UI	I shall conform to the degree of prote	ction I	P 54 as specifi	ied in IEC 60529.
4.2.2.2.8		J shall communicate with MCU throug a distance not less than one hundred (er (PLC) communication
4.2.2.2.9	The UII on the U	U shall be an interchangeable unit and JIU.	it sha	ll be possible t	to view the paired MCU
4.2.2.2.10		U shall enable loading the MCU with any existing credit balance.	many	pre-purchased	units of credit, without
4.2.2.2.11		U shall, upon acceptance of a valid tol o the appropriate register in the met			
4.2.2.2.12	The UI	U shall transfer the credit in kWh.			
4.2.2.2.13	The UI	I shall display the cumulative kilowat	t-hour	register.	
4.2.2.2.14	The UI backspa	U shall have a means to remove digit are key.	s from	a partially en	tered number sequence-
Issued by: Head	of Section,	Standard Development	Authori	ized by: Head of	Department, Standards
Signed: (A(-C.		signed:		0-6-
Date: 2017-10-12		1	Date: 20	017-10-12	All Control of Control

		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02		
V		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1		
1	Ŧ	RAIL MOUNTING STATIC WATT -	Revision No.	0		
Kenya P	ower	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and U	Date of Issue Page 13 of 33	2017-10-12		
4.2.2.2.15		shall have the ability to recall at least associated dates and time.	the last five success	ful credit tokens entered		
4.2.2.2.16	The UIU	shall be able to indicate the meter sol	lware.			
4.2.2.2.17	The UIU	shall indicate the status of the incomi	ng supply.			
4.2.2.2.18	The UIU	shall indicate the credit status.				
4.2.2.2.19	The UIU	shall indicate token acceptance or rej	ection.			
4.2.2.2.20		shall give low credit warning by mean shall have option of muting the low				
4.2.2.2.21		The UIU shall have a buzzer that will give a feedback on key press, Token Accept ar Reject melodies, low-credit alarms as a factory-programmable option.				
4.2.2.2.22	The UIU	The UIU keypad shall have backlight to enable keying of tokens in the dark.				
4.2.2.2.23	The UIU	shall be wall mountable.				
4.2.2.2.24		shall be able to communicate with M battery. The batteries shall be supplied		off via a long life 2xAA		
.3 Electri	ical Requir	rements				
swi and the	tching volt manufacu overload a	all be operated from mains with referen age range from 0.4Un to 1.3Un. The lo rred in accordance with the Internation and short circuit requirement of IEC load switching capabilities as per rele	ad switch shall be of al Standard IEC 61 61036 / 61037, 11	bi-stable type designed 810-1, as well as meet		
4.3.2 The	e load swite	h shall interrupt the supply when the	oltage is below 0.4	Un and above 1.3Un.		
	e load swite Un – 1.3 U	h shall automatically restore supply w in.	thin a minute when	the voltage falls within		
ssued by: Head	of Section, S	Standard Development A	thorized by: Head of	Department, Standards		
and a second second second						
igned: 18(-T.	Si	ined:	-6-		

SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT- HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU Issue No. 1 4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 3.3 4.3.5 The meters shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (I _h) 230V, 50Hz ± 5% Prequency (I _L) 230V, 50Hz ± 5% Load switching voltage arrange 0.4 U _n to 1.3 U _n Base Reference current, I _b 5A Max. Current circuit burden 2W and 10 VA (#230V, 50Hz, 30° C Maximum Current I _{bes} (A) 80A. Protective class Class II (double insulated) Accurate metering range 0.05 Is to 1.2 Imax Starling current 30 Imas Matition; Over voltage and Surge Protection Imaulation of 0.4 U _n - 1.3 U _n Sharting current 30 Imas Meter Constant 1000 imp/kwh Disconnection Device Typ	1	TITLE:		Doc. No.	KP1/6C/4/1/TSP/14/		
PHASE SPLIT PREPAYIENT DIN RAIL MOUNTING STATIC WATTY. ENERGY- Using PLC as Medium of Communication Between MCU and UIU Revision No. 0 4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 The meters shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Max. Voltage circuit burden 4VA @ 5A, 50Hz, 30 ⁰ C Max. Current circuit burden 4VA @ 5A, 50Hz, 30 ⁰ C Max. Current leas (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Ib to 1.2 Imax Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 U _a - 1.3 U _a S	N. In		PLON FOR SPICE				
RAIL MOUNTING STATUE WATT- HOUR METERS FOR ACTIVE ENERGY - Using P1/C as Medium of Communication Between MCU and UIU Date of Josue 2017-10-12 4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 The meter shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (U _k). 230V, 50Hz ± 5% Frequency (Hz) 2004. Load switching voltage range 0.4 U _n to 1.3 U _n Base Reference current, I _b 5A Max. Current circuit burden 2W and 10 VA @230V, 50Hz, 30 ⁰ C Maximum Current I _{bas} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Is to 1.2 I _{bas} Starting current 0.2% I _b Short circuit ourden VA (Bas A for 1 minute Over voltage and Surge Protection 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation level				Issue No.	1		
Kenya Power ENERGY- Using PLC as Medium of Communication Between MCU and UIU Date of Issue 2017-10-12 4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 4.3.5 The meter shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (U _k), 230V, 50Hz ± 5%. Frequency (Hz) 230V, 50Hz ± 5%. Load switching voltage range 0.4 U ₀ to 1.3 U ₀ Base Reference current, Is 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30 ⁶ c Maximum Current I _{low} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Is to 1.2 I _{max} Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 U ₈ - 1.3 U ₈ Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh <td< td=""><td>R</td><td>AIL MOU</td><td>NTING STATIC WATT</td><td>- Revision No.</td><td>0</td></td<>	R	AIL MOU	NTING STATIC WATT	- Revision No.	0		
Iterry arrow of the standard Development Communication Between MCU and UU Issue Page 14 of 33 4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 The meter shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (U _n). 230V, 50Hz ± 5%. Frequency (Hz) 200 Au to 1.3 U _n Base Reference current, I _b 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30 ^o C Max. Notage circuit burden 4VA @ 5A, 50Hz, 30 ^o C Maximum Current I _{less} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Is to 1.2 I _{less} Starting current 0.2% Is Running with no-load No more than one pulse on application of 0.4 U _k - 1.3 U _k Short circuit current 30 I _{less} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latchi	2028 E028			Date of	2017-10-12		
4.3.4 The meters shall be connectable for 2-wire systems, a permanent connection drawing of which shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 The meter shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (U _k). 230V, 50Hz ± 5%. Frequency (Hz) 230V, 50Hz ± 5%. Load switching voltage range 0.4 U _n to 1.3 U _π Base Reference current, I _b 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30° C Maximum Current I _{leas} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Is to 1.2 I _{max} Starting current 0.2% Is Not circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand							
shall be printed on the meter body. Stickers of any kind shall not be accepted. 4.3.5 The meter shall have Reference Standard Electrical Design Parameters as in Table 1. Table 1: Summary of Electrical Parameters Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (EC 62053-21) Rated Nominal Voltage (Un) 230V, 50Hz ± 5% Frequency (Hz) 230V, 50Hz ± 5% Load switching voltage range 0.4 Un to 1.3 Un Base Reference current, Is 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30 ⁶ C Max. Current tercuit burden 4VA @ 5A, 50Hz, 30 ⁶ C Max. Current leas (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.2% Ib Running with no-load No more than one pulse on application of 0.4 Un - 1.3 Un Short circuit current 30 Innax Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation classification Protective Class II Insulation classification Protective Class II At				Page 14 of 33	b		
Measurement and Control Unit Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (Un), 230V, 50Hz ± 5% Frequency (Hz) 230V, 50Hz ± 5% Load switching voltage range 0.4 Un to 1.3 Un Base Reference current, Ib 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30° C Max. Current circuit burden 4VA @ 5A, 50Hz, 30° C Maximum Current Ieax (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Is 10 1.2 Inux Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 Un - 1.3 Un Short circuit current 30 Inux 30 Inux 30 Inux Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5 kA, 8/20 µs Lightning Surge	shall be printed of	on the met	er body. Stickers of any k	cind shall not be acc	epted.		
Electrical Parameters Accuracy kWh Class 1 (IEC 62053-21) Rated Nominal Voltage (U _n). 230V, 50Hz ± 5% Frequency (Hz) 230V, 50Hz ± 5% Load switching voltage range 0.4 U _n to 1.3 U _n Base Reference current, I _b 5A Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30 ^d c Max. Current circuit burden 4VA @ 5A, 50Hz, 30 ^d c Maximum Current I _{max} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 I _b to 1.2 I _{max} Starling current 0.2% I _b Running with no-load No more than one pulse on application of 0.4 U _g - 1.3 U _a Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs start impulse withst							
AccuracykWh Class 1 (IEC 62053-21)Rated Nominal Voltage (Un).230V, 50Hz \pm 5%Frequency (Hz)230V, 50Hz \pm 5%Load switching voltage range0.4 Un to 1.3 UnBase Reference current, In5AMax. Voltage circuit burden2W and 10 VA @230V, 50Hz, 30° CMax. Current circuit burden4VA @ 5A, 50Hz, 30° CMaximum Current Inax (A)80 A.Protective classClass II (double insulated)Accurate metering range0.05 Is to 1.2 ImaxStarting current0.2% Ib.Running with no-loadNo more than one pulse on application of 0.4 Un - 1.3 UnShort circuit current30 InnaxMeter Constant1000 imp/kwhDisconnection DeviceTypeTypeSingle pole latching contactor, 100 A.Insulation classificationProtective Class IIInsulation levelAt least 4 kV rms for 1 minuteOver voltage withstandAt least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedanceVoltage impulse withstandAt least 5kA, 8/20 µsLightning Surge WithstandAt least 30kA, 4/10 µs		Constant and the second					
Rated Nominal Voltage (U_n).230V, 50Hz \pm 5%Frequency (Hz)0.4 U_n to 1.3 U_nLoad switching voltage range0.4 U_n to 1.3 U_nBase Reference current, I_h5AMax. Voltage circuit burden2W and 10 VA @230V, 50Hz, 30° cMax. Current circuit burden4VA @ 5A, 50Hz, 30° cMaximum Current Imax (A)80 A.Protective classClass II (double insulated)Accurate metering range0.05 I_b to 1.2 ImaxStarting current0.2% I_bRunning with no-loadNo more than one pulse on application of 0.4 U_n - 1.3 U_nShort circuit current30 ImaxMeter Constant1000 imp/kwhDisconnection DeviceTypeTypeSingle pole latching contactor, 100 A.Insulation; Over voltage and Surge ProtectionInsulation levelAt least 4 kV rms for 1 minuteOver voltage withstand400 VAC for 48 hoursVoltage impulse withstandAt least 5 kA, 8/20 µsLightning Surge WithstandAt least 5 kA, 8/20 µsLightning Surge WithstandAt least 30kA, 4/10 µs			kWh Class 1 (IEC 620	(53-21)			
Load switching voltage range $0.4 U_n$ to $1.3 U_n$ Base Reference current, Ib 5Λ Max. Voltage circuit burden $2W$ and $10 VA @ 230V$, $50Hz$, 30^d cMax. Current circuit burden $4VA @ 5\Lambda$, $50Hz$, 30^d cMaximum Current Ieax (A) $80A$.Protective classClass II (double insulated)Accurate metering range 0.05 b to $1.2 I_{max}$ Starting current 0.2% lbRunning with no-loadNo more than one pulse on application of $0.4 U_n - 1.3 U_n$ Short circuit current $30 I_{max}$ Meter Constant $1000 imp/kwh$ Disconnection DeviceTypeTypeSingle pole latching contactor, $100 A$.Insulation; Over voltage and Surge ProtectionInsulation levelAt least 4 kV rms for 1 minuteOver voltage withstand $400 VAC$ for 48 hoursVoltage impulse withstandAt least 5 kA, $8/20 \mu s$ Lightning Surge WithstandAt least $30kA$, $4/10 \mu s$	the second se	tage (Un),	and the second se				
Load switching voltage range $0.4 U_n$ to $1.3 U_n$ Base Reference current, Ib 5Λ Max. Voltage circuit burden $2W$ and $10 VA @ 230V$, $50Hz$, 30^d cMax. Current circuit burden $4VA @ 5\Lambda$, $50Hz$, 30^d cMaximum Current Ieax (A) $80A$.Protective classClass II (double insulated)Accurate metering range 0.05 b to $1.2 I_{max}$ Starting current 0.2% lbRunning with no-loadNo more than one pulse on application of $0.4 U_n - 1.3 U_n$ Short circuit current $30 I_{max}$ Meter Constant $1000 imp/kwh$ Disconnection DeviceTypeTypeSingle pole latching contactor, $100 A$.Insulation; Over voltage and Surge ProtectionInsulation levelAt least 4 kV rms for 1 minuteOver voltage withstand $400 VAC$ for 48 hoursVoltage impulse withstandAt least 5 kA, $8/20 \mu s$ Lightning Surge WithstandAt least $30kA$, $4/10 \mu s$							
Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30° c Max. Current circuit burden 4VA @ 5A, 50Hz, 30° c Maximum Current I _{nex} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Ib to 1.2 I _{max} Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 U _n - 1.3 U _n Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand At least 5 kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs			0.4 Un to 1.3 Un				
Max. Voltage circuit burden 2W and 10 VA @230V, 50Hz, 30° c Max. Current circuit burden 4VA @ 5A, 50Hz, 30° c Maximum Current Issax (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 lb to 1.2 Issax Starting current 0.2% lb Running with no-load No more than one pulse on application of 0.4 Us - 1.3 Us Short circuit current 30 Issas Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards			5.4				
Max. Current circuit burden $4VA @ 5A, 50Hz, 30^{6} c$ Maximum Current I _{max} (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 Ib to 1.2 I _{max} Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 U _n - 1.3 U _n Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand At least 6 kV, 1.2/50 µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards				V 50Hz 30 ⁰ C			
Maximum Current Inax (A) 80 A. Protective class Class II (double insulated) Accurate metering range 0.05 lb to 1.2 Inax Starting current 0.2% lb Running with no-load No more than one pulse on application of 0.4 Ua - 1.3 Ua Short circuit current 30 Inax Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards							
Protective class Class II (double insulated) Accurate metering range 0.05 lb to 1.2 lmax Starting current 0.2% lb Running with no-load No more than one pulse on application of 0.4 Ug - 1.3 Ug Short circuit current 30 lmax Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5 kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs							
Accurate metering range 0.05 lb to 1.2 lmax Starting current 0.2% lb Running with no-load No more than one pulse on application of 0.4 Ug - 1.3 Ug Short circuit current 30 lmax Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5 kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs		iax (PL)		ted)			
Starting current 0.2% Ib Running with no-load No more than one pulse on application of 0.4 Ug - 1.3 Ug Short circuit current 30 Imax Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Insulation classification Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5 kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs		ange		licu)			
Running with no-load No more than one pulse on application of 0.4 U _n - 1.3 U _n Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Insulation classification Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 5 kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs	and the second sec	ange					
Short circuit current 30 I _{max} Meter Constant 1000 imp/kwh Disconnection Device Type Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Insulation classification Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs	and the second se	nd		se on application of	0.4 U _n - 1.3 U _n		
Disconnection Device Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Protective Class II Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	Short circuit current Meter Constant						
Type Single pole latching contactor, 100 A. Insulation; Over voltage and Surge Protection Protective Class II Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	Meter Constant		1000 imp/kwh				
Insulation; Over voltage and Surge Protection Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs	Disconnection Devic	ce					
Insulation; Over voltage and Surge Protection Insulation classification Protective Class II Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs	Туре		Single pole latching ec	ontactor, 100 A.			
Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	Insulation; Over vo	Itage and					
Insulation level At least 4 kV rms for 1 minute Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	Insulation classificati	ion	Protective Class II				
Over voltage withstand 400 VAC for 48 hours Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs							
Voltage impulse withstand At least 6 kV, 1.2/50µs (IEC 62052-11) with 2Ω source impedance Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	insulation level						
Current impulse withstand At least 5kA, 8/20 µs Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards							
Lightning Surge Withstand At least 30kA, 4/10 µs sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards		istand	North Constraint States of States	EC 62052-11) with	212 source impedance		
sued by: Head of Section, Standard Development Authorized by: Head of Department, Standards	Voltage impulse with	12 12					
	Voltage impulse with	12 12	At least 5kA, 8/20 µs				
	Voltage impulse with Current impulse with	istand	Steel based and				
	Voltage impulse with Current impulse with	istand	Steel based and				
signed: Signed:	Voltage impulse with Current impulse with Lightning Surge With	istand hstand	At least 30kA, 4/10 µs	otherized has there of	Department Standard-		
	Voltage impulse with Current impulse with Lightning Surge With	istand hstand	At least 30kA, 4/10 µs Hopment A		Department, Standards		

N	TITLE:		Doc. No.	KP1/6C/4/1/TSP/14/	
/v		SPECIFICATION FOR SINGLE-		1	
1		JT PREPAYMENT DIN NTING STATIC WATT -	Revision No.	0	
		TERS FOR ACTIVE Using PLC as Medium of	Date of	2017-10-12	
Kenya Power		tion Between MCU and UIU	Page 15 of 33		
Electromagneti	e compatibili	he .	1		
Electrostatic discha		15 kV air discharge			
Immunity to HF fields		80 MHz to 2 GHz @ 10V	/m with load; 80 M	MHz to 2 GHz @ 30V/m	
		no load- Accuracy not a			
		front, sides, top and botto		ae tietus nom un sides	
Immunity to Fast Tra	ancient Burete	4 kV	an of the meter.		
Radio interference	insient Dui Sis	Complies with requireme	ante for ("ISPD ")	IEC 61000 4.3.2.4.6	
Communication	Circuitry	compiles what requireme	aus 101 CISI N 22	, IEC 01000-4-2,3,4,0	
Туре	cucuity	Power Line Carrier			
Rated Impulse Voltage		Peak Voltage 6 kV (1.2/50µs) waveform (IEC 62052-11)			
		Protective Class II			
Insulation level		4 kVms (1 Minute) - IEC	62052-11 Protect	ive Class II	
Communication Protocol		DLMS/COSEM			
Communication I	Range	>100m for MCU to	CIU and >1000	m for MCU to data	
		concentrator	cic and -1000	in tot meets to unu	
51:2007 on S (a) Facili manuf	cturer shall pr standard Trans tates interoper facturers.	its oduce meters that fully m fer Specification protocol a ability amongst hardware, C to only the bidder or any	nd hence: software and me	eters supplied by other	
procu	rement of prep	ayment meters, software or	hardware.		
		interoperable with the exis shall be able to demonstrate			
meter design, in the contract	shall submit a , physical prop et documents, s	Quality Assurance Plan (Q) erties, tests and documenta standards, specifications and ts to fulfill the requirements	tion, will fulfill th d regulations. The	e requirements stated QAP shall be based	
sued by: Head of Section,	Standard Devel	opment Aut	orized by: Head of	Department, Standards	
gned: Of C.	N	Sign	ed:	te	
and the second state of th			: 2017-10-12	M.	

<	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
/¥	SPECIFICATION FOR SINGLE-	Issue No.	1
7	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -	Revision No.	0
Kenya Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UB	Date of Issue	2017-10-12
		Page 16 of 33	3
2008 or ISC Standardiza evaluation. 5 TESTS AND E 5.1 The meters shi provisions of th performed the t 5.2 The bidder shal for technical ev laboratory, acer same third-part English Langua 5.3 Routine and sa approval before 5.4 All acceptance shall be witnes:	all be tested in accordance with the r is specification. It shall be the responsil ests specified. I submit copies of Type Tests Reports for valuation. The Type Test Reports shall edited to ISO/IEC 17025. The accredita y testing laboratory used shall also be s	I manufacturers an shall be submitted requirements of I bility of the suppli r each type of mete have been issued ation certificate to ubmitted with the supplied shall be rds shall be carriec nt. KPLC shall me	d/or KEBS with the tender for EC 62053-21:2003 and er to perform or to have r offered with the tender by a third-party testing ISO/IEC 17025 for the tender document (all in submitted to KPLC for l out by the supplier and eet the full costs of two
5.5 On receipt of th with this specifi	e goods KPLC will perform any of the te ication.	ests specified in on	der to verify compliance
	all replace without charge to KPLC the any of the requirements in the specifica	and the state of the	oon examination, test or
	ests shall be conducted on the meter as p	er IEC 62053-21:	2003 and other relevant
standards:-			
standards:- 5.7.1 Tests of Ins 5.7.1.1 Impulse Vo 5.7.1.2 AC High V 5.7.1.3 Insulation	oltage Test		
5.7.1 Tests of Ins 5.7.1.1 Impulse Vo 5.7.1.2 AC High V	oltage Test oltage Test Fest	thorized by: Head of	Department, Standards
5.7.1 Tests of Ins 5.7.1.1 Impulse Vo 5.7.1.2 AC High V 5.7.1.3 Insulation	oltage Test foltage Test Test Standard Development Au	thorized by: Head of ned:	Department, Standards

	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/1
14	SPECIFICATION FOR SINGLE-	Issue No.	1-02
1	PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -	Revision No.	0
-	HOUR METERS FOR ACTIVE	Date of	2017-10-12
Kenya Power	ENERGY- Using PLC as Medium of Communication Between MCU and U	Innun	
	curacy Requirements		
5.7.2.1 Tests on L			
	ion of Test Results		
5.7.2.3 Test of Me			
5.7.2.4 Test of Sta	-		
5.7.2.5 Test of No			
	abient Temperature Influence		
5.7.2.7 Test of Re			
5.7.2.8 Test of Inf	luence Quantities		
	etrical Requirements		
5.7.3.1 Test of Po-	wer Consumption		
	luence of Supply Voltage		
	luence of Short-term Over-currents		
	luence of Self-heating		
5.7.3.5 Test of Inf			
5.7.3.6 Test of Inf	luence of Immunity to Earth Faults		
5.7.4 Test for El	ectromagnetic Compatibility		
5.7.4.1 Radio Inte	rference Measurement		
5.7.4.2 Fast Trans			
	munity to Electrostatic Discharges		
5.7.4.4 Test of Im	munity to electromagnetic HF Fields		
5.7.5 Test for Cl	imatic Influences		
5.7.5.1 Dry Heat 'I	fest		
5.7.5.2 Cold Test			
5.7.5.3 Damp Hea	t Cyclic Test		
5.7.6 Test for M	echanical Requirements		
5.7.6.1 Vibration	Test		
5.7.6.2 Shock Tes	t		
5.7.6.3 Spring Har	mmer Test		
	Against Penetration of Dust and Water		
5.7.6.5 Test of Re-	sistance to Heat and Fire		
ssued by: Head of Section	, Standard Development A	athorized by: Head of	Department, Standards
igned: A(Si	gned:	-te
Date: 2017-10-12	D	ate: 2017-10-12	0

N	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/1				
V	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1				
-	RAIL MOUNTING STATIC WATT -	Revision No.	0				
Kanua Dawan	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of	2017-10-12				
Kenya Power	Communication Between MCU and UIU Page 18 of 33						
5.7.7.2 Token vali 5.7.7.3 Decrement 5.7.7.4 Automatic 5.7.7.5 Test of cree 5.7.7.6 Test of disc 5.7.7.7 Test of free 5.7.7.8 Test to disc 5.7.7.9 Test to reco 5.7.8 Additional 5.7.8.1 Glow wire 5.7.8.2 Accuracy t 5.7.8.3 Influence o 5.7.8.4 Measurems 5.7.8.5 Magnetic i	r tamper detection. dation test ing of units when connected to Load. interrupting of the load circuit on expiry of dit balance and debit connect of supply when credit deerement to onnecting supply on providing credit connect supply if load/current exceeds the onnect supply if load/current falls within p Tests testing for polycarbonate material ests in the presence of harmonics of d.e and even harmonics ent of Total energy – Effect of Harmonics nduction of external origin (AC & DC)	o zero preset value of th	he meter				
5.8 Minimum Test The manufacturer sl Routine Tests:	all have the necessary minimum testing fa	cilities for carry	ing out the following				
(a) AC high volt	age test						
(b) Insulation res	istance test						
(c) Test of limits	of errors						
(d) Test of meter							
(e) Test of startin							
(f) Test of no los							
(g) Repeatability							
(h) Test of powe	· · · · · · · · · · · · · · · · · · ·						
(i) Tamper cond(j) Transportation	itions - as per this specification n Test.						
NB: The manufactur 0.5 accuracy or bette	er shall have duly calibrated Equivalent So r.	ries Resistance (ERS) meter of Class				
ssued by: Head of Section.	Standard Development Auth	prized by: Head of	Department, Standards				
igned: 10/1 T.	Signe	4	1				

		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02
	1	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1
		RAIL MOUNTING STATIC WATT	and the second sec	0
Kenv	a Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of	2017-10-12
,,		Communication Between MCU and U	Page 19 of 33	3
6	MARKING	AND PACKING		
6.1 M	arking			
		omply with IEC 61010-1 unless otherwise		
		nent shall carry the following marking wh tage) on the meter and of at least 4mm fig		readable and indelible
The to	9094000000 2 0000	ormation shall be marked on each meter.		
		The Standard Transfer Specification (ST) format known as a national meter number		number, in the preferred
		The STS compliance logo,		
	(c)	The inscription "Property of KPLC.",		
	(d)	Name or trade mark of the manufacturer;		
	(e)	Wiring Connection diagram.		
	(t)	Country of Origin		
	(g)	Type/model		
	(h)	Meter number		
	(i)	Barcode comprising of meter serial numb	er without blank spa	ices
	(i)	Standard(s) to which the meter complies		
	(k)	Year of Manufacture		
	(1)	Guarantee - 5 Years		
	(m)	KEBS Mark		
6.2 Pa	icking			
6.2.1		rs shall be packaged in such a manner as nsportation and handling.	to minimize damag	e and entry of moisture
6.2.2		s shall be packed in suitable groups and / shall be done only after KPLC approval	or batches with con	secutive serial numbers.
6.2.3		rs shall be packaged in multiples of ter ch does not make a multiple of ten.	i unless where the	number of meters in a
ssued by:	Head of Sect	ion, Standard Development A	uthorized by: Head of	Department, Standards
igned:	10%.(f.is	igned:	-6-
Date: 2017	-10-12	1	Date: 2017-10-12	

	TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/ 1-02		
X.	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1		
<u>}</u>	RAIL MOUNTING STATIC WATT -	Revision No.	0		
Kenya Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UI	U Date of Issue Page 20 of 33	2017-10-12		
	r of meters packaged in a group and/or nually shall be such that their weight doe				
6.2.5 The supplie production of	r shall indicate the delivery time versus apacity.	quantities of eac	h type of meter and his		
7 DOCUMENTA	ATION				
(Guaranteed Te	l submit its tender complete with technica chnical Particulars) for tender evaluation. anguage) for tender evaluation shall inclu	The technical doc			
	filled clause by clause guaranteed techni facturer;	cal particulars (GT	P) signed by the		
b) Meter	drawing giving all the relevant dimension	ons;			
c) Wirin	g diagrams;				
d) Users	and operational manuals.				
 f) Sales g) Detai h) Copie accreation meter in provide with 1 All ty commit years by tes i) Copy labora j) Valid 	 d) Users and operational manuals. e) Copies of the Manufacturer's catalogues, brochures, drawings and technical data; f) Sales records for the last five years and at least four customer reference letters; g) Details of manufacturing capacity and the manufacturer's experience; h) Copies of required type test reports by an Independent Third-Party Testing Laborator accredited to ISO/IEC 17025; The test certificates shall bear the product serial number meter on offer, KPLC reserves the right to demand repetition of some or all the type test in presence of KPLC's representative, which acceptance should be submitted togeth with the offer. The retest results of the 3rd Party Laboratory binding and not be dispute All type test reports of the meters shall be approved by Head of Standards, KPLC, befor commencement of supply. Type test reports of offered meter carried out during last thre years shall be valid. Type tests conducted in manufacturer's own laboratory and certific by testing bodies shall not be acceptable. i) Copy of Accreditation Certificate to ISO/IEC 17025 for the third-party testing laboratory; j) Valid copies of ISO 9001:2008 or ISO 9001:2015 certificate for international manufacturers and/or KEBS standardization quality mark certificate for local 				
Issued by: Head of Section		thorized by: Head of ned:	Department, Standards		
3020602	542	incu:	And the second s		

k) Evidence of the ma type offered to sim l) Copies of DLMS/C m) Current e-mail add	ATION FOR SINGLE- PLIT PREPAYMENT DIN UNTING STATIC WATT - STERS FOR ACTIVE Using PLC as Medium of cation Between MCU and UIU unufacturer having supplied a ilar utilities in the past two ye COSEM certificates dresses, fax and telephone n on Laboratories and Meter Cer	ars.	0,000 pieces of the meter
k) Evidence of the ma type offered to sim l) Copies of DLMS/C m) Current e-mail ad Testing / Calibratio	UNTING STATIC WATT - CTERS FOR ACTIVE Using PLC as Medium of ation Between MCU and UIU unufacturer having supplied a ilar utilities in the past two ye COSEM certificates dresses, fax and telephone n	Revision No. Date of Issue Page 21 of 33 minimum of 200 ars.	0 2017-10-12 3 0,000 pieces of the meter
k) Evidence of the ma type offered to sim l) Copies of DLMS/C m) Current e-mail ad Testing / Calibratio	TERS FOR ACTIVE Using PLC as Medium of cation Between MCU and UIU anufacturer having supplied a ilar utilities in the past two ye COSEM certificates dresses, fax and telephone n	Date of Issue Page 21 of 33 minimum of 200 ars.	2017-10-12 0,000 pieces of the meter
k) Evidence of the ma type offered to sim l) Copies of DLMS/C m) Current e-mail ad Testing / Calibratio	Using PLC as Medium of cation Between MCU and UIU anufacturer having supplied a ilar utilities in the past two ye COSEM certificates dresses, fax and telephone n	Issue Page 21 of 33 minimum of 200 ars.	3 0,000 pieces of the meter
type offered to sim l) Copies of DLMS/C m) Current e-mail add Testing / Calibratic	ilar utilities in the past two ye COSEM certificates dresses, fax and telephone n	ars.	
 workmanship, tests, ser requirements stated in th QAP shall be based on an c) The QAP Statement shall the measurement and c components and the batt according to which the ray out accessories. d) An outline of the propose e) List of areas in manufactr quality control and details f) The successful bidder sha 	hall form the basis of evalua der the tender non-responsive from these requirements. Whe is such as "noted", "agreed", " inse is called for. ier) shall submit the following roval before manufacture: se Guaranteed Technical Parti- tails of low voltage measurer at of low voltage measurer e Plan (QAP) that will be u vice capability, maintenanc e contract documents, standa d include relevant parts to ful include a matrix of important computing chips, memory c ery) names of sub-suppliers w materials are tested and copi	of the Schedule of tion of the subm e. The tenderers is re the requireme 'comply" etc. sha g documents/deta culars (GTP) sign nent instruments sed to ensure the e and document rids, specification fill the requiremona raw materials and hips, display m for the raw materials and hips, display m	used to test the meter on of Guaranteed Technical nitted tender. Failure to shall indicate the details nt is the same, they shall all be considered as non- ils to The Kenya Power hed by the manufacturer; to be manufactured for at the design, material; nation will fulfill the ns and regulations. The ents of ISO 9001:2008. I components (including todules, key electronic terials, list of standards ates in respect of bought nally carried out for it a matrix/list of raw
	from those furnished alongsi be used during factory accepta		
ssued by: Head of Section, Standard Dev	velopment Auth	orized by: Head of	Department, Standards
igned: (#1 (?	Signe	ed:	-6=

1		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/
	Y	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1-02
	N.	RAIL MOUNTING STATIC WATT		0
Kenya	a Power	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and U		2017-10-12
pro 8 INI 8.1 Wa 8.1.1	e supplier sha cedures, all i FORMATIC arranty The supplie Warranty a transportatio commission defective me intimation.	provided with the instrument. Il submit recommendations for use, car in the English Language, during deliver, DN AND WARRANTY (IN CASE OF d meters, MCUs, UIUs and associated gainst any defects, which may dev in or workmanship for a period of fifty- ing certificate for KPLC or sixty (60) in eters shall be replaced at the supplier supplied shall be updated by the su	y of the meters to K TENDER AWAR I software/hardware elop due to fault four (54) months fro tonths from dispatel 's cost within one	PLC stores. (D) (c) shall be guaranteed by y material, calibration, om the date of successful h, whichever is later. All (1) month of receipt of
8.1.3	warranty per The successi least one (1)	tariff changes, statutory changes, etc. iod and beyond. ful bidder/supplier shall observe perform year and monitor accuracy of the sam port of the same.	nance of their meter	on site for a period of at
8.2		port of the same.		
8.2 8.2.		rer shall submit three (3) MCUs and thr s. Samples shall not be returned to the		s together with the tender
8.2.	Laborator	itted meter samples shall be subjected y and independent third-party accredi- ce with all the requirements of IEC ion.	ted laboratory of K	PLC's choice to verify
8.2.	Power Li	les of the meters offered shall be subm mit Settings and resets for the same, C the meters. The manufacturer might be	redit and Clear Cre	dit Tokens to aid in the
Issued by:	Head of Section	, Standard Development A	authorized by: Head of	Department, Standards
Signed:	AT P.	S	igned:	-6-
	10-12		Date: 2017-10-12	

S.		TITLE:	Doc. No.	KP1/6C/4/1/TSP/14/
1		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue No.	1
- j	RAIL MOUNTING STATIC WAT HOUR METERS FOR ACTIVE	RAIL MOUNTING STATIC WATT -	Revision No.	0
Kenya	Power	ENERGY- Using PLC as Medium of	Date of Issue	2017-10-12
		Communication Between MCU and UIU	Page 23 of 33	1
8.2.5	Bureau wit meter type winning Bi Bidders ma the followi The M Kenya P.O. F Nairol Tel: (+ Fax: (Email	y new meter being introduced in the court h 4 (four) samples of each meter type to approval from the Bureau will NOT be idder must submit this approval before th ty communicate directly with the Kenya f ng address: lanaging Director Bureau of Standards, Box 54974, 00200, bi, Kenya. +254 020) 605490, 602350 +254 020) 605490, 602350 +254 020) 604031 : info@kebs.org http://www.kebs.org	be supplied. Bid considered non-re signing of the s	Is submitted without the esponsive. However, the upply contract.
Issued by: He	ad of Section,	Standard Development Aut	horized by: Head of	Department, Standards
	0	£1	ed:	

~	TITLE:		Doc. No.	KP1/6C/4/1/TSP/14/ 1-02		
V		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN		1		
-	RAIL MOUNTING		Revision N	o. 0		
Kenya Po	HOUR METERS FO ENERGY- Using Pl	LC as Medium of	Date of	2017-10-12		
	Communication Bet	tween MCU and UIU	UIU Page 24 of 33			
ANNEX A	(Normative): Guaranteed T	echnical Particula	rs for Split Pr	epayment Static Meters		
	Energy Measurement(to be fi ole meter, relevant copies of th					
	records for previous five years					
	e manufacturer's experience a	and the second sec				
			të type tësi cër	ujicales and type lesi		
reports for	tender evaluation, all in Englis	sh Language)				
Clause	KPLC requirement		Bide	ler's offer (indicate full		
number			detai	ls of the offered for the		
			prep	ayment meter)		
Manufactu	irer's Name and address		Spec	Specify		
Brand nan	ne or designation			Specify		
	f Manufacture		Spec			
Number of the state of the stat	ame and address		Spec			
1.	Scope		Spec			
2.	Normative References		Spec			
3.	Terms, Definitions and Abbi	endationa				
		reviations	Spec	aty		
4.	REQUIREMENTS					
4.1	Operating Conditions					
4,1.1	Operating environmental conditions	Altitude	State			
	conditions	Operating temp				
		Storage temper				
		Humidity range humidity	- Kel. Statt	State		
		Pollution catego	ory State			
4.1.2	System Characteristics	Compatible ele				
		system				
		Nominal voltag	e and State			
		frequency	c und cours			
4.2	Design and Construction R					
4.2.1	General Requirements-Sta		State			
4.2.1.1	The Measurement and Contr					
	DIN rail mounting with lock Din rail.					
4.2.1.2	Distance of MCU and UIU c	communication via	LC Spe	cify		
4.2.1.3	The meters constructed as 1		Spe	· · · · · · · · · · · · · · · · · · ·		
	connected prepayment meter	ŕ.				
ed by: Head	of Section, Standard Development	Ant	horized by: Hear	of Department, Standards		
and why around	Ø	Sig		2 -6		
ned: 10c				A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNE		
ned: /////	-(.		e: 2017-10-12	0		

	1.		TITLE:		Doc.	No.	KP1/6C/4/1/TSP/14 1-02	
7			PHASE SPLIT PREPAYMENT DIN		Issue		1	
	COLUMN COLUMN		HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU Iss		Revis	ion No.	0	
	Kenya Po	wer			Date Issue Page		2017-10-12	
					3-			
	Clause	KPLC	requirement				's offer (indicate full	
	number						of the offered for the	
	4.2.1.4	(a) Cor	meetion to the meter Bottom-In, Botton	n. Ou		Specify	nent meter)	
	7.2.1.7		ne -in and Neutral-in terminals at the b			opeeny		
			v racking of the meter on a test bench.					
			ter terminals protection cover (transpar- e screws against tampering and ingress			Specify	(
		particular and particular and and an	and the second sec	01 Wa	ater			
	4.2.1.5	The M	c)Material of the screws The MCU dimensions not exceeding: Height = 1 ² nm; Width = 60 mm; and Depth = 95 mm; and n			Specify		
		base or	base on the width side where the Din rail mount shall b located.					
	4.2.1.6	The M	CU body ultrasonically sealed for life w on the MCU body except for the termin			Specify	(
		cables.	on the fried body except for the termin	inderes i	1.01			
	4.2.1.7		al cover open detection mechanism			Specify		
	(a)	commissioning code (token) and installer can				Specify		
	(b)	terminal cover when MCU not activated Activation of cover open detection function at				Specify		
		installation of MCU by inputting a commissioning co			code	-strand		
	(c)	Terminal cover detect opening of cover and MC disconnects as well as record tamper event				Specify		
	4.2.1.8	MCU sealed and its printed circuit boards conformal coated in a manner so as not to allow malfunction due to ingress of moisture, vermin, dust, chemicals and temperature extremes.				Specify	1	
	4.2.1.9	type m conduc	(a) Meters terminal holes and screws of Moving-cage type made of brass or nickel-plated brass for high conductivity and corrosion resistance			Specify type and class of brass and reference standard		
		least 12	ter terminals with continuous current ra 25%Imax			Specify		
	4.2.1.10	in dept	al holes of at least 10-mm diameter and h. The dimension from the Line-in, Ner al holes to meter base not exceeding 200	itral-i		Specify		
	4.2.1.11		eter's terminal screw inserts sealable wi		lity	Specify		
	4,2.1.12	The me	eter protection class II (Double insulate	d)		Specify standard	class and reference	
Iss	ued by: Head	of Section	, Standard Development A	uthori	ized by	: Head of	Department, Standards	
Sig	ned:(-1	S	igned:		-6		
Da	te: 2017-10-12	1	D	ate: 2	017-10	12		

	1		TITLE:	Do	c. No.		KP1/6C/4/1/TSP/14	
	1		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN		ue No.		1-02	
	-		RAIL MOUNTING STATIC WATT - Re		vision No.		0	
Van			HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Data		-	2017-10-12	
Ken	iya Po	ower	Communication Between MCU and U	U and UIU Issue		•••		
Cla	nuse	KPLC	requirement		Bid	der	's offer (indicate full	
10.800	mber		requirement		1023523		of the offered for the	
					prep	зауп	nent meter)	
4.2	.1.13	Non-vo	latile memory capable of data storage	and with			type of memory and	
		long-te or for t	rm data retention period of not less that he certified life of the meter or whiche without an electrical supply being sup	n 10 yea ver is			od of data retention	
4.2	.1.14	Meter r instanta counter token, e				Specify all the codes		
1.2	1.15	display			0	10		
	.1.15		Principal unit for the measured values Means of reading the credit register to within a				Specify Specify	
7.2	.1.10	resolution of at least 0.01 kWh for testing purposes.				city		
4.2	.1.17	Detection of significant reverse energy (SRE) when the line and load wires are swapped			e Spo	Specify		
4.2	.1.18	Meter to continue to operate correctly and decrem credit during SRE detection			Specify			
4.2	.1.19	LED in consum	dicators for testing and indication of k uption.	Wh	Spe	cify		
4.2	.1.20	for acce	nsumption. otical communication port, compliant to IEC62056-21 r accessing information stored inside the meter rough a handheld unit.					
4.2	.1.21		PLC communication module for communication to a concentrators and Meter Data Management			Specify		
			imum distance of PLC communication		Spe			
		commu	cess rate (%) using real time, bidirection mication of maximum of 5 seconds			Specify		
	.1.22	at frequ	ance with IEEE1901.2 using OFDM n tency band up to 500Khz (G3/PRIME)					
4.2	.1.23		iance with the DLMS/COSEM or equi inication protocol.	valent	Spc	cify	6	
4.2	.1.24	(a) Abi prepaid	lity of meter to work under postpaid m mode. The switch of mode shall be do pecific token or optical communication	one via	Spe	cify	6	
		(b) Me	hod of switching to and from postpaid modes		Spe	cify		
Issued by	y: Head	of Section.	Standard Development	uthorized	by: Hea	d of	Department, Standards	
Signed:_	-18-1	-P.	5	igned:	C	0	to	
Date: 20	17-10-12		1	Date: 2017	10-12	V	0	

		TITLE:	Doc.	No.	KP1/6C/4/1/TSP/14/		
/v		SPECIFICATION FOR SINGLE-	Issue	e No.	1-02 1		
7		PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -	Revi	sion No.	0		
		HOUR METERS FOR ACTIVE	Date		2017-10-12		
Kenya Po	wer	Communication Between MCU and UIU		sue 27 of 33			
Clause	KPLC	requirement		Bidder	's offer (indicate full		
number		- cquitentai		details o	of the offered for the nent meter)		
4.2.1.25	Meters	to be supplied together with three copie	s of	Specify			
		e for interrogating the meter data; and it possible to reprogram the meters using the					
4.2.1.26		U to conform to the degree of protection	n IP 54	Specify	(
		ninals of the MCU to be so designed so		Specify	¢		
4.2.1.27	and a street of the street of	ensure protection from ingress of water and dust. Material of the MCU enclosure			Specify material and reference standard		
4.2.2	Functio	onality Requirements					
4.2.2.1	Measu	rement and Control Unit (MCU)					
4.2.2.1.1		with a load switch to automatically inter-	Specify				
4.2.2.1.2	load circuit on the expiry of credit balance. Load switch to automatically restore the load circuit after top up.				Specify		
4.2.2.1.3	and the second state of the second	tee standard for the meter load switch	Specify the reference standard				
4.2.2.1.4	MCU in power.	ndication for absence or presence of con	Specify				
4.2.2.1.5	Discon	onnection of the load if power failure is detected connect the load after normalization.			Specify		
4.2.2.1.6	load on	annable power limit setting that disconnects the nece exceeded and reconnect once the load falls the set limit.			1		
4.2.2.1.7	consum	mitting Diode (LED) to indicate rate of aption. The pulse rate to be proportional to rate of consumption			Specify		
4.2.2.1.8	Diagno	stic LED to indicate the presence of nication between the MCU and the UIU		Specify	r.		
4.2.2.1.9		CU to continue metering and decrement ess of the state of the communications in JUL		Specify			
4.2.2.1.10		ity to DC for the Live and Neutral circuit	ts of the	Specify			
	and the local division of the local division	MCU with two elements double circuit easurement.			Specify		

0			TITLE:		Doc.	No.	KP1/6C/4/1/TSP/1/ 1-02	
	1		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DI	v	Issue	No.	1	
	1		RAIL MOUNTING STATIC WAT		Revis	ion No.		
Keny	Kenya Power		Communication Between MCU and UIU		Date Issue			
			Communication between wrc.0 and	UIU -	Page	28 of 33		
Clau		KPLC	requirement			details o	's offer (indicate full of the offered for the nent meter)	
		both in	U equipped with 100A relay (loading Live and Neutral circuits and operati neously		:h)	Specify		
		(c) In c circuit a tamper	ase there is an imbalance between the and the Neutral circuit, the MCU take event and record it. The MCU then n her current without disconnecting the	es it as neasur	a e on	Specify		
4.2.2	2.1.12		U to be fitted with an SCSSCAAA9 ant data port for programming and in er.			Specify		
		probes SCSSC	eter. wo (2) sets of data interrogating and programming s and software (1 each for optical and CAAA9 ports) shall be provided with the meter le for evaluation		To Comply			
		(c) For the winning bidders, each delivery of 100,000 meters shall have 100 sets of probes and software for use with the optical and the SCSSCAAA9 ports.			To comply			
4.2.3	2.1.13	of dime materia meter n engrave and also being re	ension 85mm x 54 (length X height) r I similar to that of a credit card indice umber. The meter serial number shal ad on the card together with its bar co o stored in a magnetic medium with c	the optical and the SCSSCAAA9 ports. J shall be supplied together with a plastic card sion 85mm x 54 (length X height) mm and similar to that of a credit card indicating the nber. The meter serial number shall be on the card together with its bar code version stored in a magnetic medium with capability of d out when the card is swiped. No redundant				
4.2.3	2.1.14	The MO	CU shall be with Nil Units pre-loaded	l (i.e. (0 Comply			
4.2.3	, ,	(Zero) l	kWh) iterface Unit (UIU)					
	2.2.1	The UI algorith	U comply with 20-digit (STS) encryp uns. All correctly entered tokens to b inate fraud.		stered	Specify		
4.2.3	2.2.2	User fri numeri	endly UIU's keypad with a LCD dis c credit display and language indeper ams to identified operational features	ident	or	Specify		
4.2.	2.2.3	The UI charact	U display shall have at least seven 7- ers comprising of five integers and tw ns, Icon information and numeric inf	numer vo dec	imals	Specify displaye		
Issued by	Head o	(Section	Standard Development	Autho	rized by	: Head of	Department, Standards	
Signed:	104	P		Signed				
Date: 201	(14)-(1.			2017-10	0	-0	

		TITLE:	D	oc. No.	KP1/6C/4/1/TSP/14/		
V		SPECIFICATION FOR SINGLE-	In	sue No.	1-02		
		PHASE SPLIT PREPAYMENT DIN	is	sue no.			
-		RAIL MOUNTING STATIC WATT -	/E Date of		2017-10-12		
Kenya Po	wer	HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of					
		Communication Between MCU and UI					
Clause	KPLC	requirement		Bidder	's offer (indicate full		
number				details	of the offered for the		
				prepayr	nent meter)		
4.2.2.2.4	The hei	ght of the LCD display characters for the	5	Specify			
	and the second second second second second	e values to not be less than 4.5 mm.					
4.2.2.2.5		ypad of 12-key, international standard la	yout	Specify			
12226		ig 'information' and 'backspace' keys		C			
4.2.2.2.6		closure material to be UV-stable polyear -redundant	vonal		Specify material and applicable standard		
4.2.2.2.7		U conforming to the degree of protection	IP 5				
4.2.2.2.8		U and MCU communicate through PLC		Specify			
		nication link for distance not less than or	10	-press)			
		1 (100) meters.	v2.				
4.2.2.2.9		angeability of UIU unit and possibility to	view	v Specify			
122210		the paired MCU on the UIU.			a		
4.2.2.2.10	UIU enables loading the meter with a number of pre- purchased units of credit, without loss of any existing				Č.		
			isting	5			
4.2.2.2.11		redit balance. The UIU upon acceptance of a valid token credit, the		Specify	Specify		
		nount contained on the token recorded to		-1			
	appropr	iate register in the meter and increment	he				
		by similar amount.					
4.2.2.2.12		U to transfer the credit in kWh.	-	Specify			
4.2.2.2.15	register	U to display the cumulative kilowatt-hou	r	Specify	f		
4.2.2.2.14		U to have a means to remove digits from	38	Specify	Specify		
		entered number sequence-backspace ke					
4.2.2.2.15	The UI	U to have the ability to recall at least the	last f		Specify		
	10001310/0101	ful credit tokens entered and the associat	ed da	ites			
122216	and tim			0.10			
4.2.2.2.16	and the second second second second	U to be able to indicate the meter softwa			Specify		
4.2.2.2.17 4.2.2.2.18		U to indicate the status of the incoming s U to indicate the credit status.	uppty	 Specify Specify 			
4.2.2.2.19		U to indicate token acceptance or rejection	NI.	Specify			
4.2.2.2.20		U to give low credit warning by means o					
	on UIU	display and audio alarm. The UIU to ha	ve				
		of muting the low credit warning sound b	y				
10000		a code on the UIU.					
4.2.2.2.21		s a buzzer that gives feedback on key pro		Specify	0		
		cceptance and rejection melodies, low cr as a factory programmable option	calt				
1	and mis	as a material programminore option					
sued by: Head	of Section,	Standard Development Aut	horize	ed by: Head of	Department, Standards		
igned:	P.	Sig	ied:	-0	-b-		
ate: 2017-10-12		Dat	c: 201	7-10-12	V		

5		TITLE:	Do	oc. No.	KP1/6C/4/1/TSP/14 1-02	
	Y	SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN		sue No.	1	
		RAIL MOUNTING STATIC WAT		vision No.	0	
		HOUR METERS FOR ACTIVE	Da	te of	2017-10-12	
Kenya	Power	Communication Between MCU and UIU Iss		sue age 30 of 33		
Clause	KPLC	requirement		Bidder	's offer (indicate full	
numbe	r			details of	of the offered for the	
				prepayr	nent meter)	
4.2.2.2	22 UIU ke	eypad has backlight to enable keying o	f tokens	in Specify	/	
	the dar	k.				
4.2.2.2		wall mountable		Specify		
4.2.2.2		able to communicate with MCU when		s Specify		
	1.2.1.57	2xAA alkaline battery. The Batteries t	o be			
1.2		d with the UIU.		0.10		
4.3		ical requirements	1	Specify es Specify		
4.3.1	of 230	The meter is operated from mains with reference values of 230V, 50 Hz, with a load switching voltage range from 0.4Un to 1.3Un.			and reference d of the load switch	
4.3.2		ad switch is able to interrupt the supply is below 0.4 Un and above 1.3Un.	ne Specify	Specify		
4.3.3		The load switch automatically restore supply within			Specify	
	minute	when the voltage falls within 0.4Un -	1.3 Un.			
4.3.4	of which	he meters is connectable for 2-wire systems, drawing f which shall be printed on the meter body. Stickers of ny kind shall not be accepted			1	
4.3.5	Summ	ary of electrical parameters as per ta cation	able 1 of	. Specify		
(a)	Meter	accuracy class		Specify	class and reference	
14-14	1000000000			standard		
(b)	Rated 1	Nominal Voltage (Un)		Specify		
(c)	Load s	witching voltage range		Specify		
(d)	Maxim	um Voltage Circuit burden (W and V/	۱)	Specify		
(e)		eference Current, Ib		Specify		
(f)	Maxim	um Current circuit burden (VA)		Specify		
(g)	Maxin	um Current Imax (A)		Specify		
(h)	Protect	ive class			class and reference	
(i)	Accura	ite Metering Range		Specify		
(j)	and the second se	g Current (as a percentage of Ib)		Specify		
(k)	Runnin	ng with no-load		Specify		
(1)	Short (Circuit current (as a function of Imax)		Specify		
(m)	Meter	constant		Specify		
ssued by: H	ad of Section	, Standard Development	Authorized	d by: Head of	Department, Standards	
Signedi-	KI-P		Signed:	-		
Date: 2017-1	T1 ('		Date: 2017		0	

			TITLE:		Doc. No.		C/4/1/TSP/14/	
	1		SPECIFICATION FOR SINGLE-		Issue No.	1-02		
	T		PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT -		Revision No.	0		
	-		HOUR METERS FOR ACTIVE		Date of	2017-10-12		
Ken	iya Po	ower	ENERGY- Using PLC as Medium of Communication Between MCU and UI		Issue			
		-			Page 31 of 33			
	use nber	KPLC	requirement		details	of the offe	ndicate full ered for the	
(n)		Discon	nection device		Specify	nent mete type	and current	
(0)		Insulati	on class		rating Specify standar		reference	
(p)		Insulati	on f.evel (kV)		Specify	and	reference	
(q)		Overvo	Itage withstand (VAC for 48 hours)		Specify standar		reference	
(r)		-	e Impulse Withstand (KV)		reference	e standar		
(s)			prrent Impulse withstand (kA/microsecs)			Specify withstand value and reference standard Specify withstand value and		
(t)					reference	e standar	d	
(u)			C-Electrostatic discharge (kV air discharge) unity to HF Fields			Specify rating and reference standard Specify rating and reference		
(v) (w)			ity to Fast Transient Bursts		standard	i	nd reference	
(x)			ity to Radio interference		standard	i .	nd reference	
(x) (y)		12.000,10000000	mpulse withstand voltage of PLC (kV)		standard	1	d value and	
(y)			on level of PLC (kVrms)	_	referenc	e standard		
(2)			mication Protocol		reference	e standard		
(bb)			mication Range of PLC		Specify Specify			
4.4		Interop	ocrability Requirements					
4.4.	1		ter's applicable standards		Specify	(
(a)			crability of the meter on offer among ha e and meters supplied by other manufac					
(b)		only on	oprietary technology that does not lock l e bidder or any one manufacturer in its ment of software, hardware or meters			1		
	: Head	of Section.			ized by: Head of	Departmen	t, Standards	
igned:	1441	-C.		ned:		-of-e		
ate: 201	7-10-12	2	Da	te: 26	017-10-12			

SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN RAIL MOUNTING STATIC WATT - HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU	Date of	No. ion No.	1-02 1	
RAIL MOUNTING STATIC WATT - HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of	ion No.		
HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of	Date of		0	
		.6		
	Page			
KPLC requirement		Bidder	's offer (indicate full	
Ribe requirement			of the offered for the	
		prepayn	nent meter)	
	Collins and the	Specify	, 	
Quality Management System				
Quality Assurance Plan		Provide	0	
Copy of valid ISO 9001:2008, ISO 9001:2015 Certificate for international manufacturers and/or	Certificate for international manufacturers and/or KEBS standardization certificate for local manufacturers			
TESTS AND INSPECTIONS				
Test standards and responsibility of carrying out	tests	Provide		
Copies of valid Type Test Reports and 3rd Party	Provide			
Routine and sample test reports to be submitted by supplier to KPLC for approval before shipment			Provide	
Acceptance tests to be witnessed by KPLC Engin factory before shipment	neers at	Provide		
order to verify compliance with this specification	i	comply		
which upon examination, test, or use, fail to mee	r to replace without charge to KPLC meters pon examination, test, or use, fail to meet any			
	sts	Specify		
Minimum testing facilities		Specify		
MARKING AND PACKING				
Packing as per specifications		Specify		
DOCUMENTATION				
	t	Provide		
Documents to be submitted to KPLC for approva	ıl	Provide		
before manufacture (if tender awarded)				
	metering management system. The bidder shall b to demonstrate this capability before award. Quality Management System Quality Assurance Plan Copy of valid ISO 9001:2008, ISO 9001:2015 Certificate for international manufacturers and/or standardization certificate for local manufacturer TESTS AND INSPECTIONS Test standards and responsibility of carrying out Copies of valid Type Test Reports and 3 rd Party t lab accreditation certificate submitted with tende Routine and sample test reports to be submitted b supplier to KPLC for approval before shipment Acceptance tests to be witnessed by KPLC Engin factory before shipment KPLC to perform any of the tests independently order to verify compliance with this specification Supplier to replace without charge to KPLC meta which upon examination, test, or use, fail to meer requirements in the specification Required Type Tests and Routine Acceptance Test Marking as per specification Packing as per specifications DOCUMENTATION Documents to be submitted with GTPs for tender evaluation	Meter interoperable with the existing KPLC smart metering management system. The bidder shall be able to demonstrate this capability before award. Quality Management System Quality Assurance Plan Copy of valid ISO 9001:2008, ISO 9001:2015 Certificate for international manufacturers and/or KEBS standardization certificate for local manufacturers TESTS AND INSPECTIONS Test standards and responsibility of carrying out tests Copies of valid Type Test Reports and 3rd Party testing lab accreditation certificate submitted with tender Routine and sample test reports to be submitted by supplier to KPLC for approval before shipment Acceptance tests to be witnessed by KPLC Engineers at factory before shipment KPLC to perform any of the tests independently in order to verify compliance with this specification Supplier to replace without charge to KPLC meters which upon examination, test, or use, fail to meet any requirements in the specification Required Type Tests and Routine Acceptance Tests Minimum testing facilities MARKING AND PACKING Marking as per specification Packing as per specifications Documents to be submitted with GTPs for tender evaluation	details of prepayn Meter interoperable with the existing KPLC smart metering management system. The bidder shall be able to demonstrate this capability before award. Specify Quality Management System Provide Quality Assurance Plan Provide Copy of valid ISO 9001:2008, ISO 9001:2015 Provide Certificate for international manufacturers and/or KEBS standardization certificate for local manufacturers Provide TESTS AND INSPECTIONS Provide Test standards and responsibility of carrying out tests Provide Copies of valid Type Test Reports and 3 rd Party testing lab accreditation certificate submitted with tender Provide Routine and sample test reports to be submitted by supplier to KPLC for approval before shipment Provide Acceptance tests to be witnessed by KPLC Engineers at factory before shipment comply KPLC to perform any of the tests independently in order to verify compliance with this specification comply Supplier to replace without charge to KPLC meters which upon examination, test, or use, fail to meet any requirements in the specification Specify Marking as per specifications Specify Marking as per specifications Specify Documents to be submitted with GTPs for tender evaluation Provide	

1.		TITLE:	Doc.	No.	KP1/6C/4/1/TSP/14/ 1-02
Y		SPECIFICATION FOR SINGLE- PHASE SPLIT PREPAYMENT DIN	Issue	No.	1
-		HOUR METERS FOR ACTIVE ENERGY- Using PLC as Medium of Communication Between MCU and UIU		ion No.	0
Kenya P	ower				2017-10-12
Clause number	KPLC	requirement		details	's offer (indicate full of the offered for the
8.1	commis	ur (54) months warranty from date of succ sioning certificate for KPLC or Sixty (60) warranty from the date of dispatch which		Specify	nent meter)
8.1.2	Softwar extra co statutor	e supplied shall be updated by the supplie st while any required changes, e.g. tariff ch y changes, etc. shall be implemented free he warranty period and beyond.	anges,	Specify	
8.1.3	perform one (1 indepen	successful bidder/supplier shall o ance of their meter on site for a period of a) year and monitor accuracy of the dently and submit a performance eval f the same.	same	Specify	
8.2	Sample	8		Specify	
8.2.1	UIUs sa Sample The sub and rou and also requirer respons specific		(N.B. o type tory ify the	Provide	
8.2.2	test toke for the s testing of	of meter offered to be submitted together ns for different power limit settings and n ame, credit and clear credit tokens to aid i of the meters. The manufacturer may be re de tokens at no extra cost	esets n the	Provide	

APPENDIX II – MINIATURE CIRCUIT BREAKER (MCB) SPECIFICATIONS

Kenya Power SPECIFICATION FOR MINIATURE CIRCUIT BREAKERS (for use in domestic/residential buildings and imilar premises) Issue No Revision Date of Is Page 1 of TABLE OF CONTENTS 1 0.1 Circulation List 0.2 Amendment Record FOREWORD 1 1. SCOPE 2 2. REFERENCES 3 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufact complete type test reports for tender evaluation, all in E	No. 0 sue 2014-10-18
MINIATURE CIRCUIT BREAKERS (for use in domestic/residential buildings and similar premises) Revision Date of Is TABLE OF CONTENTS Page 1 of TABLE OF CONTENTS 0.1 Circulation List 0.2 Amendment Record 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING	sue 2014-10-18
Renya Power BREAKERS (for use in domestic/residential buildings and similar premises) Date of Is Page 1 of Page 1 of TABLE OF CONTENTS 0.1 Circulation List 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 1. SCOPE 2. 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing capacity is the manufacturing capacity i	
Kenya Power domestic/residential buildings and similar premises) Page 1 of TABLE OF CONTENTS 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity is consistent of the construction of th	
TABLE OF CONTENTS 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing capacity is the capacity of the Manufacturing capacity is the manufacturing capacity of the manufacturing capacity is the manufacturing capacity of the manufacturing capacity is the	
 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufacturing state of th	
 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufacturing state of th	
 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufacturing state of the Manufacturing state of the Manufacturing state of the manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity of the Manufactu	
 0.1 Circulation List 0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufacturing state of the Manufacturing state of the Manufacturing state of the manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity, the manufacturing capacity of the Manufactu	
0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufacture drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture of the manu	
0.2 Amendment Record FOREWORD 1. SCOPE 2. REFERENCES 3. TERMS AND DEFINITIONS 4. REQUIREMENTS 5. TESTS AND INSPECTION 6. MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sign submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture	
 FOREWORD SCOPE REFERENCES TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture of t	
 FOREWORD SCOPE REFERENCES TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture of t	
 FOREWORD SCOPE REFERENCES TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture of the manufac	
 SCOPE REFERENCES TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture	
 REFERENCES TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacture	
 TERMS AND DEFINITIONS REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing capacity c	
 REQUIREMENTS TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing capacity c	
 TESTS AND INSPECTION MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing 	
 MARKING LABELLING AND PACKING ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufacturing 	
ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufactu	
ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufactu	
ANNEX A: Guaranteed Technical Particulars (to be filled and sig submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufactu	
submitted together with relevant copies of the Manufact drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufactu	
drawings, technical data, sales records for previous five letters, details of manufacturing capacity, the manufactu	ned by the supplier and wer's catalogues, brochure
letters, details of manufacturing capacity, the manufactu complete type test reports for tender evaluation, all in E	years, customer reference
complete type test reports for tender evaluation, an in E	rer's experience and copies
	igiish Language)
ssued by: SENIOR ENGINEER R&D Authorized by: CHIEF	
Stanade	ENCINEER D & S
Signed: July Signed: (b. alt Date: 2014-10-21 Date: 2014-10-21	ENGINEER, R & D

	TITLE		Doc. No.	KP1/3CB/TSP/11	1/010	
1-/			Issue No. Revision No. Date of Issue	1		
V		VIFICATION FOR		0 2014-10-18		
-		AKERS (for use in				
Kenya Pov	ver simila	stic/residential buildings and ir premises)	Page 2 of 10	· · · · · · · · · · · · · · · · · · ·		
0.1 Cir	culation List					
COPY NO).	COPY HOLDER				
1		Research & Development Ma	anager			
2		Supply Chain Manager (Proc	urement)			
Electronic	copy	(pdf) on	Kenya	Power	server	
(http://172	.16.1.40/dms	browse.php?fFolderId=23)				
0.2 Am	nendment Re	cord				
0.2 Am Rev No.	nendment Re Date (YYYY-MM-	Description of Change	Prepared b (Name	y Approved & (Name	d by &	
		Description of Change		& (Name	&	
	Date (YYYY-MM-	Description of Change	(Name	& (Name	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No.	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No. 0	Date (YYYY-MM-	Description of Change	(Name	& (Name Signature	&	
Rev No. 0	Date (YYYY-MM- DD)	Description of Change	(Name Signature)	& (Name Signature	&	

		TITLE:	Doc	. No.	KP1/3CB/TSP/11/010
	-/	SPECIFICATION FOR	Issu	e No.	1
	V	MINIATURE CIRCUIT	Rev	ision No.	0
	•	wer BREAKERS (for use in domestic/residential buildings and similar premises)	Date	of Issue	2014-10-18
Keny	a Power			e 3 of 10	
0	in collabor Power and Miniature equipmen It shall be good engi	fication has been prepared b ation with Nairobi Region Te I Lighting Company Limited (Circuit Breakers (MCB). It is i	chnical Servic (KPLC) and it I intended for us ufacturer to en facture of the I	es Departi ays down se by KPL sure adeq diniature (ment both of The Kenya requirements for C in purchasing the uacy of the design and Circuit Breakers for
1.	SCOPE This speci	perience with products which fication is for Miniature Circui nstallations in domestic/resid	it Breakers for	overcurre	nt protection of
2.		ICE STANDARDS	ornar bananığı		ai premises.
2	constitute	ing standards contain provisi provisions of this specificatio need document (including any	n. Unless othe	rwise stat	rence in this text, ed, the latest edition of
	150 000				
	IEC 898:	Circuit-breakers for overco installations - Part 1: Circu			
			uit-breakers fo	r a.c. oper	ration.
3.	IEC 60947	installations - Part 1: Circu	uit-breakers fo	r a.c. oper	ration.
3.	IEC 60947 TERMS A	installations - Part 1: Circu -2: Low-voltage switchgear a ND DEFINITIONS rpose of this specification the	uit-breakers fo and controlgea	r a.c. oper r - Part 2:	ation. Circuit-breakers
3. 4.	IEC 60947 TERMS A For the pu	installations - Part 1: Circu -2: Low-voltage switchgear a ND DEFINITIONS rpose of this specification the	uit-breakers fo and controlgea	r a.c. oper r - Part 2:	ation. Circuit-breakers
3. 4. 4.1	IEC 60947 TERMS A For the pu shall apply REQUIRE	installations - Part 1: Circu -2: Low-voltage switchgear a ND DEFINITIONS rpose of this specification the	uit-breakers fo and controlgea	r a.c. oper r - Part 2:	ation. Circuit-breakers
4.1	IEC 60947 TERMS A For the pu shall apply REQUIRE	installations - Part 1: Circu -2: Low-voltage switchgear a ND DEFINITIONS rpose of this specification the MENTS CONDITIONS	uit-breakers fo and controlgea	r a.c. oper r - Part 2: ven in the	ration. Circuit-breakers reference standards

	TITLE:		Doc. No.	KP1/3CB/TSP/11/010	
1-1		-	Issue No.	1	
Y	SPECIFICATION FO		Revision No.	0	
*	BREAKERS (for use	in	Date of Issue	2014-10-18	
Kenya Power	domestic/residential buildings and similar premises)		Page 4 of 10		
	similar premises)		- age to the		
tropical a average a +40°C an 4.2. DESIGN 4.2.1. The Minia	ature Circuit Breakers sh reas at altitudes of up to ambient temperature of d heavy saline condition AND CONSTRUCTION ature Circuit Breakers (M pply with the requiremen	2000m above +30°C with a m as along the coa MCB) shall be a	sea level, hun inimum of -1º ist. Moulded Cas	hidity of up to 90%, C and a maximum of e Circuit Breaker and	
4.2.2. The MCE overloads		free, manufact	ured for contro stallations for	ol and protection against domestic/residential	
	uit Breakers shall be so on nce is reliable and witho				
4.2.4. The MCE above.	3 shall operate with the c	leclared accura	cy under the o	climatic conditions listed	
4.2.5. The Deg	ree of Protection of the e	enclosure shall	be at least IP2	20.	
4.2.6. Rated Vo	oltage shall be 240V AC,	50Hz supply.			
4.2.7. The mec	hanical endurance shall	be ≥ 20,000 op	erations.		
4.2.8. The elec	trical operations shall be	≥ 10,000 opera	ations.		
4.2.9. The prefe	erred color of the covers	is Grey RAL 70)15.		
configura		ctor has multipl		e and neutral wire (L-N), ne Neutral is also solidly	
	B shall be designed for a used position and to the o		rovision for m	anual operation by hand	
when the	uit Breaker manual oper a circuit breaker is mount closed by the up movem	ted as in norma			
sued by: SENIOR ENG	INEER R&D	Authorized	by: CHIEF ENG	GINEER, R & D	
		Signed: (le alter		
	and the second se	Elmed. /	115		

4.		TITLE:	Doe	c. No.	KP1/3CB/TSP/11/010			
			Iss	ue No.	1			
	V	SPECIFICATION FO MINIATURE CIRCUI		ision No.	0			
	-	BREAKERS (for use	e in Dat	e of Issue	2014-10-18			
1	Kenya Power	domestic/residential similar premises)		ge 5 of 10				
	closed po	n position of the circuit to osition by the symbol "I" of the circuit breaker cor	The Operating mea	cated by t ans shall b	he symbol "O" and the be used to indicate the			
5	rest only	uit Breakers shall be so in the Closed Position of released in an intermed	r in the Open position	e moving c on, even w	ontacts can come to hen the operating			
	4.2.15 The Supply and the Load terminals shall be marked appropriately in accordance with IEC 898. Alternatively the words "LIVE" for supply terminals and "LOAD" for Load terminals may be inscribed next to the terminals.							
	4.2.16 Connections whether electrical or mechanical shall withstand the mechanical stresses occurring in normal use.							
	4.2.17 The MCBs shall be equipped with an overcurrent release as well as an overload release.							
	tripping, s	d current for the MCB, w shall be One (1) Amp or quirements).						
2	4.2.19 The MCB shall Trip once the current rating in clause 4.2.18 is exceeded. The minimum current at which the MCB will Trip, shall be stated by the bidder, but shall not exceed 1.45In, where In is the rated current. The MCB shall however not operate for load current up to 1.13In where In is the rated current. The Time –Current Characteristic shall be submitted with the Bid.							
	4.2.20 Time Current Characteristic for the MCB							
	coordinat	shall be equipped with tion with a Load Current by the MCB and the Loa	Limiter. All short cir	cuits beyo	nd the MCB shall be			
		shall have an inbuilt Inru event false trips.	ush delay to allow fo	er motor/co	empressor start up and			
		shall have a rated shor						
	4.2.23 The Powe	er frequency withstand	voltage of the MCB	shall be 3k	v ms.			
	ed by: SENIOR ENG	INEER R&D	Authorized by: 0	HIEF ENG	INEER, R & D			
Issu			/					

	TITLE:		Doc. No.	KP1/3CB/TSP/11/010
X			Issue No.	1
V	SPECIFICATION FO MINIATURE CIRCUI	2.0	Revision No.	0
*	BREAKERS (for use	e in	Date of Issue	2014-10-18
Kenya Power	domestic/residential t similar premises)	ouildings and	Page 6 of 10	
4.2.24 The Impu	lse withstand voltage of	f the MCB shall	he SkV/n	
4.2.25 The Conr	nection Terminals shall I ad device and shall be la	be Screw termi	nals with wash	
4.2.26 The term conducto	inals shall be designed rs.	to clamp solid	conductors as v	well as rigid stranded
4.2.27 The term specificat	inals shall be corrosion tion.	free under the	climatic conditi	ons stated in this
coppe - Other coppe 4.2.29 Terminal	oy containing at least 50 er for other parts or metal or suitable coated er and having mechanica	d metal with no al properties no s shall be such	less resistanc less suitable. that the condu	e to corrosion than octors may be connected
	s shall be so designed t			
4.2.31 Terminal surfaces. its own.	s shall be so designed t Once the conductor ha	hat they clamp is been tighten	the conductor ad the screw sh	reliably between the nall not become loose on
4.2.32 The Unit	shall be supplied compl	lete with termin	al connection s	screws.
4.2.33 The MCE	shall be suitable for me	ounting on a ra	il inside a distri	bution board
	imum temperature rise s t breaker is carrying its			
4.2.35 The MCE	3 shall have one protect	ed pole.		
sued by: SENIOR ENG	INEER R&D	Authorize	d by: CHIEF ENG	GINEER, R & D
			/ /	

			TITLE:		Doc. No.	Nr				
	1	- / 1	ADEOLEIO ATION FOR		Issue No.	1				
	Kenya Power		SPECIFICATION FOR MINIATURE CIRCUIT		Revision No.	0				
			BREAKERS (for use in		Date of Issue	2014-10-18				
			domestic/residential buildings and similar premises)	ildings and	Page 7 of 10					
			Similar premisesy							
	5.	TESTS	AND INSPECTION							
	5.1	IEC 609	d routine tests shall be don 47-2 and this specification (ibility of the manufacturer to d.	(KPLC1/3CB/	TSP/11/010).	It shall be the				
	5.2	Certified true copies of previous test reports by the relevant International or National Testing/Standards Authority of the country of manufacture (or ISO/IEC 17025 /ILAC accredited laboratory) shall be submitted with the offer for evaluation (all in English Language). A copy of accreditation certificate for the laboratory shall also be submitted.								
		The copies of Type Test Reports to be submitted with the tender shall include the following tests in accordance with IEC 898:								
		b) R c) R d) P e) D f) T g) 2	ndelibility of Marking teliability of Screws, Curren teliability of terminals for ext rotection against electric sh ielectric Properties emperature rise 8 Day Test ripping Characteristic	ternal conduc		lions				
		i) N j) S k) R l) R m) R	lechanical and Electrical en hort-Circuit 'esistance to Mechanical sh 'esistance to heat 'esistance to abnormal heat 'esistance to rusting.	nock and Impa	act					
	5.3	A sample of the MCB offered shall be submitted with the Bid at no cost to KPLC.								
	5.4	approva	test reports for the MCB to I before shipment/delivery on nee tests at the factory before	of the goods. I	and a local second s					
	5.5		pt of the MCBs, KPLC will i or have tests performed in ttion.							
Issu	ied by: S	ENIOR ENG	GINEER R&D	Authorized	by: CHIEF ENG	NEER, R & D				
Sig	ned:	Sthel.		Signed:	be alline					
Dut	e: 2014			Date: 2014	and the second s					

	1	דודו ר		Doc. No.	KP1/3CB/TSP/11/010			
	- /			Issue No.	1			
Kenya Power		SPECIFICATION FOR MINIATURE CIRCUIT BREAKERS (for use in domestic/residential buildings and similar premises)	Revision No.	0				
			Date of Issue	2014-10-18				
			Page 8 of 10	- A Constant				
		ier shall replace withou on, test or use fail to m			which upon nts in this specification.			
6.	MARKING	G, LABELLING AND I	NSTRUCTIONS	3				
6.1	The following information shall be marked indelibly and legibly on the MCB:							
	a) Manufacturer's name or trade mark;							
	b) Type designation and serial number;							
	c) Rated voltage;d) Rated current and the instantaneous tripping curve;							
	e) Rated frequency;							
	 f) Rated short-circuit capacity; g) Wiring diagram. 							
	NB: where all the details listed above cannot fit on the front of the device, a), b), c), e)							
	and f) shall be marked on the side of the MCB as per recommendations of IEC 898.							
	In addition to the required markings above, the following letters shall be printed on the unit: "PROPERTY OF KPLC"							
	All markin	gs shall be by engravi	ng.					
6.2	The number of electrical operations at full fault current and the mechanical operations of the MCB shall be indicated and be in accordance with IEC 898.							
6.3	A set of Five (5) Original Hard Cover Operation and Installation Manuals for the MCBs shall be supplied with the equipment.							
6.4	with the B provide p	id for purposes of carr	ying out technic this specification	al evaluation. 7	ce with this specification			
	••••	THIS SPACE LE	FT BLANK					
	SENIOR ENGI	NEER R&D	Authorize	d by: CHIEF ENG	INEER, R & D			
ssued by: S								
isued by: ! igned:	Marsh .		Signed:	(aller				

		TITLE:	Doc. No.	KP1/3CB/TSP/11/010
	11		Issue No.	1
	Y	SPECIFICATION FOR	Revision No.	0
	<u>}</u>	MINIATURE CIRCUIT BREAKERS (for use in		
Kenve	Powe	domestic/residential buildings and	Date of Issue	2014-10-18
Reliye	TFOWE	similar premises)	Page 9 of 10	
	manufac certified A1: M	A (to be filled and signed by the manufacture turer's catalogues, brochures, drawings, techn lest reports for tender evaluation) ANUFACTURER'S EXPERIENCE A.1: Eligibility: Manufacturer's Experien	ical data, custorr	
	ITEM NO.	DESCRIPTION		BIDDER TO ENTE DETAILS
	1	Manufacturer's Name		
	2	Manufacturer's Address		
	3	Location of Manufacturing Plant		
	4	Reference Number/Name for MCB offere		
	5	Number of years that the MCB has been	manufactured	
	6	Number of MCB units sold to date		
	7	Manufacturer's experience in the manufa	B	
	8	Manufacturer's Guarantee and Warranty		
	9	List catalogues, brochures, technical data submitted to support the offer		
	10	List customer sales records submitted to		
	11	List copies of Type Test Certificates		
	· · ·	Reports submitted with tender (india		
		numbers, date, Testing Institution and co		
÷.	12	List Acceptance Tests to be witnessed by	1	
		Engineers at the factory		
	13	List test reports to be submitted to KPLC		
		before shipment/delivery		
	14	Quality Assurance Programme		
	15	Manufacturer's Declaration of Conformity		
	16	Statement of compliance to tender specifi		
	u	Comments on tender specification/Deviat specifications and supporting data, test re documents etc		

		TITLE:		Doc	No.	KP1/3CB/TSP/11/010
			Issu	e No.	1	
V		SPECIFICATION FOR		Revi	sion No.	0
-	-	MINIATURE CIRCUIT BREAKERS (for use in domestic/residential buildings and				-
Kenva	Powe		ngs and	Date of Issue		2014-10-18
Kenya Power		similar premises)		Page 10 of 10		
A2: T		CAL SCHEDULES A.2: Performance Guarantee DESCRIPTION	s for the I	<u>WCB</u>	BIDDER	TO ENTER DETAILS
	1	Manufacturer's Name				
	2	Reference Number/Name for	and the second	ed		
	3	Rated Temperature and Humi	dity			
	4	Altitude Applicable Standard(s)				
	5	Rated Voltage				
	6	Rated Current				
		Rated Short-Circuit Current				
	7	Minimum Trip Current as a mu current for the MCB				
	8	Instantaneous tripping curve of a copy of the tripping curve)	offered (at	tach		
	9 10	Inbuilt Inrush delay feature Largest supply cable that can to the MCB (in mm ²)	be conne	cted		
	11	Close/Open Indication				
	12	Type of terminals				
	13	Material used for terminals				
	15	Suitable for Mounting on a rail distribution board	l in a			
	16	Markings to be included				
	17	Operating duty cycle				
	18	Markings on the MCB No. of Poles				
	20	Number of Electrical operation	ns at 100%	6		