Kenya Power

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Stima Plaza, Kolobot Road
Nairobi, Kenya

M/s. **25th August, 2016**

Dear Sir/Madam

ADDENDUM I FOR TENDER NO. KP1/9AA-2/OT/06-BS/16-17 FOR SUPPLY, INSTALLATION AND COMMISSIONING OF BOUNDARY METERS

1. **RELATIONSHIP WITH THE PRINCIPAL TENDER DOCUMENT**

   Save where expressly amended by the terms of this Addendum, the Principal Tender Document shall continue to be in full force and effect.
   The provisions of this Addendum shall be deemed to have been incorporated in and shall be read as part of the Principal Tender Document.

2. Please find the following clarifications as requested:-

3. **SECTION 1 – INVITATION TO TENDER**

The tender number is KP1/9AA-2/OT/06-BS/16-17.

SECTION IV – BID DATA SHEET (Appendix to Instructions to Tenderers)

Clause 3.42 – Award of Contract shall be awarded to the lowest compliant evaluated bidder for each lot. No bidder shall be awarded both lots.

TECHNICAL CLARIFICATION

QUESTION 1:
KPLC Requirement:
Page 79 Clause 5.3.2.4: The external communication modem/module shall be equipped under the terminal cover.
Page 83 Clause 5.3.2.54: The meter shall be able to communicate with a remote central system using a plug in modem/module through the GSM/GRPS,, dual band for operation in the 900/1800 MHz GSM networks.

Question:
There is conflict between above two requirements. We suggest it to be plug in modem/module, because it is easy and safe for installation and maintenance. There is no need for KPLC maintenance team to open terminal cover to check communication module.

KPLC Answer: It is not a mandatory requirement to position the external communication modem/module inside the terminal block for the border metering solution, as long as it is inside the integrated unit and it is duly protected from weather and general environmental harsh conditions as per IP 64.

QUESTION 2:
KPLC Requirement:
Page 83 Clause 5.3.2.56: The communication module shall have the DC power output +13V to support the power to UIU.

Question:
Will it be accepted if there is no DC power output +13V on communication module? We think there is no need for DC power output +13V on communication module and cabling will create serious problem for KPLC because it need four cables, two for power supply and two for data. It is better to use twisted cable method for connection with UIU and no need for power supply. Twisted pair cable is not polarity sensitive and installation is very easy and also twisted pair cable can supply UIU more than 100 meters.

KPLC Answer: If the twisted cable is a better option, a bidder can opt for it as long the functionality of the communication module is not compromised.

QUESTION 3:
KPLC Requirement:
Page 84 Clause 5.2.4.1: The meter's accuracy shall be class 0.5 for active energy and class 1 for reactive energy measurement a per accuracy requirement such that it meets IEC62053-21 8.1-8.6.
Page 92 No. 21 Accuracy class for active energy: Class 0.2S; Min. Accuracy class for reactive energy: Class 2.

Question:
Above two requirements are inconsistent. Should it be class 0.5 for active energy and class 2 for reactive energy? For reactive energy according IEC62053-23, we can only have accuracy of 2 or 3 and for accuracy class of 1, IEC officially doesn't issue new standard, for MV feeder accuracy class of 0.5 for active and 2 for reactive will be enough to fulfill requirement of KPLC, important point for accuracy of integrated CT/PT and meter is that metering unit should be 3 CT and 3 PT, other configuration will create a lot of error.

KPLC Answer: Meter accuracy class shall be class 0.5 for active energy and a minimum accuracy class of 2 for reactive energy.

QUESTION 4:
KPLC Requirement:
Page 83 Clause 5.3.2.61: The communication module shall support USSD, CSD communication.

Question:
USSD is old technology and normally it is used by telecom service provider for charging money in SIM card (i.e. *140*PIN# for charging SIM card based on PIN value). If KPLC wants to use this technology, KPLC should receive special services from telecom service provider and also KPLC should define new protocol. New protocol based on USSD technology is very poor in comparison with DLMS/COSEM, because meter complies with DLMS/COSEM, but USSD is not supported in DLMS/COSEM. The communication module is suggested to support DLMS/COSEM compliant new technology of GSM/GPRS/3G communication.

KPLC Answer: The communication module shall support DLMS/COSEM compliant new technology of GSM/GPRS/3G communication.

QUESTION 5:
KPLC Requirement:
On Page 82, 5.3.2.47 DLMS certificate and KEMA certificate should be offered.

Question: Is a certificate and test report from a lab accredited according to ISO17025 rather than KEMA accepted?

KPLC Answer: KEMA certificate is preferred but a certificate and test report from a lab accredited according to ISO17025 rather than KEMA is accepted.

QUESTION 6:
Under SECTION X, It is stated that "The metering solution must be compatible with the central management system as used by the current Commercial & Industrial (C&I) System currently in use within KPLC for outdoor metering of industrial customers".

The prospective bidder is concerned that the existing supplier may make it difficult for them to prove that their meter is compatible with the existing system.

KPLC Answer: The bidder shall submit a sample for access and security authentication testing. The bidder shall submit all the required documents (protocol details) to KPLC and should support the C&I vendor for the access testing and bear all the related administrative costs for this process.

QUESTION 7:

What are the Current Transformer (CT) and Voltage Transformer (VT) specifications/ratings and accuracy class.

KPLC Answer: For the VTs, the rating for 11KV VTs is 11000/110V and for 33KV VTs the rating is 33000/110V. The CT accuracy is 0.5 or higher while the CT ratio is 400/1A and a burden of 10-15.

QUESTION 8:

Whether combining the CTs and VTs in one unit is acceptable

KPLC Answer: Yes. The more compact the integrated unit is the better. The bidder can share the construction of the same for concurrence.

QUESTION 9:

General arrangement drawings with positioning of meter box and dimensions. Are the CTs and VTs mounted on the pole and the energy meter in an enclosure?

KPLC Answer: The general arrangement is as shown below.

There is no separate meter box. The metering unit is integrated as shown below.

Compact/Integrated metering unit with CT, VT and meter in one enclosure.

An example of a compact/Integrated metering unit can be seen in the picture below. A physical one can be viewed along Mombasa road in the following locations:

1. Outside the gate of **Bobmil Industries** (Mattress manufacturers).
2. Polythene Industries after General Motors towards Cabanas (structure about 100m before Imara Daima Estate turn-off).

QUESTION 10:

Please clarify the concrete pole quantities.

KPLC Answer: Each metering unit will require two (2) concrete poles only. Therefore

	11KV					33KV				
LOT NUMBER	INTEGRATED METERING UNITS	CONCRETE POLES	AIR-BREAK SWITCHS	SOLID TAPLIN ISOLATORS	FITTINGS	INTEGRATED METERING UNITS	CONCRETE POLES	AIR-BREAK SWITCHS	SOLID TAPLIN ISOLATORS	FITTINGS
LOT 1	42	84	126	252	1 LOT	18	36	54	108	1 LOT
LOT 2	29	58	87	174	1 LOT	13	26	39	78	1 LOT
TOTAL	71	142	213	426		31	62	93	186	

The tender closing date has been extended from 6th September, 2016 to close on **29th September, 2016** at **10. a.m.** The procuring entity will open the bids immediately thereafter on the same day.

All other terms and conditions of the tender remains the same.

Yours faithfully,
For: KENYA POWER & LIGHTING COMPANY LIMITED.

BERNARD NGUGI
GENERAL MANAGER, SUPPLY CHAIN