Kenya Power

Our Ref: KP1/9AA-3/PT/30/14-15/ea   19th December 2014

M/s ....

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Dear Sirs,

ADDENDUM NO. 1 TO TENDER NO. KP1/9AA-3/PT/30/14-15 FOR SUPPLY, INSTALLATION AND COMMISIONING OF SMART METERING SYSTEM.

The following amendments are made to the specified provisions of the Tender document for Supply, Installation and Commissioning of Smart Metering System.

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. CLARIFICATION ON QUERIES RAISED DURING THE PRE-BID MEETING AND SITE VISIT

1. *Question*: Is it mandatory that the meters have a feature for partial disconnection of customers load?
   Answer: Refer clauses 4.2.6.3 and 4.2.7.3 requirements for single phase and three phase Smart meters respectively.

2. *Question*: Will there be covers for outdoor data concentrators and will provision of the same by tenderer for part of evaluation?

Answer: Provision of weather proof covers by tenderers is optional and this will not be used considered in evaluation. KPLC will provide suitable Data Concentrator covers for weather protection. However, the concentrator must meet requirements in clause 4.2.1.3.

3. *Questions*: Is it a must that meters samples have approvals by KEBS?
   Answer: This is a mandatory requirement.

4. Questions: Are samples going to be returned to the bidders?
   Answer: Samples will not be returned. Please refer to Clause 5.9 of the Specifications.

5. Question: Is Radio Frequency acceptable as a mode of communication between the meter and the data concentrator?
   Answer: The default communication between the meter and the data concentrator shall be PLC. However, the meter should be able to support PLC, RF, and any other open communication platforms.

6. Questions: Are PLC modules included in the tender?

   Answer: The PLC module was not captured as a separate item in the tender. However, its functionality is captured in clause 4.2.3.1 (a) and should therefore be quoted for.

7. Question: Clause 4.5.8/ 4.5.10 of the single phase and 3 phase meter specifications respectively regarding the duration of the PLC technology deployment.

   Answer: The communication should employ an open PLC platform and the clause should read in part; "Smart meters using PLC technology (single phase or 3-phase sold and installed in utilities outside the country of manufacture shall not be less than 50,000 meters".

3. OTHER QUERIES /CLARIFICATIONS RAISEED BY VARIOUS BIDDERS

A. General Requirements	Clarification	Response
1. General Requirements:		
The system should meet the ISO 9000, ISO 9001-2008 Quality Assurance certification or similar.	This shall apply to head-end system manufacturing company?	**Yes**
2. Manufacturer/Bidder Related Requirements		
The bidder should provide continuous software and hardware upgrades, support and consultancy to cater for changing functional and technical business requirements.	What hardware upgrades are expected?	**The server hardware and accessories**
B. Functional Requirements		
5. System Structure & Design		
It shall be possible to control the remote load control devices connected to the meter via the home area network.	Meters specification does not require this. Is it required for head-end only?	**There should be provision in the head end system for future use.**

A. General Requirements	Clarification	Response
It shall be possible to carry out demand side management.	Meter specification does not allow for any other demand side management (e.g. external breakers). How is this envisaged to be supported by system?	**The provision required for future use.**
The supplier must demonstrate interoperability with other devices. A copy of the relevant certificate shall be submitted with the tender document.	Please specify "other devices". Is this related to meters, concentrators, other IT systems, etc.?	**The system should employ open system architecture (should not be closed).**
The system shall have capacity to support Smart Grid Technology.	Are other interfaces than IEC 61968-9 as specified below required?	**IEC 61968-9 (*Meter Reading, Control and MDM integration*). Since there is no MDMS; direct interface to billing system will be required.**
6. Main System Components		
Capture readings on all scales of the meter	Please clarify what this means.	**The head end system should be able to capture all the parameters as per the meter specifications.**
7. Information Processing		
The system MUST present the information in a format that will be interfaced to the current billing software; this MUST be in ODBC format or XML files.	ODBC (Open Database Connectivity) is not a format, but a standard programming language middleware API for accessing database management systems (DBMS).	**ODBC standard is for the purpose of automatic data interface to other systems (to avoid manual data transfer via files).**
C. Technical Requirements		
10. Operating Systems & Database		
The system should be capable of operating on the current KENYA POWER hardware environment of Solaris UNIX servers & Windows NT Servers.	Please specify requirements if different from Table 13	**The KPLC environment is Solaris Unix Servers and Windows NT which the system is supposed to integrate with.**
The Database should be scalable to cater for future growth.	Please specify requirements if different from Table 13	**This is the design of the Database (relational database approach).**
11. Interface and Interoperability Support		
The system shall have an interface to Kenya Power's Meter Data Management System (MDM). The interface shall be as per IEC 61968-9 standard. Refer to the diagram below:	Please share details on MDM manufacturer and version.	**MDMS is not in place. The head end system should provide provision to interface with future MDM system(IEC 61968-9 standard)**

A. General Requirements	Clarification	Response
HARDWARE SPECIFICATIONS		
IT REQUIREMENTS FOR SMART METERING HEAD-END SYSTEM		
This system will be responsible for collecting AMI data from the various meters end points via GSM/GPRS network and backhaul communication network to Corporate headquarters where the data will be processed before being integrated into KPLC MDMS and billing system. The four GPRS router will connect to a VPN concentrator viz Cisco 2811 router.	Please share the design/network architecture intended for this setup, as BOQ is very specific.	**The design is in page 2 of the tender document. MDMS not in place. The HES will assume some of the MDMS roles.**
Meters & Installation		
General.	Are the meter installations new or existing premises? What will happen to any removed meters? Who will dispose of these meters?	**The meters are to be installed in existing premises; removed meters are the responsibility of Kenya Power.**
Single Phase Meter Specification, 4.2.2.5, Meters and DC requirements are stated as IP 51.	Will meter/DC enclosure be provided by KPLC or installations are outside or no enclosure is required?	**The enclosures will be provided by Kenya Power.**
Single Phase Meter Specification, 4.2.7 Load control & management.	How is this automatic disconnection of part(s) of customer load envisaged to work? What, if any, are the requirements for auxiliary relay outputs from the meters to control part(s) of consumer load?	**Provide a provision for load control as Clause 4.2.7.**
Pre-tender meeting	Can we receive minutes of meeting from the pre-tender meeting?	**The minutes will be provided with this document.**
Project start date	What is the project timeline, specifically the proposed project start date?	**Please refer to Tender Document Section V; Schedule of requirements; Notes.**
Single Phase Meter Specification, 4.2.5 CIU	What are the full functionality requirements of the CIU? Are any CIUs required to be supplied as part of the BOQ?	**CIUs are required for interrogation of the meter.**
Single Phase Meter Specification, 4.2.7.5 Provision for entering credit tokens when meters are operated in prepayment mode.	Does this mean via a keypad or 'token' receptacle? This could be a 'soft' token. Is this a mandatory requirement?	**The meter shall be able to load tokens remotely and on site.**
Specification for Smart Data Concentrators,	DC configuration software and associated laptop computer is not listed in BOQ, is this required, if so how many?	**No Lap top computers are required with Data Concentrators.**

A. General Requirements	Clarification	Response
Single Phase Meter Specification, 5.9 Samples, (a).	Can the sample meters and DC be provided after the tender submission deadline?	**The samples to be submitted with the tender.**
Single Phase Meter Specification, 4.5.8	Has KPLC carried out any testing on the LV network for noise and other possible causes of PLC interference?	**PLC modules shall be based on applicable international standards.**
Data Concentrator		
Specification for Smart Data Concentrators,	DC configuration software and associated laptop computer is not listed in BOQ, is this required, if so how many?	**A complete solution is required.**
The following documents were referred to during the preparation of this specification:	OFDM is required, but no standards related to this (eg. IEEE P1901.2-2013) mentioned – should this be considered?	**International standards should be considered.**
4. Requirements		
4.2.3 Communication		
4.2.3.1 General		
a) The concentrators shall have down-link communication mode that supports communication with the meters by PLC system, scalable to other communication options.	Differs from Appendix A, please clarify priority	**The data concentrators shall be scalable to other communication options; wireless and Ethernet.**
e) The concentrators shall have facility for local and remote configuration to suit customers' requirements.	Please specify "customers' requirements"	**The DC shall be configurable both remotely and locally.**
j) Offer data rate performance significantly which provides for a foundation for future integration of electric vehicles and distributed generation control.	Please specify requirements for "future integration of electric vehicles and distributed generation control"	**Data rate performance should be in line with the current market speeds.**
4.2.3.2 Down link communication		
a) The data concentrators shall have PLC interface that satisfies the requirements below:		
i) Modulation: OFDM	Differs from Appendix A, please clarify priority	**OFDM is required**
ii) Link layer: IEC 61334 or higher	IEC 61334 is S-FSK – contradicts OFDM requirements in i), please clarify	**provide OFDM modulation**
vii) Minimum number of meters to be connected: 1000	256 is mentioned in Appendix A, please clarify if 256 or 1000	**The minimum number of meters required is 1,000.**
4.2.3.3 Up-link communication		
a) The data concentrators shall have a GPRS modem that satisfies the requirements below:		
viii. SMS capability: Yes	Not in Appendix A, please clarify priority	**The GPRS modem shall have SMS capability.**

A. General Requirements	Clarification	Response
4.3.5 The Tenderer shall complete clearly, all the clauses in both columns of the schedule in Appendix D. This shall form the basis of evaluation of the submitted tender. Failure to complete this appendix shall render the tender non-responsive. The tenderers shall indicate the details of their offer where it is different from these requirements. Where the requirement is the same, they shall indicate what is offered. Insertions such as "noted", "agreed" etc. shall be considered as non-responsive where a specific response is called for.	Appendix D not found, Appendix A, assumed, please verify	**Refer to Appendix A.**
4.3.8 The tenderer shall give proof that the number of Data Concentrators sold and installed in utilities outside the country of manufacture over a period of last 5 years shall not be less than 1,000. The addresses and contact person(s) shall be provided with the tender to facilitate confirmation of this information by the procuring entity.	Numbered 4.3.9 in Appendix A	**Please refer to clause 4.3.8 in the DC specifications.**
Data Concentrators	SIM Cards – Is the bidder expected to quote and provide the 300 x SIM Cards for the Smart Data Concentrators?	**The SIM cards are the responsibility of Kenya Power.**
	APN – Is the bidder supposed to provide the supporting APN	**NO**
Head End System	TABLE 13: Smart meter head-end system server specification – Is the bidder supposed to provide the server as specified in this table? Our proposed system should be able to run on a much smaller machine, in actual fact a PC, for the proposed 3,000 meters. If we are supposed to provide the server, can we quote for the appropriate hardware that would support our system?	**Yes.** **A server shall be provided.**
TABLE 14: BILL OF QUANTITIES	GPRS/EDGE Routers – What is the purpose of the GPRS/Edge Routers?	**GPRS/EDGE Routers - are used to wirelessly connect equipment and devices via Ethernet interface to the Internet or intranet.**

	Cisco 2811 Router – Why is there a requirement of 2 Cisco 2811 routers. Our system can be supported on 1 x Cisco 2881 routers.	Provide as per Bill of Quantities.
	AMI server – Clarify whether this one is the same as the server whose specifications appear in TABLE 13.	Yes
	Clarify that the requirement is for 2 x AMI.	Yes

PREBID MEETING AND SITE VISIT		
PREBID MEETING	Due to the last minute change of venue for the Pre-bid meeting, the attendance will no longer be considered as a Mandatory Requirement.	
SITE VISIT	The Site Visit was Mandatory. Bidders should ensure that the "Site Visit Form" that was signed & stamped is submitted together with the bid Document.	

4. DEADLINE FOR SUBMISSION OF TENDER

The closing date for the tender remains **Monday 19th January 2015** at **10.00 a.m.**
Tenders shall be opened immediately thereafter in the Auditorium located at Stima Plaza, Kolobot Road, Nairobi.

All the other terms and conditions remain as per the tender document.

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

Eng. JOHN OMBUI
GENERAL MANAGER, SUPPLY CHAIN