

25<sup>th</sup> September 2008

Eng. Kaburu Mwirichia  
Director General  
Energy Regulatory Commission  
Integrity Centre, 1st Floor  
P.O. Box 42681 - 00100  
Nairobi

Dear Sir,

**Cause For Public Concern On The KPLC Prepaid Meter Tender**  
**Tender No. KPLC1/1C/5/3/METERLAB01/08**

We are the Africa Centre for Open Governance (AfricoG), a civil society organization that focuses on governance issues in the public interest.

We are writing to your esteemed Commission as the custodian and guardian of the public interest in the energy sector.

It has come to our attention that the Kenya Power & Lighting Company Ltd. (KPLC) has advertised a tender for the design, supply, installation, testing and commissioning of prepayment software, hardware and meters under a partial turnkey project under the above tender number. As you will be aware, the tender targets the supply and installation of prepaid electricity meters on a partial turnkey basis first to 25,000 customers, later to be upscaled to 3,000,000 customers. The tender is scheduled to close on Friday, 26<sup>th</sup> September 2008.

Upon a preliminary review of issues of concern we consider that they are critical enough to deserve your urgent attention and response, particularly in view of the imminent tender closing date. The concerns relate to the following main areas:

- Transparency in Procurement
- Appropriateness of specified technology
- Protection of consumers' interests

## I. On Transparency in Procurement:

- **Tender appears restricted:** The tender has specified a token based non-intelligent system (STS - one way communication) that is specifically used in South Africa (see p. 36 Section 11<sup>1</sup>). The Bid Data Sheet requires that the bidder is at least a current Ordinary Member of the Standard Transfer Specification Association (STSA). The STSA website presently lists four founder members and 31 ordinary members. The KPLC tender therefore appears restricted.
- While the tender document states on Page 26 that bids with superior specification to the proposed requirements are welcome to state their solution/superiority and clearly document it, the bid data sheet clearly states under ITB8.3 (g) "alternative bids are NOT acceptable". What is the correct position?
- The STS Association favoured by KPLC informs us on its own website as of 20<sup>th</sup> September 2008, (*mhtml:file://E:\Introduction to the STS – Association.mht*) that the STS technology has not yet been adopted by the International Electrotechnical Commission (IEC). This is the world's leading organization that prepares and publishes international standards for all electrical, electronics and related technologies. The website also indirectly confirms that the STS technology is a 1-way communication device by listing the development of 2-way communication to their existing technology as one of the envisaged enhancements that are anticipated in the future<sup>2</sup>.

The KPLC minimum requirements also state that "the system should be able to support Automatic Meter Reading technology (AMR), if required in future, (emphasis ours) so as to provide two-way communication e.g. "real time" communication of meter consumption, meter status data". (vol. 2 p.42, Section 15). KPLC implies that the STS system will be upgraded to smart card system in future. This leads to questions on the rationale behind its implementation in the first place. Is the KPLC insisting on procuring technology that may soon become obsolete and, if so, why? Is the ERC satisfied that the interests of consumers, investors and other stakeholders have been protected?

We fear that the Kenyan consumer may, in effect, end up underwriting the cost of this improvement when KPLC could immediately move to acquire the more up-to-date technology, which, as we understand, is already available and in use, even in neighbouring countries.

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<sup>1</sup> Cf. Bidding Document. Republic of Kenya. The Kenya Power and Lighting Company Ltd. Tender No. KPLC1/1C/5/3/METERLAB01/08. Design, Supply, Installation, testing and Commissioning of Prepayment Software, Hardware and Meters Under Partial Turnkey Project.

<sup>2</sup> See also <http://www.sts.org.za/news/Smart-power-metres-herald-future>

- **Lifespan guarantee:** The tender apparently does not require a mandatory, independent third-party certification that guarantees a minimum of 15 years trouble free operations as is the industry norm. If this is correct, this critical omission exposes the investment to the risk of delivery of substandard products by unscrupulous suppliers.
- **Cable sale:** Further, the tender has specified that a cable with a minimum length of 80 meters be used to connect the meter (Measurement Control Unit - MCU) to the keypad (User Interface Unit - UIU) in each of the targeted homes (vol. 2 p. 69. 4.2.1.22). Clarification should be publicly provided on why this minimum length has been specified. Would this amount of cable be necessary with Smart Card technology?

At an estimated \$5 per meter this amounts to US\$ 10 million for the 25,000 households in the pilot project. If the target of 3 million households were attained this would mean that a minimum cable length of 240 million meters would be required, or \$1.2 billion worth of cable. This raises questions on whether this is a disguised cable tender and who could stand to profit?

- **Security:** STS does not encompass the latest encryption standards to protect against the ever-increasing threat of hackers. The internationally recognized standard as used by the banking system globally is triple DES (Data Encryption Standard). The KPLC repeatedly emphasises the problems caused by vandalism on its installations. Is the STS technology more or less prone to tampering than the more modern wireless technology?

Does the Energy Regulatory Commission not have a duty to ensure that the 49% government-owned KPLC acquires technology that is fit for purpose and offers value for money?

## II. On concerns around the appropriateness of the technology:

- Our preliminary research indicates that utility meters around the world are being transformed from simple measurement devices to complex socio-technical communications and information management devices. Smart meter technology enables utility firms and governments to collect factual data and statistics on individual consumers to be used in energy research, taxation, planning and development.

Smart meter technology also enables utility suppliers to give customers a choice of tariffs so that customers may choose when to consume most power. This allows individual users to monitor and adjust their consumption thus improving energy efficiency.

It would be important for Kenyans to be allowed to understand why the technology specified in the tender is being procured and others being

excluded.

- As recorded in the pre-bid meeting for the tender, the KPLC claims to have "done extensive research on prepayment since 1998 and chosen STS-Keypad systems as it is an open standard (IEC 65055-41) (sic) and allows us flexibility of sourcing meters from any STS compliant supplier among others"<sup>3</sup>. The research referred to is not posted on the KPLC website, nor is any reference document cited. Further, the suggestion that STS technology has been adopted by IEC is misleading; on its own website the STSA notes that "the STS is currently in the process of being adopted by IEC ...However, these documents have NOT YET (sic) been officially released..."

The STS technology may be an improvement on the present KPLC systems but it is being phased out elsewhere:

- Even in South Africa, electricity legislation has recently been amended to make it mandatory for all loads consuming more than 1000 kWh per month to be measured by SMART meters.
- The European Parliament in December 2005 effectively required member countries to phase out the one-way communication meters in favour of two-way communication SMART meters.

### III. Consumer protection

The Kenyan consumer is already reeling under the costs of the recent increases in power tariffs. If the above-listed objections are justified then implementing this tender risks wasting immense resources on sub-optimal technology, raising power tariffs and overburdening consumers even further.

We kindly request the ERC, as the custodian of the public interest, to look into the tender more closely.

There are consumer protection issues associated with the various options open to KPLC which seem not to have been considered at all in this exercise. KPLC informed bidders that ERC had voiced no objections to its intentions. In other jurisdictions, regulatory bodies have paid attention to issues such as the long term interests of consumers with respect to the price, quality and reliability of essential services and, at the same time, having regard to economic efficiency and the protection of the environment.

AfriCOG does not endorse any particular options. However, our preliminary research indicates that there are public interest issues raised by this tender that it would appear important to respond to.

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<sup>3</sup> Minutes for the Kenya Power & Lighting Company Pre-Bid meeting for the prepayment tender No. KPLC1/1C/5/3/Meterlab/01/08, Question 17 response, no doc. ref. given.

