



Preamble

We would like to welcome you to the ERA Secretariat's maiden publication of the '**ERA Sector Update Newsletter**'. The birth of the Newsletter culminates from the 'sector updates' that ERA has been distributing to stakeholders in the past. This publication marks another milestone in our quest to facilitate communication amongst stakeholders, and the general public that is interested in regulatory issues in the electricity sub sector. We hope that our esteemed stakeholders will quickly seize the opportunity and inform themselves on pertinent issues in the sector.

As a maiden edition, we have found it appropriate to feature a statement from the Chairman – ERA. A profile of the organization is also included, our achievements to-date and some of the challenges we face as we execute our task. Current pertinent issues and reforms in the sector have been highlighted providing an up to date basket of information on the electricity sub sector.

For now the newsletter will be published twice annually and the next issue should be expected before the end of July 2008. Needless to say the expectations of this first edition were very high and we hope we made a good job of it. Ultimately, we would like to reiterate that this newsletter will become what stakeholders make of it and we hope that you will comment freely and contribute regularly to this publication to ensure it remains a regular feature.

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Electricity Regulating Authority
Plot 15 - Shimoni Road
Nakasero
P.O. Box 10332
Kampala

Tel: +256-414-341852
341646
+256-312-260166

Fax: +256-414-341624

Email: era@africaonline.co.ug

Website: www.era.or.ug



Chairman's Statement

Welcome to the maiden edition of our bi-annual ERA Sector update. This publication not only highlights what is happening in the sector but also provides some useful tips and information for people interested in the electricity regulatory issues.

ERA was established by an Act of Parliament in 1999 to regulate the generation, transmission, sale, export, import, and distribution of electrical energy in Uganda. Since the establishment of the Secretariat in 2001, ERA has had several successes notably the acquisition of permanent home on Plot 15 Shimoni Road and the staffing and training of all the core professional staff to manage the new field of electricity regulation. Although regulation on the continent, is still in its infancy, ERA has established herself as a credible Regulator and has attracted Associate Regulators from several African Countries to visit it for learning and sharing ideas in the field of electricity regulation. However we need to bear in mind that the organization remains fragile and on its learning and as such we too must do everything possible to consolidate the achievements we have made so far, while keeping abreast on new features in regulation.

Part of the challenges the Regulator has faced in the formative years have been to get the regulatory structures right and establish themselves as independent, objective and impartial in the sector. We are proud to state that ERA has stood firm on these attributes, has not compromised on any of them and we have weathered many storms.

This publication marks a milestone for ERA in a bid to facilitate communication more effectively facilitating communication with and amongst our stakeholders. Its content will also make provision for pinpointing issues that could be of interest to all our stakeholders and consumers.

Mr. Ben Dramadri.
Chairman – ERA.

The CEO highlights ERA

Origin of ERA

The enactment in 1999 of the Electricity Act led to the establishment of the Electricity Regulatory Authority (ERA); and subsequently establishment of its Secretariat in 2000, which became operational in March 2001.

The Role of ERA

The ERA has a statutory mandate of regulating the generation, transmission, sale, export, import and distribution of electrical energy in Uganda. The ERA balances the interests and needs of the various stakeholders in the sector. It therefore has the responsibility of ensuring that utilities earn a reasonable rate of return on their investments while providing quality electricity and service at affordable prices to the consumer. The activities of the ERA are guided by the Government's energy policy goals and objectives. To execute this mandate effectively; ERA has put together a team of competent and experienced individuals in matters of utility regulation.

The Structure of the ERA

The ERA is led by an Authority of 5 members, although presently only three are in place: - Mr. Ben Dramadri the Chairman, Mr. F. J. Kasujja, and Eng. Dr. V. B. Kasangaki - members. The Authority is serviced by a full time Secretariat, led by the Chief Executive Officer. The current establishment of the ERA stands at twenty eight (28) and staff is made up of 2 economists, 2 lawyers, 4 engineers, 3 accountants, 1 statistician, and other support staff. Where necessary the Authority also competitively hires external consultants to supplement its internal capacity.

Other Resources

The Authority has a dynamic website (www.era.or.ug) in addition to a well stocked Resource Centre (Library) which is open to the public for research and information at ERA House, Plot 15 Shimoni Road – Nakasero Kampala.

The Future

Looking forward the ERA intends to reach out to more electricity consumers while enforcing licence conditions and standards more stringently and vigorously. However, the electricity supply shortages continue to be a major challenge. Also notable is the fact that the cost-reflective tariffs that might attract investments are going to take time to be achieved given the increasing role of expensive oil based generation to meet these shortages as we develop the hydro potential for the country. However the Government has pledged to subsidize costs up until the major hydro projects come on stream.

Eng Dr Frank Sebbowa - CEO

Sector News

1. Electricity Supply Industry Status: - Supply and demand status today:

- Electricity supply at peak now averages - 250MW.
- Maximum demand now stands at – 350MW (due to supply constraints) during the evening peak.
- Deficit for electricity is approximately 90MW during peak hours.
- 100MW thermal generation from Aggreko i & ii at Lugogo & Kiira respectively.
- Uganda's GDP growth rate constrained due to insufficient power supply.
- Diesel fired electricity generation is now half of Uganda's generated supply.
- Unfavorable high tariffs due to high oil prices.

As a result GDP, which was expected to grow by 6.0% to 6.5%, is now estimated as reduced to 4.5% due to electricity shortages.

2. Mitigation Measures undertaken to curb electricity shortfalls and the Future outlook:

- Procurement of additional thermal is in high gear with the World Bank supported Mutundwe 50MW diesel generator close to implementation.

- Loss-reduction programs are being rigorously implemented.
 - Development of small renewable generation plants has intensified.
 - Solar options are being seriously considered for implementation.
 - Fast track of the big hydro projects namely Bujagali Hydro whose implementation is ahead of schedule. Preparatory work on Karuma is also in high gear.
- a. **Mutundwe:** 50MW temporary (3year) thermal diesel generator is expected in the first quarter of 2008.
 - b. **Namanve:** 50MW permanent thermal electricity plant for commissioning in August 2008.
 - c. **Tororo:** 10 MW HFO thermal electricity plant expected by the end of the first half – 2008.
 - d. On-going mini hydro project developments include:
 - WENRECO - 3.5MW hydro power project construction on-going at Nyagak; Nebbi District. Licence issued 2003
 - ECO Power – 5MW at Ishasha, Kanungu District – licence issued 2007 and construction set to start soon.
 - China Shang Shen International – 10MW at Kikagati, Mbarara District. Licence issued 2007.
 - Hydromax – 9MW at Buseruka, Masindi District. Licence issued 2007
 - e. **Co-generation Projects:** Kakiracogeneration project is in full progress for 16M of which the 12MW will eventually be supplied to the national grid by the first quarter of 2008. The first 6MW feed to the national grid started October 2007. Additionally SCOUL is also another co-generation project in progress for a 3MW generation; and both projects are tapping on their sugar cane waste (bagasse).
 - f. **Import electricity from Kenya:** Subject to Kenya's own internal needs there is a provision for up to 30MW (thermal power) to be imported as and when the need is critical since this electricity is also expensive.
- g. **Solar lighting and solar water heating:** Government is promoting solar PVs systems in homes and solar water heating in both homes and commercial enterprises in order to reduce on the evening peak load demand for grid electricity.
 - h. **The Bujagali hydropower Project:** Construction for the long-awaited Bujagali hydropower project for the 250MW hydro dam has kicked off and is several months ahead of schedule. The project is being developed by Bujagali Energy Ltd led by the IPS Group and commissioning is expected in the next 44 months.
 - i. **The Karuma hydropower project:** The 200MW Karuma project is programmed for development in parallel with the Bujagali project. Presently it is progressing as a public-private partnership with government joining Norpak led consortium of investors.
3. **Implications and outcome of mitigation measures addressed.**
 - Reduction in load shedding.
 - Tariff revision to reflect costs of supply.
 - Huge Government subsidy that affects the capacity to invest in new projects.
 - a. The additional thermal generation capacity significantly reduces day load shedding to enable the affected sectors of the economy; both the manufacturers and commercial services to operate in a more predictable manner. Additionally night load shedding reduces to some extent.
 - b. ERA had to adjust the tariffs by late 2006 to reflect the costs of power supply as a result of increased thermal energy (close to 50%) in the electricity generation mix.
 - c. Government has since 2007 and through 2008 will continue to provide substantive subsidy towards the costs of the power supply for

end-users to ensure electricity affordability and reduce negative impacts to the national economy. This subsidy amount could have provided additional investment in new generation capacity.

4. **What consumers can do to curb the electricity short fall?**

Smart electricity consumers conserve electricity by:-

- Utilizing electricity sparingly through switching off un-used appliances and lights.
- Using more energy efficient appliances and equipment.
- Regularly carrying out energy audits in all domestic and commercial premises and factories and endeavour to mitigate electricity wastage.
- Regularly servicing equipment to reduce current leakages, sparking and overheating, all of which reflect energy wastage.

5. **Electricity Sector budget highlights for FY 2007 / 2008.**

For the Financial Year 2007/08 – Government has placed emphasis on aligning sector expenditures to the priorities which will support the Vision of Government. Top on the expenditure list is investment in the energy infrastructure.

A total of Ug Shs 92billion to support thermal power generation was set aside for this.

- Additional resources set aside for the Energy Fund created in 2006/07 are being deployed for the quicker construction of the Bujagali and Karuma dams
- Government advanced US\$ 75m for the early commencement of the Bujagali hydro project and the loan will be re-paid when the project reaches financial closure.

- Likewise Karuma hydro project is being fast tracked to avoid further electricity shortfalls since it is clear that demand will outstrip supply soon after completion of the Bujagali project.
- All priority transmission and distribution capacity are to be built in the short to medium term.

A total of Ug. Shs 119 billion for the development of hydro power plants and related infrastructure was set aside for the FY 2007/08.

Finally this FY 2007/08 will see the development of renewable energy generating schemes. A total of 40MW of electricity is to be generated from these schemes over the next 5 years.

6. **Umeme introduces a new billing system.**

Umeme Ltd has recently signed a contract with the Spanish software company SOLUZIONA CONSULTORIA TECNOLOGIA to supply a New Customer Care and Billing System (NCBS). The system worth US\$ 8 million, will replace the Company's ageing billing system which has outgrown the capacity it was designed to handle.

Umeme has made intermediate improvements to the billing system and related processes aimed at improving the level of service; these include the elimination of the billing backlog, reducing on customers on estimated consumption, cutting down the number of customers on direct supply and metering previously unbilled customers.

7. **Investment on the Distribution Network.**

Umeme plans to spend US\$ 100 million on capital expenditure in asset purchase and system improvements in the first 5 years of operation.

- In 2006 Umeme Ltd spent a total of US\$11 million, on investments in the network and in 2007 it targeted to spend US\$ 25 million.
- As part of operations and maintenance, the company has replaced 20,071 poles and installed 840 new distribution transformers.
- Umeme Ltd has connected 18,000 new homes to power per year, 6,000 more than the

contractual figure of 12,000 since it took over operations.

- Umeme Ltd has connected over 44,000 new households to power in two and half years against a commitment of 60,000 over five years in the concessionaire agreements.

8. **Lesotho Regulators visit ERA.**

We have continued to interact with other continental regulators in the African Forum for Utility Regulators (AFUR). On the home front the Lesotho Electricity Regulators visited Uganda and the ensuing interactions proved mutually beneficial.

9. **ERA launches Electricity Consumer Committees (ECCs).**

The Electricity Regulatory Authority in August 2007 launched the first ever electricity consumer committee (ECC) for the electricity sub sector in Kampala Central Division. The launch of the ECC in Kampala Division is a pilot study and will be replicated in other regions after six-months, and subsequently rolled out in the rest of the country. The establishment of two additional ECC's in Jinja and Nakawa - Kampala is in advanced stages.

The main reason for the establishment of ECCs is:-

- ECCs are an intervention expected to raise knowledge about sector issues to consumers – a channel for communication between ERA and actual consumers.
- The Regulator is enabled to receive feedback directly from consumers to inform their Licensee monitoring functions.
- ECCs facilitate working relations between the electricity companies, such as Umeme and consumers.
- ECC promote stakeholder participation and involvement – improve multi-sectoral collaboration & coordination.

ECCs are tasked with the following:-

- ECCs are the first point of call for consumers with unresolved complaints; (the companies e.g. Umeme should always be asked first to resolve consumer concerns).
- ECCs provide mechanisms for complaints registration, resolution and feedback to affected parties.
- ECCs sensitize consumers on sector activities affecting the interests of consumers;
- ECCs provide feedback on electricity companies' performance to the Regulator;
- ECCs enhance localized electricity sector information from electricity companies to consumers through the Regulator;
- ECCs also provide an independent consumer input channel to the regulatory tariff process and sector projects;
- Finally ECCs are channels of communication for any other issues of interest to consumers, the Regulator, and the electricity companies.

Composition of the pilot ECC in Kampala as at press time was:-

- Uganda Manufacturers Association represented by Mr. Moses Kyayiise of Erimu Furniture Ltd
- Private Sector Foundation represented by Joseph Olanya of the Uganda Consumer Protection Association (UCPA)
- Uganda Chamber of Commerce and Industry – Joseph Bogera; Trade & Policy Advocacy Officer – UNCCI
- Uganda Hoteliers Association – Mark Kirya of Ivys Hotel; Wakaliga Road.
- Domestic representatives:
 1. Awelo Sarah – Lawyer.
 2. John Nyabutsitsi – Businessman
 3. Lubu Sulai – Electrician.

Note: Membership extension to KACITA, NGO's and Local governments is being implemented.

10. **Fourth quarter end-user tariffs for FY 2007 remain unchanged.**

The distribution and supply license of Umeme Ltd provides for the quarterly adjustments in the distribution price for inflation and exchange rate. It further provides for a quarterly determination of the power supply price, which is a pass-through cost as bulk power acquisition costs and is supposed to be adjusted quarterly with regard to changes in the generation capacities, inflation and exchange rates. Against this background, ERA did undertake a tariff review for Q4 2007. The following are the adjustments to-date:-

End-user tariffs: these retail tariffs have been maintained at their current levels for the Q4 and as a result the energy subsidy requirement for the fourth quarter 2007 has been increased to cater for the unchanged tariffs. The higher than envisaged subsidy requirement is attributed to the faster increase in fuel prices.

11. **Opportunities in the Sector.**

BACKGROUND

Uganda's hydropower potential is estimated at over 2,000MW along the River Nile. Current exploitation is about 314MW, of which 300MW is along the River Nile while 14MW is the combined installed capacity of Kilembe Mines Ltd. and Kasese Cobalt Company Ltd., both of which are classified as non-Nile small hydropower sites. The two are on River Mubuku on the eastern slopes of Mt. Rwenzori.

Numerous mini and micro hydropower sites, in the range of 0.1-10MW, exist in various locations in Uganda. Given the low electrification rate, these small hydropower sites can be developed to supply power to isolated areas or feed into the national grid. As part of the Renewable Energy Framework, the Government of Uganda embarked on promoting development of such small hydropower sites.

CURRENT INVESTMENTS IN SMALL HYDROPOWER IN UGANDA. (July 2007)

To-date, four companies capable of producing a total of 30MW have been licensed by ERA to generate electricity from four of Uganda's small hydro-based resources. Table 1 below presents details of these four sites and the corresponding Developers.

Table 1: Licensed Companies

Site	District	Capacity (MW)	Developer
Nyagak	Nebbi	3.5	West Nile Rural Electrification Company Ltd. – Project under construction.
Kikagati	Mbarara	10.0	China Shan Sheng Industry International Ltd. – Project impeded by inter border negotiations with TZ.
Ishasha	Rukungiri	6.6	Eco Power Uganda Ltd. – Project impeded by EPC acquisition costs.
Buseruka	Hoima	9.0	Hydromax Ltd. – Still negotiating financing.

M/s South Asia Energy Management Systems has concluded feasibility studies for sites in Kamwenge and Bushenyi districts for Kyambura – 5.2MW and Mpanga – 18MW respectively and is in advanced stages of obtaining licenses for generation of a combined capacity of 23MW.

Two companies namely China Shan Sheng Industry International Ltd – Nshungyenzi Project – 22MW & Adjumani Rural Electrification Co. Ltd for River Esiya Project – 1MW are currently in possession of valid exclusive permits for two small hydropower sites capable of generating a total of 23MW. Feasibility studies for these sites are at varying levels of completion.

AVAILABLE INVESTMENT OPPORTUNITIES IN HYDROPOWER

Small hydropower sites for which no exclusive permits are in force, and which are available for any intending Developer to lodge a Notice of Intended Application with the Electricity Regulatory Authority are shown in Table 2. Please note that this table includes sites for which permits were issued but have expired, and may therefore qualify for renewal.

Table 2: Available Investment Opportunities

Site	District	Capacity (MW)	Remarks
1. Waki	Masindi	5	Feasibility studies completed by SN POWER INVEST AS Permit expired May 31st 2006 Incomplete license application submitted on September 27th 2006. Developer not interested in site.
2. Muzizi	Kibaale/ Kabarole	5	Pre-feasibility studies carried out by SN POWER INVEST AS. Permit expired 30th November 2006 without studies submitted.
3. Nengo Bridge	Rukungiri	7.5	Pre-feasibility studies carried out by SN POWER INVEST AS. Permit expired November 30th 2006 without studies submitted.
4. Kakaka	Kabarole	7.2	Permit issued to ECO POWER (U) LTD. Expired April 30th 2007. Developer lost interest in site.
5. Muyembe/ Sirimityo	Mbale	9.0	Feasibility studies carried out by MT ELGON HYDROPOWER CO LTD. Permit expired September 1st 2004. NIA submitted by another Developer.
6. Nyamabuye	Kisoro	2.2	Permit issued to UGANDA SUSTAINABLE ENERGY CO. LTD. Permit expired September 2nd 2006.
7. Yerya, Mahoma Confluence	Kabarole	3.0	Permit issued to Uganda Energy for Rural Development. Permit expired October 1st 2006.
8. Siti	Kapchorwa	2.5	Preliminary technical studies carried out under AERDP (2003) by SWECO (1999) & MEMD. MT ELGON HYDROPOWER CO LTD also carried out a limited study.
9. Sipi / Chebonet	Kapchorwa	2.5	Preliminary technical studies carried out under AERDP (2003) by SWECO (1999) & MEMD
10 Mvepi	Arua	2.4	No Studies
11. Mitano	Kabale	2.0	No Studies

12. Sogahi	Kabarole	2.0	No Studies
13. Ela	Arua	1.5	No Studies
14. Ririma	Kapchorwa	1.5	Pre-feasibility study carried out by MT ELGON HYDROPOWER CO LTD
15. Haisesero	Kabale	1.0	No Studies
16. Nyahuka	Bundibugyo	0.65	Preliminary technical studies carried out under AERDP by MEMD.
17. Nkusi (at Pachwa)	Kibale	0.6	Preliminary technical studies carried out under AERDP by MEMD.
18. Rwizi	Mbarara	0.5	No Bankable studies
19. Sezibwa	Mukono	0.5	Preliminary technical studies carried out under AERDP by MEMD
20. Rwigo	Bundibugyo	0.48	No Studies
21. Narwodo	Nebbi	0.4	No Studies
22. Agoi	Arua	0.35	No Studies
23. Kitumba	Kabale	0.2	No Studies
24. Tokwe	Bundibugyo	0.4	Preliminary technical studies carried out under AERDP by MEMD.
25. Amua	Moyo	0.18	No Studies
26. Ngiti	Bundibugyo	0.15	Preliminary technical studies carried out under AERDP by MEMD.
27. Leya	Moyo	0.12	No Studies
28. Nyakibale	Rukungiri	0.1	No Studies
29. Miria Adua	Arua	0.1	No Studies
30. Nkusi (at escarpment / Lake Albert)	Kibale	11	No Studies
	Total	61.95 MW	

12. **ERA's 5 key achievements over the period.**

1. [ERA established the necessary processes required of a Regulator and set up the present electricity tariff structure. This has earned ERA credibility from fellow Regulators.](#)
2. [ERA has successfully carried out annual tariff reviews, adjustments and approvals.](#)

ERA has in the last six years balanced the interests of all its stakeholders by ensuring a reasonable rate of return for sector investors and cost reflective and fair prices for consumers.

Because of the credibility of the Regulator – the sector has attracted several investors and some of these have commended ERA on its professionalism especially in regard to processing of licences.

For six years ERA has continued ensuring the sustenance of the sector through setting cost-reflective tariffs that meet the needs of all stakeholders.

Electricity operators' businesses have been sustained, generation has increased and more consumers are now connected to the grid.

Tariff approvals have followed wide consultation from all sector stakeholders to ensure transparency, fairness and accountability of the Regulator.

3. Licensed the three UEB successor companies and regulating their operations.

The shift from a vertically integrated monopoly to open up generation and distribution operations of electricity business has improved supply and revenue in the sector.

Losses in the sector are now better managed especially since they are detected early and the responsible company can be better equipped to manage them.

The unbundling of UEB has seen more investment in the sector and more growth all of which have worked out to the advantage of the electricity users.

4. Participated in the concession process for generation and distribution operations.

Licensed both the ESKOM (U) Ltd. and Umeme Ltd concessions

ERA continues monitoring these concessionaires on behalf of Government to ensure they comply with the terms within the licences given to them.

5. Established a well-staffed professional Secretariat for ERA with a modern office block.

With only an Authority (Board) in place at the start; ERA now boasts of a fully fledged Secretariat with highly trained staff and streamlined structures in place.

ERA has successfully established herself as a credible regulator following their licensing role and attracted several Associate Regulators in the region to learn from her.

ERA has built a magnificent office block as its permanent home through own savings and saved electricity consumers billions of shillings for renting office space.

ERA has increasingly become the information hub on sector issues through a well furnished modern resource centre and a dynamic website.

13. Who does what in the electricity sub sector? (Employee info clarification to be sent through by various agencies)

(a) Uganda Electricity Generation Company Ltd (UEGCL) – (company with 11 employees) caretaker of all the public generation assets i.e. Nalubaale and Kiira power stations leased out to the concessionaire Eskom (Ug) Ltd.

(b) ESKOM Ug Ltd – responsible for the operation and maintenance of the Kiira and Nalubaale power stations to generate electricity. The concessionaire is for 20 years.

(c) Uganda Electricity Transmission Company Ltd (UETCL) – responsible for all bulk transportation of electricity for the main grid. UETCL is also the System Operator and as such dispatches generation plants in Uganda.

(d) Uganda Electricity Distribution Company Ltd (UEDCL) – (company with 49 employees) caretaker of all the public distribution assets presently leased to Umeme Ltd. UEDCL also manages all off-grid stations not concessioned out to Umeme Ltd to include Moyo, Adjumani and Moroto.

(e) UMEME Ltd – the electricity retailers who purchase electricity in bulk from UETCL and retail / distribute it along smaller electricity lines to consumers' premises. The concessionaire to operate for 20 years.

(f) Electricity Regulatory Authority (ERA) – The overall overseer / supervisor / regulator of the various electricity companies to ensure fair play in the generation, transmission and delivery of electricity to customers. ERA employs 29 people and approves the rates each company pays its energy suppliers and what it charges its own energy consumers.

- (g) Rural Electrification Agency (REA) – this Agency currently employing 25 people carries out the Ministers responsibilities with regards to rural electrification. Additionally the REA receive and review applications for capital buy-down subsidies for rural electrification projects.
- (h) Energy for Rural transformation (ERT) – The Government Agency that coordinates the funds utilised by REA within the Ministry of Energy & Mineral Development.
- (I) West Nile Rural Electrification Company (WENRECO) – This is an Independent Power Producer (IPP) that generates, and sales electricity to the off-grid supplying Arua, Nebbi and Koboko districts. WENRECO serves 2,400 customers and employs 51 people.
- (J) Ministry of Energy and Mineral Development (MEMD) – the Government organ that provides policy guidance in the development of the Energy sector in Uganda. Note that the MEMD additionally guides the Mineral and oil development effort in Uganda.



Aggreko International Projects Ltd



Nalubaale Power Dam



UETCL & ERA staff –
Nkenda Transmission Substation.



Tororo Cement Industry Substation