GENEWS

THE OFFICIAL UEGCL NEWSLETTER **Issue 10** | 2023

Turning the Tide:

UEGCL's New Journey with Nalubaale-Kiira power stations

UEGCL
Generating for Generations

WORD FROM EDITORIAL

Enock KUSASIRA
Head Communication &
Corporate Affairs

Dear reader,

Welcome to the 10th Issue of GeNews Newsletter. In this edition, our focus is well encapsulated in the amazing theme " **Turning the Tide: UEGCL's New Journey with Nalubaale-Kiira power stations**".

The Issue brings you the joyful tidings of the re-transfer of Nalubaale-Kiira Power stations from Eskom Uganda Limited to Uganda Electricity Generation Company Limited (UEGCL).

On 27th March 2023, Eskom Uganda Limited handed over Nalubaale-Kiira Power stations to Government of Uganda. Our take-over of these great assets marked the end of the twenty year concession of Eskom Uganda Limited.

The grandeur of the occasion reflected the significance of the historic event. It was a joyous moment as we gathered under a marque tent to witness the handover. From the arrival of important dignitaries, to the cultural dances, and the deafening ululations of the expectant staff, it was evident that a new beginning was unfolding.

Nalubaale Power station (180 MW) , formerly called Owen Falls Power Station, is located across the White Nile and sits between the towns of Jinja and Njeru on the shores of Lake Victoria. It is the oldest hydro power station in Uganda, having been completed in 1953. As the first hydro power plant in Uganda, Nalubaale remains an iconic facility, representing a remarkable engineering feat.

Kiira Power Station (200MW) on the other hand, was commissioned in 2000 to address the increasing demand for electricity at that time.

The re-transfer of the above assets to UEGCL, is a strategic commitment to prioritize national interests by consolidating control over critical energy infrastructure. This move will go a long way in strengthening and optimizing the electricity sub-sector for the benefit of the country and the citizens.

Dear reader, in this Issue, there are compelling testimonies by staff who served under the dispensation of Uganda Electricity Board(UEB), transitioned to Eskom Uganda Limited, and have now joined UEGCL. They have fond memories of the different transitions and are optimistic about the value of the next course of engagement under UEGCL.

The stories in here capture the long and daunting process of re-transfer over as the concession was nearing the end. The teams that worked "tooth and nail" to ensure business continuity, to recruit staff and orient them into a new work environment are at the centre of this publication

Enveloped in here is a plethora of stories carrying what Charles Dicken called 'great expectations', aspirations and the high hopes of the employees, as they crossed the bridge from the privately owned Eskom Uganda Limited to UEGCL. Whereas UEGCL made effort to retain 93% of ESKOM staff, it was a herculean task to secure relative adjustment for easy continuation of work.

Most importantly, the newsletter captures the perspectives of different authors, relating to the significance of this changeover and what it means for the country's in-built capacity to run its own infrastructure. The stories in here, affirm the commitment of UEGCL in ensuring that power plants are reliable and available at all times, thereby aligning with our credo of Generating for Generations.

Thank you for joining us on this journey, as we carry the mantle of running the country's most critical power stations.

Enjoy the pages!

WE ARE UEGCL

OUR VISION
The Vision of UEGCL is to be "Africa's leading electricity generating utility".

OUR MISSION
UEGCL's Mission is to "Sustainably Generate Reliable, Quality and reasonably priced Electricity for Socio-Economic Development".

OUR CORE VALUES

- Integrity
- Safety
- Sustainability
- Innovation
- Accountability
- Collaboration

OUR MANDATE
The mandate of UEGCL is to establish, acquire, maintain and operate electricity generation facilities and to promote Research and Development in the Electricity generation sector while running the company on sound business principles.

PURPOSE
To make electricity safely available for supply at all times from all our powerplants.

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Chief Executive Officer

CEO'S WORD

DR. ENG. HARRISON .E. MUTIKANGA
Chief Executive Officer

Turning the Tide: UEGCL's New Journey with Nalubaale-Kiira power stations.

Theme

Dear esteemed reader, Welcome to the 10th Issue of UEGCL's newsletter, GeNews, under the theme "**Turning the Tide: UEGCL's New Journey with Nalubaale-Kiira power stations**". It gives me deep joy to acknowledge the exponential growth of our business portfolio especially after the re-transfer of the Nalubaale-Kira Stations to UEGCL.

Recall that UEGCL was incorporated in 2001 as one of the successor companies of the unbundled Uganda Electricity Board (UEB). Upon this restructuring, the two stations, Nalubaale and Kiira, were concessioned to Eskom Uganda Limited for twenty years, and the main role of UEGCL was to monitor that concession, which came to its natural end on 31st March 2023. The re-transfer of the 380MW Nalubaale-Kiira Hydropower Complex back to UEGCL is, therefore, a significant milestone for the company. It is also an endorsement of the Government's capacity to operate and maintain its critical assets. We are very grateful to the Government of Uganda for entrusting UEGCL with this herculean responsibility and facilitating the smooth retransfer process.

In so many ways, the retransfer of this "golden egg", was a big win for Uganda. First and foremost, through UEGCL, the Government now supplies 49% of the Country's grid demand, effectively keeping it

firmly in charge of the electricity supply industry. The importance of this cannot be downplayed because electricity is the engine of socio-economic development. It, therefore, makes sense for the Government to hold the majority of its supply to meaningfully and ably protect its long-term interest and guarantee the security of supply.

Secondly, after its re-transfer, the Complex is now 100% operated by the people of Uganda, which comes with the benefit of patriotism in the operations and maintenance of such an important asset.

Further, the Complex is the first dam on the River Nile and plays a crucial role in flood control for the downstream communities and power plants. The Complex is, therefore, a strategic safety and security asset for Uganda.

Finally, the Complex has for the longest time been the cheapest power plant in the country, selling at less than 2 US Cents per kWh, with UEGCL's other plants selling at just below 5 US Cents, while the Independent Power Producers (IPPs) sell at over 8 US Cents per kWh. Whereas this is advantageous, keeping the overall end-user tariff low, it poses a sustainability risk for UEGCL and may ultimately affect the Government's ability to retain a controlling stake in the electricity supply industry. This is because, considering the less than 2 US Cents tariff, for instance, the Complex can only finance its operations and maintenance activities, but cannot contribute to investment in new generation facilities to meet growing demand. Unfortunately, this is the same case with the Isimba, Karuma and Namanve plants. Therefore, UEGCL continues to look to the Treasury for investment support. The tough macroeconomic season will most likely make it difficult to support the investments required to realize the national target of 52,481 MW by 2040.

Consequently, the artificially low tariffs for the UEGCL-operated plants may cost the Government a loss of grip on the electricity supply industry, which will result in an escalated increase in the tariff in the medium term, as has been seen in our peer countries like Ghana, where there was a massive increase in IPPs in 2010. Urgently, there is a need to rethink how to strike a fair balance between averting the above risk and maintaining a fairly competitive end-user tariff.

The above challenges notwithstanding, UEGCL has continued to record progressive growth in its performance. The recent increase in income generated is mainly attributed to increased electricity sales due to a growing business portfolio with the likes of Namanve and the Nalubaale-Kiira Stations coming on board.

I am deeply grateful to our staff for ensuring a seamless integration of the Nalubaale–Kiira Power Plants into UEGCL's business. The company has and will continue to capitalize on the operational synergies from the in-house compatibility of its various power plants, as we strive to generate for generations.

Enjoy your reading!

AXE REGISTER

IAF DA CS 007 25.02.22

Membro degli Accordi di Mutuo Riconoscimento EA, IAF
Signatory of EA, IAF Mutual Recognition Agreements

CERTIFICATE

N. UG23-12214A

This is to certify that the Quality Management System of

Uganda Electricity Generation Company Limited

P.O. Box 75831, Plot 6-9, Okot Close Bukoto. Kampala – UGANDA

HAS BEEN INDEPENDENTLY ASSESSED AND IS COMPLIANT WITH THE REQUIREMENTS OF

ISO 9001:2015

for the following scope of activities:

The establishment, acquisition, operation and maintenance of electricity generation facilities to the satisfaction of stakeholders.

IAF 25

For timely and up-to-date information on any changes in the status of the certification referred to in this certificate, please contact the number +39 0296368458 or the e-mail address info@axe-register.com

The validity of this certificate is subject to annual periodic surveillance and the complete review of the organization's management system every three years.

Date of initial registration (by other CAB)	07/06/2017
Date of this certificate	05/06/2023
Date of expiry	06/06/2026

On Behalf of the Certification Body
AXE REGISTER
Antonio Liavoi
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MINISTER'S REMARKS AT THE TAKEOVER CEREMONY OF NALUBAALE – KIIRA ON 27TH MARCH 2023

Hon. Peter LOKERIS
Minister of State for Mineral Development

I wish to thank Eskom (U) Ltd for the warm welcome and for maintaining the Complex in a very good condition as we all witnessed during the plant tour.

As you are all aware, the Ministry of Energy and Mineral Development, represented by the Uganda Electricity Generation Company Limited (UEGCL), and Eskom (U) Limited signed a Concession and Assignment Agreement (CAA) on 26th November 2002. Under this agreement, UEGCL, as the asset owner of the Nalubaale (180MW) and Kiira (200MW) hydropower Complex, assigned its rights and interests in the asset to Eskom (U) Ltd (EUL) for 20 years starting from 1st April 2003.

The Nalubaale-Kiira power plants contribute 380MW to the country's generation capacity, which is currently at 1378.1 MW and is expected to rise to 2,000 MW once the Karuma HPP is commissioned in the near future. The good news is that we have successfully tested some of the units. This is a good indicator that the commissioning of the plant is imminent. The current concession period, therefore, naturally expired on 31st March 2023, pursuant to the provisions of the Concession and Assignment Agreement. It is, however, required that before the end of the concession term, Eskom re-transfers the Complex to Uganda Electricity Generation Company Limited. Therefore, this visit officiated and witnessed the retransfer of the Complex back to the Government of Uganda.

In addition to the Concession and Assignment Agreement (CAA), the Government signed a Support Agreement dated 26th November 2002 relating to the Nalubaale and Kiira hydropower Complex, which provided for inter alia a buy-out provision at the termination of the CAA for a tenure of 20 years, as provided for under Clause 2.1(a) of the Agreement, which becomes effective on 1st April 2023. Therefore, in order to facilitate the retransfer process, and as per the Support Agreement, the Ministry of Energy and Mineral Development (MEMD) undertook an audit

through the Office of the Auditor General (OAG) to help inform the Government on any potential Buy-Out Amount, if any, at the end of the concession period.

The Audit of the final Buy-Out Amount was finalized, and a stakeholders' meeting was held on 16th March 2023 to review the Nalubaale-Kiira Eskom Concession Audit report. Government is ready to fulfil the outstanding obligations that will arise out of this audit. We take note of the enormous investments that have been executed by Eskom on the Complex, some of which whose Defects Liability Period will spill over into the Operations and Maintenance regime of UEGCL. We also strongly believe that Eskom built adequate local capacity that can continue the proper operations and maintenance of the Complex under UEGCL, as a mechanism to ensure a smooth continuity of service.

UEGCL completed the recruitment process for the key staff who will take over the operations of the plant after the transfer date, and I am happy to report that over 96% of the Eskom staff were taken over by UEGCL at the same or better employment compared to Eskom's. These staff shall remain a valuable resource for the proper operation of the Nalubaale and Kiira Complex post-re-transfer to UEGCL. Finally, I would like to thank Eskom (U) Ltd once again for having kept the Complex in good condition throughout the concession period and, therefore, call upon UEGCL to emulate this example and keep the plant in the best working condition for the rest of its lifespan.

FOR GOD AND MY COUNTRY

Hon. Peter Lokeris hands over a Technical assessment report of the Complex to the UEGCL board chairperson, Eng. Proscovia Njuki during the Handover ceremony.

ESKOM'S EXIT OF NALUBAALE
A SUCCESSFUL PPP AND DIRECT FOREIGN INVESTMENT

Nicholas Agaba RUGABA
Project Manager, Nyagak III HPP

In 2003, as part of the privatization process of the Uganda Power Sector, the Government offered a 20-year concession for the operation and maintenance of the 380MW Nalubaale and Kiira hydroelectric power stations. This concession was held by Eskom Uganda Limited until April 2023. These power stations remained assets of the Government of Uganda (GoU) in terms of the Concession and Assignment Agreement (CAA) signed between GoU and ESKOM.

This was a case of Foreign Direct Investment in Uganda. According to www.investopedia.com, Foreign direct investment (FDI) is an ownership stake in a foreign company or project made by an investor, company, or government from another country.

ESKOM UGANDA LIMITED (EUL) was a subsidiary company of Eskom Enterprises SOC Limited South Africa, the investment arm of Eskom Holdings SOC Limited has more than 97 years of heritage as the leading electricity utility in Africa and is headquartered in Johannesburg South Africa.

The construction of the Owen Falls dam commenced in 1950 and it was commissioned on 29th April 1954 by Her Majesty the Queen of England. Nalubaale Power Station has 10 turbines each rated at 18MW while Kiira Power Station has five turbines each rated at 40MW.

In this regard, the concession was for a brownfield project that included operations and maintenance of existing power plants and also undertaking capital expenditure and upgrades/

refurbishment of the civil structures, electro-mechanical equipment, and machinery to ensure a reliable supply of electricity on the national grid. The performance management and monitoring of the concession was done by the Uganda Electricity Generation Company Limited (UEGCL) as the plant owner in accordance with the Concession and Assignment Agreement (CAA).

We note that all through the twenty-year concession period, there were no risks associated with government default in its obligations under the concession agreement. This demonstrates robust concession monitoring on the part of UEGCL and supportive policy implementation and regulatory oversight by key stakeholders namely the Ministry of Energy and Mineral Development (MEMD), Ministry of Finance, Planning and Economic Development (MoFPED), and Electricity Regulatory Authority (ERA).

Foreign Direct investment projects like the concession of the Kira-Nalubaale Power Plant face risks associated with events that are considered as government default especially when those events are so severe that they completely frustrate the private partner's ability to perform its obligations under the concession agreement. These include non-payment of monies owed to the private partner, expropriation of the right of use of the assets, and actions that prevent the private partner from performing its obligations.

It is commendable on the part of UEGCL, MoFPED, MEMD, and ERA that the requisite arrangements were made under the midterm budget framework and national budget to allow for the buy-out amounts and compensation for the capital investments undertaken by the operator ESKOM over the concession period. This continues to strengthen Uganda's position, as a premium destination for foreign direct investment especially in infrastructure namely power plants, roads, bridges, railways, etc.

We further note that the expiry of concession agreements or contracts is inevitable and yet the lack of preparedness by many governments or owners or state-owned enterprises (SOEs) in managing this expiry leads to difficult and costly transition periods at the end of the concession period. According to the World Bank practice guides on PPPs, the best practice is to ensure that at least three years prior to the expiry of the PPP contract, the government undertakes an assessment of the various options available to it. A number of questions would be probed as part of this pre-expiry examination or assessment. Should

the government re-tender the PPP or concession? If so, on what terms and conditions? What services will be required and what capital investment is required to enable those services? The guide further indicates that all of these questions need to be answered in a rational manner in the same way as the original feasibility study was done prior to the tendering of the concession/ PPP.

UEGCL with support from other stakeholders developed a comprehensive take-over plan following the government's decision not to renew or retender the concession for Kira-Nalubaale Hydro Power Complex. This ensured a smooth transition from the privately operated ESKOM Uganda to the public owner/ operator UEGCL. Such successful hand-back mechanisms and arrangements for concessions/PPPs that are financed by foreign direct investment help to build market confidence for international equity and debt investors looking to invest in Uganda's infrastructure project.

According to UNCTAD's 2022 World Investment Report, FDI in Uganda increased by 30.6% from USD 874 million in 2020 to USD 1.1 billion in 2021. Successful concession contracts and PPPs like Kira-Nalubaale help to firm up opportunities for Uganda as a favorable destination for private investment in infrastructure development. And that is a feat worth celebrating.

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A LUNCH DATE WITH JOYCE NAKALEMA, CHIEF HUMAN RESOURCE OFFICER

Who is Mrs Joyce Nakalema?

Nakalema is a Chief Human Resource Officer at Uganda Electricity Generation Company Ltd, a Certified Coach, a fellow Global Academy of Finance &Management (GAFM), a Chartered International Change Manager and a mother.

During the Nalubaale-Kiira takeover you were recognized to have played a central role in its success, what is the secret to managing such transitions?

The previous year, UEGCL had a retransfer of the Namanve Thermal power plant and that provided several learning areas for us. This enabled us to prepare adequately during the retransfer of the Nalubaale- Kiira Complex. As a former employee of Eskom, I saw this as a privilege to be part of the transition team.

The success is etched in identifying the needs of the various stakeholders and as such creating a strong coalition to smoothen the transition process. Additionally, we did risk assessments on all the different aspects of the retransfer and mitigated these risks before they could materialize. At UEGCL, we always go into these

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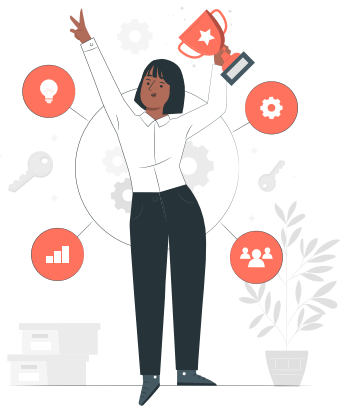

transitions with clear targets for success, for example, a target to absorb over 90% of the staff into our structures. We applied for the generating license beforehand and had the Power Purchasing Agreement (PPA) negotiations before this transition. Internally, we had a transition committee that would report to the Top management and the board. This committee provided governance throughout the process. In HR, we adopted the Project Management model where we ensured that the objectives were clear and that resources were assigned to meet them. The tasks had task owners who were required to report back on timelines.

What strategy did you use to manage the NKPS staff expectations upon joining UEGCL from ESKOM?

The complex is very vital to the Ugandan economy. Upon the end of Eskom's concession at the complex, UEGCL was tasked to take over the facilities as well as the staff. For us to absorb the staff smoothly we had to employ a change management plan. This approach looked at the change identification whereby we had to establish what kind of change we were going to make, develop a plan on how to manage the change, carry out awareness before the change and finally implement the change. At the moment, we are evaluating the impact of this change. At the identification stage, we undertook a SWOT analysis and also confirmed the readiness for integration of the staff into the UEGCL system. We also have to highlight the resources. Along the way, we involved a lot of stakeholders e.g., the regulator – ERA, our customer – UETCL, MEMD, the Ministry of Public Service, as well as MoFPED.

Before the change, we transparently engaged the Eskom staff and created lines of accountability so that upon transfer, there would be no lapses in terms of production at the complex. I'm proud to report that we absorbed over 90% of the Eskom staff into the UEGCL structure. These were assessed technically and taken through a rigorous and intentional induction process.

We noticed that UEGCL has a very low staff turnover, what advice would you give to other HR practitioners on how to attain such a feat?

Currently, we have a staff retention of 97% and this has been achieved by setting a standard for our staff and creating a purpose for them to feel that they are contributing to something important. The 3% are majorly those that have joined other organizations at an elevated level, a move we see as positive for career growth.

Currently, we have a staff retention of 97% and this has been achieved by setting a standard for our staff and creating a purpose for them to feel that they are contributing to something important.

I must say in HR we do not believe that you can retain 100% however, I encourage the HR professionals to work towards the number. It is also important to get new staff to join the organization and this calls for an intentional recruitment process to replace those that leave the organization. Lastly, we have a Talent management strategy where we have graduate trainees joining us and growing in the ranks at the company.

Lastly, as a professional human psychologist, how can staff attain a healthy work-life balance?

The first thing staff have to know is to establish what their goals in life are and consequently, understand the purpose of why they exist. This self-analysis will aid them in establishing their priorities and values while evaluating what is important and not. It is important to note that different genders have different needs and goals in life. At UEGCL, we prefer to call this “work-life integration” instead of work-life balance because the work that staff does should be able to complement their personal goals; for example, our leave plans are calculated in normal working days and not calendar days to allow staff to fully utilize the ample time for their personal use. As an organization, we also have an Alternative Work policy, where we provide staff with flexible hours and even in some scenarios, the option to work from home.

Hence, work-life integration is about finding what creates value in someone’s life and integrating it with work.


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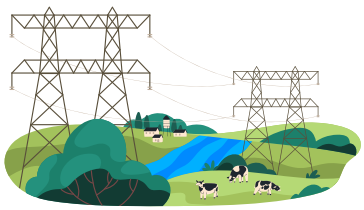
END OF A CONCESSION: THE BITTER BETTER

Edgar KANSIIME
Public and Media Relations Officer IHPP

Uganda, often referred to as the "Pearl of Africa," has long been blessed with abundant natural resources, including its vast hydropower potential emanating from the presence of the mighty River Nile.



Uganda, often referred to as the "Pearl of Africa," has long been blessed with abundant natural resources, including its vast hydropower potential emanating from the presence of the mighty River Nile. As such, the country's hydropower plants have been crucial in meeting the electricity demands of its rapidly growing population and developing economy. However, for several years, Uganda challenges in harnessing this potential to its fullest extent, primarily due to the lack of proper channels for project financing. Hydropower requires a lot of investment from financing the project to funding viable operations and maintenance of these plants upon completion. Uganda also lacked enough in-house capacity to run these plants. This birthed the 20-year concession with Eskom, South Africa's state-owned power company, to operate and maintain the two key hydropower plants at the time i.e.; Nalubaale HPS and Kiira HPS.

Background

Nalubaale Dam, formerly known as the Owen Falls Dam, is one of the legacy projects of the British

colonial administration commissioned 70 years ago. Built across the White Nile near its source at Lake Victoria in the Jinja district, the dam was designed to have 10 turbines. However, when electricity generation started in 1954, only four turbines were operational. In the 1990s, the station was refurbished to repair the accumulated wear. During these repairs, the output power of the generators was increased, bringing the Nalubaale Power Complex's generating capacity to 180 MW. As such, Nalubaale HPS remained Uganda's sole hydropower station until 1993, when the construction of Kiira HPS started. At 200 MW, with 5 units generating 40 MW, the plant was finally completed and commissioned in 2003.

As part of the privatization process of the Uganda Power Sector, the Uganda Government, through the newly formed UEGCL, signed a 20-year operational, management, and maintenance concession to Eskom Uganda Limited on the 1st of April 2003.

Last year, Eskom announced that it had handed back the operations of the two power stations to the Uganda Electricity Generation Company Limited (UEGCL). The power utility stated that the decision not to renew the agreement correlated with its strategic direction to put more effort into turning Eskom's performance back home in South Africa around.

The Bitter

On 1st April 2023, the operations of the Kiira-Nalubaale complex were officially handed over to the Government of Uganda, represented by UEGCL, aparastatal mandated to build, own and operate electricity generating utilities on behalf of Government. The operation and maintenance of the Nalubaale and Kira hydropower dams, however, place the government in an awkward position because it will have to strike a balance between investing in the two dams while keeping the electricity tariffs low, a major headache that Eskom dealt with for the past two decades. It is however vital for the government to sink money into the complex as it generates the least cost of electricity recorded at 1.5 US cents, lower than the average of 8 US cents charged by other plants in the country.

According to pre-handover inspection findings, it was noted that the electricity facilities require at least US$ 10 million in the short term and US$100 to US$ 150 million in the long term to extend their operational lifespan. A 70-year-old plant like Nalubaale HPS has equipment that is considered to be obsolete and needs replacement as soon as possible. The challenge, however, is that some of the equipment is out of the market and any attempt to replace them implies overhauling the entire system with a new technology making the entire exercise

expensive.

During the handover, Chairperson of the Board of Directors of Eskom Uganda, Andrew Etzinger stated that they had contributed over US$ 50 million to Uganda's economy through taxes and other levies since the start of the agreement. He however confessed that the company had invested less into the complex than they had previously promised to do. However, he wasn't so revealing about the causes of this underperformance. For example, in Nalubaale, the failure to invest the required US$ 100 million has left the civil works wanting. Eskom was meant to conduct studies and apply mitigations to the cracks that were evident all over the plant. However, this wasn't done by the time of handover. On the upside though, they had invested US$29 million in routine maintenance of the facility since 2002, with the investment partly going into rehabilitating the Nalubaale switch yard (US$10m) and upgrading some electrical components of the plant (US$15m).

The Better

At their best, concession agreements are a form of outsourcing that allows all parties to benefit from comparative advantage. Often, a country or company will own resources that it lacks the knowledge or capital to use effectively. Outsourcing the development or operation of those resources to others makes it possible to earn more than they could alone. For example, a country might lack the capital and technical skills to utilize offshore oil reserves. A concession agreement with a multinational oil company can generate revenue and jobs for that country.

Although it played a significant role in enhancing Uganda's energy sector, the termination of Eskom's concession brings new opportunities for the country to take control of its energy resources and reap the benefits.

One of the key advantages of the end of Eskom's concession is the potential for increased revenue generation. For the past 20 years, Eskom has been the primary recipient of electricity sales revenue from the two hydropower plants. The expiration of the concession allows Uganda to retain a more substantial share of the income derived from the electricity sales. This additional revenue has the potential to be channeled into diverse development projects, including but not limited to infrastructure, healthcare, education, and poverty reduction initiatives, ultimately improving the standard of living for its citizens.

Secondly, the conclusion of the concession opened up avenues for Uganda to fortify its energy sector and develop local expertise. During Eskom's tenure, it facilitated valuable technical knowledge transfer to Ugandan engineers and employees. This collaboration played a pivotal role in augmenting Uganda's proficiency in hydropower plant operations and

maintenance as well as concession monitoring. As the UEGCL takes control of these plants, it can further enhance the skills of its workforce, reducing reliance on external expertise. This not only empowers the local workforce but also enables the country to strengthen its energy security and reduce dependency on foreign entities.

Furthermore, the expiration of Eskom's concession could potentially stimulate regional energy trade. Uganda is a member of the East African Community (EAC), which promotes regional integration and cooperation, including in the energy sector. By taking charge of its hydropower plants, Uganda can actively participate in regional energy trade, exporting surplus electricity to neighbouring countries and contributing to the regional power pool. This collaboration not only strengthens regional energy security but also fosters economic integration and cooperation among East African nations.

In conclusion, the end of Eskom's concession to run Uganda's hydropower plants opens up new opportunities for the country's energy sector. Increased revenue generation, capacity building, and regional energy trade are just some of the potential benefits. Uganda has a significant opportunity to harness its resources, develop its workforce, and further contribute to its socio-economic development and regional integration. By seizing this moment, Uganda can truly become the engine of growth and sustainable development in East Africa.

Indeed, the bitter could be the better.

The South African Ambassador to Uganda - Lulama Xingwana, HE Ms (L), is received by the Managing Director of Eskom - Thozama Gangi during the takeover ceremony for the NKPS Complex.

AN INTERVIEW WITH ANNE GITTA, CIVIL SECTION.

Head, Nalubaale-Kiira Complex.

Briefly tell us about yourself.

My Name is Anne Nankanja Gitta. I am a civil engineer by profession, a mother of four beautiful girls, and was born in a family of six girls.

Currently, I work at the Nalubaale power station as the head of the civil engineering section and I play a pivotal role in spearheading and leading the civil engineering process with the key objective of maximizing the useful life of civil engineering structures.

We are informed that you are one of the longest-serving staff at the Nalubaale, complex, kindly walk us through your career journey.

I started my career when I was at Kiira Power Station, I joined that project as a very young girl straight from school, working with Acres International Limited.

Being a construction site, I was a lady and we still had that myth of thinking that ladies couldn't work in that kind of environment. I appreciate my supervisors who never looked at that as an issue.

From Kiira I joined UEGCL where I only

> *I love many things about my job, but the most outstanding of all of them is that I have mentored many young engineers. Some of them have significantly advanced in their careers and are doing great things in various fields.*

worked for 9 months. When ESKOM took over in 2003, I joined them as a civil technician. I have risen through the ranks to become the head of the civil engineering section.

I am very happy to be back at UEGCL. It is now bigger in terms of operations with many projects.

My journey in the energy sector has been exciting, I am looking forward to forming a body of civil engineers at hydropower plants so that we can always support the other smaller plants.

What is the one thing that you love about your job?

I love many things about my job, but the most outstanding of all of them is that I have mentored many young engineers. Some of them have significantly advanced in their careers and are doing great things in various fields.

What would you define as your biggest motivators for the work you do?

In civil engineering, there are always results, it gives me a lot of pride when I feel that the work I do, supports the community, economy, and the country at large.

I wouldn't want anything to happen in the future because my actions today determine the consequences later in ten years. If I don't do my work right today there is no way people in the next ten years will be able to succeed. I have to make sure it's really proper.

What advice do you give to a graduate engineer who has just started a career in the energy sector?

I would like to encourage young engineers, to be innovative, creative, and hardworking. They should always take the lead and avoid taking the back seat.

What challenges have you met in your career journey?

Some of the challenges I have faced in this career are the rapid changes in technology and the modern ways of executing various engineering activities, which means I have to constantly be abreast with technology through regular reading, research, and networking globally. Therefore, incorporating rapidly evolving technologies with traditional practices becomes difficult although it is necessary for efficiency and competitiveness.

Also dealing with uncertainties such as unforeseen site conditions or project delays requires proactive risk management strategies

UEGCL TAKES OVER THE COMPLEX: MY EXPERIENCE WORKING WITH A BIGGER TEAM

Eng. Ronald KASEKENDE
Section Head – Mechanical,
Nalubaale – Kiira Power Complex

Unlike some of the great men and women around me who have for decades offered their diligent service at the 69-year-old Nalubaale dam, I am yet to make a single one, although I value every occasion that presents me an opportunity for both personal development as well as my contribution to national development.

I joined the Complex on January 4th, 2016, as a Graduate Engineer in Training, after barely two years in the field. As a young graduate passionate about engineering, I smelt the gates of paradise at the complex as I was put in the able hands of very experienced and knowledgeable cadres who knew every small detail about both the science of hydropower engineering and its applicability. I joined at a time when Unit 3 was undergoing an overhaul and after seeing the extent of activity on the ground, I was not spared from the feeling of "I have arrived", as they normally say, and indeed, I had arrived!

My focus was on

> ***Success is peace of mind, which is a direct result of self-satisfaction in knowing you made the effort to become the best of which you are capable.***

applying my school knowledge and the wealth of exposure at the plant to learn beyond margins. With the advantage of being a young star, I got involved in every activity on the plant with an eagerness to always overcome complex challenges. Severally, I took on big tasks, having to take the lead in sensitive maintenance outages and projects, including turbine overhauls. As John Wooden stated, “Success is peace of mind, which is a direct result of self-satisfaction in knowing you made the effort to become the best of which you are capable.” I believe it all begins with one acknowledging that they have the ability for the task ahead of them and, with the right attitude, it is always possible.

Fast forward, I was given the mantle to lead the Mechanical section in June 2022 after being a substantive Engineer for 5 years and, truthfully speaking, my elastic limit was put to a test. The administrative role came at a time when I still had several plant assignments under my direct supervision as the Lead Engineer including the Unit 10 overhaul. At the same time, it was barely a year from the natural end of Eskom Uganda Limited’s concession, and whereas the handover preparatory activities (documentation and plant capacity tests) were such a stretch, the anxiety that came with the uncertainty of life after the concession created a huge turbulence within my team. However, calmness was obtained when the UEGCL Management team visited the site and gave assurance to take on former Eskom staff after the concession.

The D-Day

As night followed day, 1st April 2023 came, and we safely landed in the “promised land”. I honestly had a couple of expectations, but I tried to convince myself to believe that not everything would change overnight—especially being in the same plant, the same role, and working largely with the same crew. Certainly, the plant maintenance philosophy was not going to change because of the transition, and likewise, the outstanding work (including new and old investment projects) that had been carried over still needed to be done and guess by whom? … the same team. Thus, my mind was more than prepared for a continuation of long days and work weekends at the lovely complex. Together with the management team, we embraced the long days and brief

nights for the first month while drafting the station budget, technical plans and staff performance contracts. It would be unjust at this point not to appreciate the support from Top Management as we got inducted into the whole management process. They moved with us at all stages.

Expectation Vs Experience

Joining UEGCL, I was looking forward to a new experience of business operation under a public entity having been entirely under private administration. I also wanted to explore a new culture and be part of a bigger group in an impactful organization.

One thing I was prepared for is the strict and, sometimes, "rigid" public procurement process. Having led several projects at the Complex worth more than USD 4 million, I had deeply interacted with the procurement process in a private space and tasted the flexibility that it offers. I was, therefore, caught unaware by a number of things ranging from using MS Dynamics to raising manual requisitions using Form 5s and Form 18s. Nonetheless, I maintained positivity and an open mind to adapt to the new experience, thanks to the PPDA training that we obtained during onboarding, which clearly highlighted the Dos and Don'ts of public procurement.

Together with my dedicated team, we have been able to accomplish quite a lot including rectifying the governor major fault on Unit 14, which had for long made the 40MW generator unreliable. Using internal capacity, the main distribution valve for the wicket gates was dismantled for the first time in the history of Kiira Power Station. The fault was rectified, and the Unit was recommissioned successfully with minimal support from the manufacturer.
In my section, we currently have 13 investment projects ongoing. I have also managed to steer my team in the development and updating of all plant procedures, strategies, and operating instructions. That is something

> ***As dealing with change becomes a regular activity, leading it becomes a skill to hone, an internal capacity to master***
>
> ***Arnaud Henneville.***

I am proud of–the committed team effort. This is despite a few grey areas that Management has yet to put right in line with the expectations of the employees.

In my opinion, UEGCL taking over the complex was such a successful historical endeavour. However, this meant more staff numbers and operational sites (capacity) within UEGCL's responsibility which calls for rather more agile administrative approaches for efficiency to be realized. Management has demonstrated unwavering dedication to ensuring that this effort is a success, but with the looming merger of the electricity sub-sector entities, a prompt strategy may need to be put in place to avert potential staff morale deterioration. And not forgetting the national target of hitting 52,000 MW power generation by 2040, of which UEGCL is part and parcel as the main player.

I believe there is a lot to learn from the processes at UEGCL, but I want to state that the people have been so friendly and supportive. I have been able to exchange knowledge and ideas on various aspects across the plants. I am looking forward to benefitting from the diverse experiences within the business and grooming more new talents in the business for succession as this, to me, looks to be an area that the business needs to critically observe. As the transition is a change moment for the staff at the Nalubaale-Kiira Complex, it is for UEGCL as a business as well.

Former staff of Eskom in attendance during the official takeover ceremony of the NKPS Complex. Over 90% of these staff were retained under UEGCL.

THE HISTORIC RE-TRANSFER OF UGANDA'S KIIRA NALUBAALE HYDRO POWER PLANTS

Jemimah Connie AKIROR Manager Asset Management &
Peace Ingabire Senior Risk Officer

The re-transfer of the 380MW Kiira-Nalubaale Hydro Power Plant Complex marks a significant milestone for both UEGCL and Uganda at large. Nalubaale is not just a dam; it's a **piece of Uganda's rich history** and was constructed in the 1950s. Kiira, on the other hand, holds the distinction of being the **first dam commissioned under the visionary leadership of His Excellency. President Yoweri Kaguta Museveni**. This historic re-transfer also represents the government's policy on taking back their assets following concessions 20 years ago, having built capacity internally to operate and maintain them. This desire to take control of the subsector and confidence in home grown skill is also an implementation of the Electricity Act 2022 on the handover to government of all power plants exceeding 20MW after two decades of private operation. This experience therefore offers valuable lessons for future retransfers back to Government.

Over 20 years ago following the unbundling of the unbundling of UEB, UEGCL was responsible for the Nalubaale-Kiira (The Complex) 380MW hydropower generation assets located in Jinja. These power generation assets were concessioned out to Eskom Uganda Limited (EUL) in 2002 for 20 years as part of the wider electricity sub-sector reforms. Through the Concession, UEGCL assigned its interest in Maintenance and Operation responsibilities to EUL but remained the Owner of the Complex on behalf of the Government. The Concession Assignment Agreement (CAA) became effective on 1st April 2003 and subsequently expired on 31st March 2023 after which the assets were

re-transferred back to UEGCL.

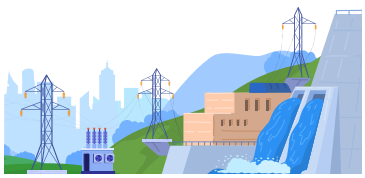
The beginning of the re-transfer process as provided for in the CAA was five years before its expiry with several obligations to both UEGCL (Government) and EUL. All these activities were included in a roadmap that was tracked as the years progressed. Two coordination committees (one at the sector level and another between UEGCL and EUL management) were formed in the final year of the Concession to ensure a successful retransfer. The final laps of this journey were marked by extensive dialogues with various stakeholders, including our esteemed shareholders (MEMD and MoFPED), the regulator ERA, the outgoing operator EUL, and the country's leadership.

The core of these discussions revolved around examining the commitments and obligations outlined in the Concession and Assignment Agreement (CAA) and the Support Agreement (SA) especially to Government. One key obligation was ascertaining the Buy-Out Amount which was arising from the unrecovered investments made by EUL, and ensuring provision of the same. As such Government conducted a comprehensive audit to estimate the Buyout amount at the natural expiry of the CAA, verify the completeness of the asset register, and establish any liabilities due to Government, outstanding legal non-compliance, financial liabilities among others. Other things were matters of coordination between EUL and UEGCL such as the transfer of licences and permits, management of the staff recruitment, capacity testing of the Complex, transfer of warranties, guarantees and management of work in progress, verification of handover lists, and the handover ceremony. While all this Coordination was on going, UEGCL was in the midst of negotiations for a Power Purchase Agreement (PPA) with the off-taker, Uganda Electricity Transmission Company Limited, and the acquisition of a generation and sale license from ERA.

This multifaceted process, though lengthy and demanding, was executed with precision, ensuring that UEGCL was ready to assume control at the stroke of midnight on March 31, 2023.

This journey was not without its challenges. The condition in which the assets were to be handed over was a significant point of contention. The "Independent Engineer" with the final verdict, opined that the plant was in good condition, absolving EUL of maintenance obligations. However, UEGCL's inspections revealed critical deferred main-

The re-transfer has significantly increased UEGCL's portfolio from 233MW in operation to more than double, reaching 613MW, with further expansion expected to 1213MW after the full commissioning of the Karuma project. Prior to this, UEGCL met around 20% of the Grid demand via the 183MW Isimba HPP and 50MW Namanve TPP. Post re-transfer, UEGCL now fulfills nearly 49% of the National Grid demand through the combined portfolio.



tenance that could impact the plant's reliability post-transfer. After extensive discussions involving other stakeholders, this issue was eventually resolved by the provision of funds in the tariff for investment. The lesson here would be for the Government to have clear requirements before an asset is transferred to ensure all deferred maintenance is completed or compensated for by the previous operator.

Another substantial challenge was negotiating the tariffs with UETCL and ERA. While some expected the tariffs to automatically decrease upon re-transfer of the asset and commencement of the UEGCL regime the realities in UEGCL's application were not necessarily in support of this notion. UEGCL's tariff requirements were influenced primarily by the deferred maintenance mentioned earlier. The lesson here is that both public and private operators should be allowed sufficient revenue requirements to upon the desired plant performance both in the short and long term.

Lastly, the disparities in staff remuneration packages for the staff at Nalubaale Kiira versus those in other plants in UEGCL remained a contentious issue still awaiting resolution with the regulator ERA.

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Consequently, the re-transfer of the Com-

plex has had a major boost to UEGCL's revenues (projected at over UGX 50 Billion in the 9 months from April to December 2023). This is a major increase from the UGX 10 Billion or so that UEGCL previously earned from the asset in form of concession monitoring.

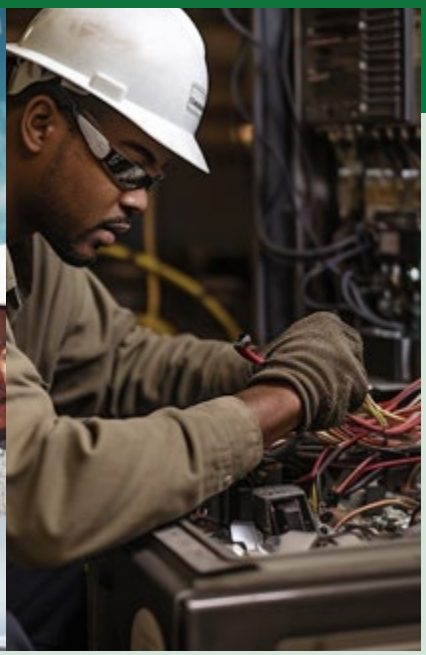
In terms of the balance sheet, the impact has rather been minimal as the Kiira-Nalubaale asset base was already recognized in UEGCL's Financial Statements. In terms of profitability, the impact for FY22/23 has been positive as the plant has made accounting profits. The profits are really due to the fact that the approved investments for the period outstripped the accounting depreciation charged on the plant's Income Statement.

However, the sustainability of accounting profits depends on regulator-approved investments in a given period. In an ideal scenario as is the case with Independent Power Producers (IPPs), the profits would almost be certain as the plant would ideally have a Regulatory Asset Base being recovered over the period. This asset recovery component of the plant's revenues would net off the accounting depreciation hence leaving the plant with some accounting profits.

This exposure to accounting losses is a main challenge for the sector that needs a policy remedy. Considering that Uganda's electricity generation sector has now matured to a level where there is significant participation from the private sector, it is imperative that government rethinks of strategies to remedy the profitability and financial sustainability situation of UEGCL and our sister utilities which have unstable financial standings.

Urgently, there is need to rethink of how to strike a fair balance between averting the above risk and maintaining a fairly competitive end user tariff.
In conclusion, having had the opportunity to be a part of the UEGCL team that meticulously shepherded this process to its pivotal culmination at midnight on March 31, 2023, is a privilege. This milestone will be etched into our career achievements, UEGCL's history, and Uganda's energy legacy.





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UGANDA'S FUTURE FOR THERMAL POWER GENERATION: A CASE OF NAMANVE THERMAL POWER PLANT

ENG. RONALD SEKITENE MUKASA
Technical Manager NTPP

In Uganda, thermal power generation was first conceptualized in 2005 as a remediation action to alleviate the enormous load-shedding challenge at the time. This was a manifestation of energy demand and supply imbalance that was greatly caused by a reduction in the county's generation capacity due to the drastic fall in water levels on Lake Victoria and along the Nile River which serves as Uganda's fuel for hydropower generation.

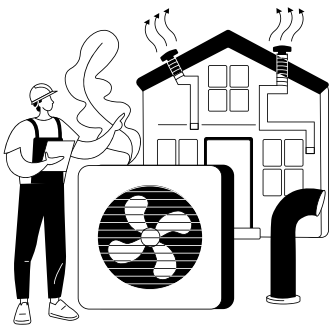
As such, a number of interventions were adopted that included but were not limited to; the installation of diesel generators at Mutundwe 132/33/11kV transmission substation, commissioning of the 50MW Thermal Power Plant in 2008 at Namanve North 132/33kV transmission substation, and commissioning of the 89MW Thermal power plant in 2010 at Tororo 132/33kV transmission substation. The former was a temporary solution, whilst the latter provided a more permanent solution that not only solved the dire electricity shortage problem but also diversified the country's energy generation mix.

In 2007, a Build, Own, Operate, and Transfer (BOOT) implementation agreement was signed between the Government of Uganda represented by the Ministry of Energy and Mineral Development, and Jacobsen Elektro, an independent Norwegian power production company for a term of thirteen years. This gave birth to the construction and official commissioning of the 50MW thermal power plant at Namanve, Kiwanga Village in Mukono

Municipality by H.E. the President of the Republic of Uganda in 2008.

The thermal power plant is installed with seven (7) Wartsila 18V32 engines as a prime mover. Each engine has eighteen pistons forming a V-shape with cylinders of 32cm bore diameter. These engines run on Heavy Fuel Oil (HFO) as the main fuel and Light Fuel Oil (LFO) as backup fuel. The engine is coupled to a generator set with a maximum output of 7.285MW. Thus providing a total plant dependable capacity of 51MWe.

In addition, the plant is installed with a heat recovery system that utilizes exhaust gas from the power stroke normally after combustion to boil water and produce steam at magnitudes of 7 to 8 bars from within the Exhaust Gas Boilers.



In addition, the plant is installed with a heat recovery system that utilizes exhaust gas from the power stroke normally after combustion to boil water and produce steam at magnitudes of 7 to 8 bars from within the Exhaust Gas Boilers. The steam generated supports the regulation of fuel temperature and viscosity along the fuel storage facility and the fuel injection lines to allow for efficient engine and equipment operation.

Upon commissioning, Jacobsen Elecktro AS registered a private company Jacobsen Uganda Power Plant Company Limited (JUPPCL) that undertook the operation and maintenance of the 50MW thermal power plant for the entire period of the implementation agreement that was set out to expire in September 2020. Uganda Electricity Generation Company Limited (UEGCL), a government agency mandated to build, operate, and maintain the country's generation facilities had been appointed to take over the operations and maintenance of the thermal power plant upon expiry of the implementation agreement.

Despite a few challenges during the transition from Jacobsen back to the government, the takeover of the 50MW thermal plant was largely smooth. As such we are grateful to the Minister of Energy and Mineral Development (MEMD) Hon. Ruth Nankabirwa for the invaluable support she accorded to the UEGCL management in the entire process.

Upon takeover, a number of non-conformances were observed that included but were not limited to three (3) engines that were approaching their major Planned Maintenance Service (PMS) of 36,000

Run Hours; the plant Supervisory Control and Data Acquisition (SCADA), Programmable Logic Controller (PLC), and Automation equipment that had reached an obsolescence stage. Since then UEGCL has undertaken several remediation interventions on the plant, including the replacement and/or upgrade of some plant equipment, a general facelift on the plant's civil structure, and the construction of a modern canteen on the plant.

For the period of operation, UEGCL has demonstrated utmost competence towards the prudent and efficient operation of the power plant as can be evidenced by the significant improvement in the plant's dependable capacity that increased from 49.45 MW at takeover to 49.999 MW during the midterm capacity test of the plant undertaken on May 25, 2023.

Better still, UEGCL is strategically working tooth and nail to improve Namanve's plant factor from 14.29% to 42.86%. Hence uplift the guaranteed dispatch from one unit (7MW) to at least three units (21MW) through exploring and embracing the engine conversion technologies specifically the conversion to Duel Fuel (DF) engine that is a combination of Heavy Fuel Oil and Gas. In addition, maximize the heat recovery process from exhaust gases through optimizing the performance of Exhaust Gas Boilers. Implementation of such strategies shall not only increase the country's generation capacity but also guarantee power supply security to the central business district in case of grid emergencies. From an environmental perspective, this technology will help reduce emissions to the environment.

Entrance to the 50MW Namanve Thermal Power Plant.

A CHAT WITH MILDRED NANONO, TECHNICAL MANAGER, NALUBAALE - KIIRA COMPLEX

What is your name and current position at the Nalubaale-Kiira complex.?

My name is Mildred Nanono, I am a registered engineer so sometimes am referred to as Eng. Mildred though I prefer to be called Mildred.

Currently, I am the technical manager at Nalubaale and Kiira power stations. Under this role, I lead the technical team at the complex to ensure its availability and reliability.

On April 1st this year UEGCL took over Nalubaale - Kiira Operations, what has been your experience of working at the complex, under UEGCL so far?

There is a big cultural shift from private to government especially in the procurement processes.

It has taken some adjustments as the PPDA process is longer than that used in the private sector. The roles and responsibilities in PPDA are quite different from those used by the previous entity.

Joining a bigger organization has provided some exciting opportunities from technical to business strategy spheres. The UEGCL team is very cooperative and has made the transition and onboarding of the complex team smooth. The business encourages

innovation, creativity, and accountability and provides equal opportunities for all its employees, values that foster individual growth.

As a technical manager in a hydropower plant, what is your style of work?

I am a very passionate person when it comes to work, I challenge myself to perform and exceed certain standards, and as such I hold my team to the same level of standards, and they have come to learn that with me, things have to be done the right way.

People want to be listened to, and people need to be given space to innovate and to be part of solutions, I want to come from the point of what you think, where could we do better, and we gauge from there how I support you to see that you enjoy your job as you deliver for the business and as an individual you are growing.

Are there any challenges you have met as a female manager in this male-dominated setting?

I have not had a situation where I feel marginalized or where I feel I need to defend myself. Once the team realizes that I am a very hands-on person who is ready to move things forward and challenge them at an intellectual level, the gender barriers diminish immediately. Over time I have gained the professional respect of my colleagues.

This year, it will be 70 years since Nalubaale started operation, what are some of the initiatives under your docket that we can use to extend the life span of this historical dam?

with such an aging plant the risk of having obsolete spares and operating software is realized. Therefore, this calls for investments to migrate the operating systems to modern technologies.

We have over time done skilling in Plant Safety Regulations that have created an environment that fosters innovation.

What is your advice to young engineers out there?

Do your best, excel at what you do, never inhibit yourself, and surround yourself with people who see potential in you. It is important that you keep growing your career you never know when an opportunity for growth will come.

THE FUTURE OF DAM SAFETY: A NALUBAALE-KIIRA PERSPECTIVE

Shakilah KARUNGI
Civil Engineer Dam Safety

When I started as a graduate trainee, I was assigned to work at UEGCL-Isimba Hydropower Plant and I was filled with enthusiasm and youthful exuberance. I gained comprehensive insights into the intricacies of operating and maintaining a dam, along with the essential skills for vigilant surveillance to monitor the dam's performance and its associated structures It was an invaluable foundation, and I soaked up every piece of knowledge like a sponge.

However, life had a different plan for me. With the government's decision to reclaim the Nalubaale-Kiira Hydro Power Stations from Eskom Uganda Limited after a 20-year concession, I was selected to be part of the team responsible for the transition. This was a significant shift, as I had to leave the comfort zone of a new Hydropower Plant and embrace the challenges of an aging infrastructure.

The moment I set foot at Nalubaale Hydro Power Station, I was awe-struck by its history and the sheer scale of the operation. The station has been operational for over six decades, providing electricity to countless homes and industries in Uganda. My new role as a Civil Engineer in Dam Safety was a daunting but exciting responsibility.

The first task was to assess the condition of the dam, which had endured the test of time. This meant analyzing data and records dating back to its inception. It was like digging into a treasure trove of engineering history. The data, some of it handwritten on yellowed pages, offered insights into the challenges faced during the construction and subsequent maintenance. I pored over geological surveys, maintenance logs, and engineering reports,

trying to piece together the story of this remarkable structure.

As I delved deeper into my role, I realized that it wasn't just about preserving an old dam; it was about preserving a piece of Ugandan history and ensuring the safety of its people. Every day has been a great learning experience. I've had the privilege of working alongside seasoned engineers who have dedicated their lives to the power station. Their wisdom and guidance are invaluable as I navigate the complexities of dam safety.

The challenges are significant, no doubt. Decades of wear and tear have left their mark, and it's a constant battle to balance maintenance with the need for an uninterrupted power supply. But with these challenges comes immense personal and professional growth. I have learned the importance of adaptability, resilience, and the value of historical data in decision-making.

So, as I embark on this new chapter of my career, I can't help but feel a sense of pride and excitement. My journey from a graduate trainee to a Civil Engineer in Dam Safety was a remarkable one. I'm eager to contribute to the safe operation of this historic Hydro Power Station, and I'm grateful for the opportunity to be part of its story.

Inspection of the newly instaled Stand Pipe Piezometers on the Right Embarkment Dam crest of Isimba HPP.

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RE-TRANSFER OF NALUBAALE-KIIRA POWER PLANTS – WHAT DOES THIS MEAN FOR UEGCL?

Eng. Sandra Matty KAJUMBA
Asset Management Officer

On April 1st, 2023, Uganda Electricity Generation Company Limited (UEGCL) successfully took over the direct operations and maintenance of the country's 380MW power plant. This was after 20 years of monitoring the concession of Eskom Uganda Limited. As a member of the technical team that steered this transition, the achievement of this milestone was a moment brimming with joy and a profound sense of fulfilment. This was particularly heartening as it marked the realization of one of the key objectives drawn in UEGCL's recently concluded strategic plan for the period 2018-2023. Particularly in the aspects of power plant reliability, this strategic plan focused on ensuring operational efficiency in the advent of operating the power plants and the takeover of existing plants under different management. With this takeover, it is crucial now, more than ever, for UEGCL to ensure and sustain high levels of availability and reliability at all the generating stations at all times. According to the Handbook for Practitioners and Decision Makers, availability refers to a factor that indicates how well the utility has managed the maintenance program to keep the generating units available for operation while reliability refers to the plant's ability to generate electricity consistently and dependably over time under normal operating conditions. These high levels of availability and reliability will only be achieved if the facilities are operated and maintained using the best utility practices that include the timely, proactive, and regular implementation of maintenance schedules for all equipment and systems within the power plants. This includes routine inspections, preventive maintenance, and equipment testing. To

> ***Particularly, UEGCL has commenced the timely execution of scheduled outages at the complex to enable the facility to keep generating the much-needed electricity for Uganda's power grid and contribute significantly to grid reliability in terms of energy, capacity, and ancillary services (reactive power and voltage control, frequency control, and operating reserves).***

support the attainment of these targets, all UEGCL power plants—Nalubaale and Kiira (the complex) inclusive—have annual and five-year preventive maintenance plans that specify the preventive maintenance activities to be undertaken on the respective equipment and systems. The plants further implement a combination of condition-based and predictive maintenance strategies to support the attainment of the key performance indicators. Particularly, UEGCL has commenced the timely execution of scheduled outages at the complex to enable the facility to keep generating the much-needed electricity for Uganda's power grid and contribute significantly to grid reliability in terms of energy, capacity, and ancillary services (reactive power and voltage control, frequency control, and operating reserves).

Additional initiatives that have been undertaken to ensure the availability of this critical asset include ensuring the accessibility of critical spare parts and consumables to support maintenance and timely replacements. This will minimize downtime in case of equipment failures. However, UEGCL needs to foster strong relationships with the original equipment manufacturers (OEMs) and suppliers in a bid to ensure access to technical support, genuine spare parts, and expert advice when needed.

Finally, UEGCL will need to foster a culture of continuous improvement characterized by a mindset and practices that can encourage ongoing enhancement of processes, products, and services within the organization. This culture will support the regular review and assessment of operational processes, maintenance strategies, and safety protocols to identify areas for enhancement. For operational synergy, the lessons learned from one power plant can be shared across the organization's other power plants to enhance operational efficiency, foster innovation, and prevent the reoccurrence

of preventable undesirable incidents.

Generally, the integration of the Nalubaale and Kiira power plants into the UEGCL business portfolio has been smooth and seamless. The company has skilfully capitalized on the operational synergies obtained from the inherent compatibility of the various power plants with the existing infrastructure and operations of the company. This strategic alignment has not only mitigated challenges but has also optimized the overall efficiency of the integrated power generation framework.

UEGCL team delves into benchmarking best Asset Management practices for enhanced efficiency and seamless integration of Nalubaale and Kiira power plants with existing UEGCL infrastructure.

RECHARGED AND RESILIENT: NAVIGATING THE EBB AND FLOW OF TRANSITION.

ROSE AUMA
Civil Engineer – Dam Safety

Transitioning to a new employer can be a daunting task. It involves leaving the comfort of a familiar environment and starting afresh in a new work setting however it is an experience that should be embraced.

In terms of a smooth transfer of management, UEGCL's acquisition of Nalubaale and Kiira Power Stations on April 1st, 2023, seemed impossible, it was to my amazement. That's when I understood how much Ugandans can do if we just have faith in our abilities. The handover ceremony went off without a hitch. The 90% employment retention of all Eskom staff was the most exquisite thing. Having a position with the new company is the best assurance I needed.

To be quite honest, I relaxed in the first week. The young people call it "chilling". All I had to do was show up at work, go to a few departmental meetings and the induction meeting, monitor the performance of the instruments, eat, and then leave for home. I hadn't had a day in a while where I wasn't rushing around, writing so many reports, and attempting to complete so many assignments. For me, induction week was unquestionably the finest. I took use of this time to let loose following the pressure I felt at Eskom toward the end of the concession. Just so you know, my last few days at Eskom were the busiest I've ever been at a job. Along with all the civil paperwork I needed to complete for closing, I still had a project that needed to be finished. To make matters worse, aside from my supervisor, I was the sole remaining civil engineer at the moment; all of the other civil engineers had left the company by the end of 2022.

Returning to my experience with the new employer, the

induction week helped ease my transition. I valued the business of the organization and how my contribution helped it reach its objective. During this time, the UEGCL workers who were already working in the system established a friendly atmosphere and made things simple for us. This period was however short-lived.

The time of probation! According to our contracts, we had to undergo a three-month probationary period after which we would be evaluated to determine whether or not the contract should be renewed. To prove that we were qualified for and capable of performing in our correspondingly allocated positions, we had to pull up our socks.

I'm reminded of the last weeks with Eskom around this time. Once again, there were several assignments and strict deadlines. In general, the time was quite difficult. I'll stop here for now, but looking back, I still think that time was meant to assist us in understanding and becoming accustomed to the UEGCL way of life. That's how I see it.

There were more pieces of training in between, but let us quickly get to the month of July 2023, which I will undoubtedly always remember. So far this year, it's been my best. The wonderful news came to me on a bright Thursday in the late afternoon of July 13. I had been selected to join the Isimba Civil team in Italy for a training session on dam safety. It was like being in a dream. Who had considered me and forwarded my name was the notion that kept racing through my thoughts. Who is this considerate person? They appeared to have read my thinking. I needed some time to unwind and get away from work. Anyway, it's fantastic that I just so happened to be on the list. Preparations kicked off, and Charles and Raymond deserve praise for making the process a lot easier for me and making sure I was fully involved in the training given that it was connected to Isimba's level 2 dam safety evaluation. Additionally, I'd like to take this chance to thank UEGCL management and whoever recommended me for this fantastic opportunity. I gained a lot of knowledge from the training, made new friends, went shopping, and traveled to several locations, but my favorite two were St. Peter's Basilica and Lake Como. It gave me such joy.

Now that I'm back to work, I feel energized and under less stress. The transition has generally been 'ebb and flow,' but I want to say that even if we have different perspectives, I think it's a chance for us to push ourselves and test our limits. It is an opportunity to meet new people and experience other cultures, as well as an opportunity to develop, evolve, and express gratitude. The road may be long or short, simple or challenging, but it will always have the potential to change your life.

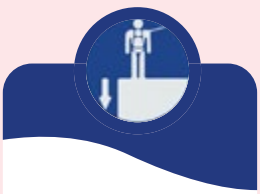
VITAL SAFETY RULES

Work with a valid work permit/JSA when required

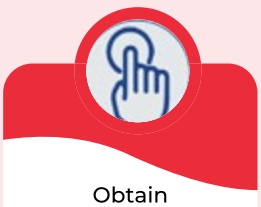
Verify isolations before working on energized systems

Always use equipment that is fit to it's intended purpose

Ensure safe conditions before entering a confined space



Protect yourself against a fall when working at height



Obtain authorization before overriding or disabling a critical safety equipment

Stay away from a suspended load

Wear appropriate personal protective equipment

Wear your seat belt when in a moving vehicle

Comply with road safety rules

Health and safety is everyone's responsibility.

GENERATING SAFELY FOR GENERATIONS

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ASSET MANAGEMENT BEST PRACTICES

Agrey NDIKUBWIMANA
Asset Management Officer - Planner

The 21st century has ushered in new considerations for the management of hydropower assets. Amidst a global push for sustainable energy solutions, hydropower remains a cornerstone, given its long history and established infrastructure. As one of the largest sources of renewable energy, hydropower assets are transforming to align with modern demands, technological advancements, and environmental concerns.

Technological advancements play a critical role in modern hydropower asset management. Innovations, such as predictive analytics, machine learning, and advanced sensors, are deployed to monitor and assess the health and performance of hydro plants. By collecting data in real-time, operators can predict potential failures, optimize operations, reduce maintenance costs, and enhance the longevity and efficiency of these assets. The digital transformation also involves the integration of hydro plants with smart grids, allowing for more flexible and responsive power generation.

Environmental, Social, and Governance (ESG) considerations have taken centre stage, with a growing emphasis on sustainable and socially responsible investment options. Asset managers are increasingly integrating ESG factors into their investment strategies to meet investor demand for responsible and ethical investing. Regulatory changes, such as the Markets in Financial Instruments Directive (MiFID II) in Europe, have reshaped the way asset managers interact with clients and disclose fees, enhancing transparency and investor protection.

Environmental considerations have become paramount. The ecological impacts of hydropower, notably on aquatic habitats and local ecosystems, are under scrutiny. As a result, asset managers are adopting more sustainable practices, such as installing fish-friendly turbines and redesigning reservoir operations to mimic natural river flows. These measures aim to reduce the environmental footprint of hydropower assets and maintain

biodiversity.

Regulatory frameworks are evolving in response to both environmental concerns and the broader energy transition. Hydropower assets now operate within stricter regulatory environments that emphasize environmental protection, stakeholder engagement, and grid integration of renewable sources. Compliance with these regulations requires asset managers to invest in updates and modifications, ensuring that hydro plants meet contemporary standards.

Resilience against climate change has emerged as a new focal point. Changing precipitation patterns, droughts, and increased frequency of extreme weather events can directly impact hydropower output. Asset managers are strategizing to ensure the adaptability of hydro assets, exploring options like augmenting reservoir storage capacities and diversifying renewable energy portfolios to mitigate risks.

In view of the aging assets such as Nalubaale and Kiira Hydro Power Stations, this will involve a delicate balance between modernizing infrastructure, ensuring operational efficiency, and addressing environmental concerns. The first step is to conduct thorough assessments of the existing assets, identifying areas that require upgrades or replacement to enhance overall performance. This may include retrofitting outdated technology, implementing advanced monitoring and control systems, and adopting smart grid solutions to optimize energy distribution.

Furthermore, sustainability considerations are paramount, and hydroelectric plants must align with environmental standards. Upgrading or retrofitting these aging facilities may involve incorporating eco-friendly technologies, such as fish-friendly turbine designs to mitigate ecological impact.

Additionally, integrating renewable energy storage solutions, like advanced battery systems, can help manage fluctuating power generation and enhance grid stability. Collaborative efforts with stakeholders, including local communities and environmental organizations, are essential to address social and environmental concerns while ensuring the continued reliability and productivity of these crucial hydro power stations in the modern era.

In conclusion, while hydropower remains a vital player in the 21st-century energy landscape, the management of these assets requires a multidimensional approach. Combining technological innovation, environmental stewardship, regulatory compliance, and strategic planning, asset managers are gearing up to ensure the long-term viability and relevance of hydropower in a rapidly evolving energy world.

> ***Environmental considerations have become paramount. The ecological impacts of hydropower, notably on aquatic habitats and local ecosystems, are under scrutiny.***

SUMMARY OF THE UEGCL HSE POLICY STATEMENT

1. 

Stop unsafe work and report near misses

2. 

Complete Safety Trainings

3. 

Ensure Plant Operational Safety

4. 

Environment Protection

5. 

Comply with Regulations

6. 

Plan-Do-Check-Act

7. 

Risk-Based Thinking

8. 

Workers Participation

Safety is Everyone's Responsibility

Generating Safely for Generations

UEGCL HOSTS EAST AFRICAN PR PRACTITIONERS AT THE NKPS COMPLEX IN JINJA.

Miria NIWOMUGISHA
Graduate Trainee, Communication and Corporate Affairs

On 11th November 2023, UEGCL hosted a team of East African Public Relations practitioners at the Nalubaale-Kiira Complex. The visit to the complex was a culmination of their week-long retreat for PR practitioners in Jinja.

Upon arrival, the visitors received a safety induction as per the plant visitor's Standard Operating Procedures. Before embarking on the plant tour, the team donned Personal Protection Equipment as one of the safety measures at the plant. Looking stunning in reflectors, and white helmets, they were led to the control room by the plant Operations Manager, Eng. Peter Tentena.

It is here that they saw how the plant activities are monitored remotely using the modern technology of SCADA.

As they walked on the old bridge, staring in awe at the expanse of water at the source of the Nile, they could not believe they were here, at the much talked about Owen Falls Dam , listening to the tremors on Nalubaale dam crest, as the gushy waters ran through the spillways.

The president of the Public Relations Association of Uganda (PRAU) and delegation leader, Ms. Tina Wamala, visibly wowed by the spectacle, described the tour as simply breath taking and as such an golden opportunity to showcase Uganda to colleagues from other East African countries.

"It's been a very mind blowing experience; We are utterly blown away by the whole science of power generation with the maze of machine connections and interconnections. It is a very thrilling experience. UEGCL staff on the ground are very knowledgeable and willing to tell the story of these vital assets of the country. We are also happy to find out that it is Ugandan professionals doing all this technical work. We

now have a story to tell about our internal capacity," noted Tina.

The president Public Relations Society of Tanzania, Mr. Assah Mwambene expressed his excitement about the trip to the former Owen Falls dam.

"To me, it's an amazing visit because taking into consideration that in primary and secondary schools, one of the areas that we studied in geography is Owen Falls Dam. After years, I am here to see it physically, it's indeed a dream come true." He discloses.

The practitioners' visit to Nalubaale-Kiira was intended to showcase Uganda's power generation capacity to the delegates who were attending the second edition of East African Public Relations Association, EAPRA week hosted by the Public Relations Association of Uganda, PRAU in Jinja.

PRAU is the umbrella body of all private and public PR professionals, communication specialists, brand managers, mass communication, and other related disciplines founded in 1976 striving to promote PR excellence in Uganda.

The association is affiliated with both regional and international bodies, the East African Public Relations Association, the Africa Public Relations Association, and the International Public Relations Association.

The delegation poses for a picture moment during their visit to the Nalubaale Kiira complex.

NALUBAALE - KIRA TAKE OVER
A TESTIMONY OF UEGCL'S OPERATIONAL CAPACITY

Noella NSABA
Customer Care Officer

In a groundbreaking move on 27th March 2023, the Uganda Electricity Generation Co. Ltd (UEGCL) took control of the Kiira (200 MW) and Nalubaale (180 MW) hydro power plants from Eskom Uganda, making a significant milestone in Uganda's energy history. This transition signifies a renewed focus on harnessing the potential of hydroelectric power and sets the stage for a more sustainable and robust energy future fully run by Ugandans.

Nestled on the mighty Victoria Nile, the Kiira and Nalubaale power stations have stood as iconic symbols of Uganda's commitment to clean and renewable energy sources for decades. Originally commissioned in the 1950s (Nalubaale) and 2002 (Kiira), these plants have played a pivotal role in meeting the nation's growing energy demands.

The decision to re-transfer operational control to UEGCL was driven by a strategic vision to centralize the management of these critical national hydroelectric assets. This transfer of power promises a host of advantages for Uganda.

Foremost among these benefits is the empowerment of UEGCL to implement a more agile and efficient operational framework. With direct oversight, UEGCL can leverage its expertise to optimize plant performance, potentially leading to a substantial increase in power output for the national grid.

Beyond its technical implications, UEGCL's takeover represents a significant step towards Uganda's self-reliance in managing critical infrastructure. It stands as a testament to the nation's growing capacity to oversee and optimize its vital assets, setting a precedent for future endeavors in the energy sector.

With UEGCL under the leadership of Dr. Eng. Harrison MUTIKANGA, Uganda embarks on a new era of energy infrastructure management. Through increased efficiency, sustainable practices, and a commitment to innovation, the nation is poised to navigate the challenges of a rapidly evolving energy landscape.

The future of hydroelectric power generation in Uganda shines brighter than ever as the country embraces its natural resources to power a more resilient and prosperous tomorrow.

UEGCL TAKE-OVER OF THE COMPLEX: SECURITY LESSONS FROM ISIMBA HPP

Alfred ODAMA
Security Officer - IHPP

Some people do not appreciate the achievements of the government. Quite often there are organized groups who seek to discredit the government through sabotage, terrorism, and petty criminality.

As UEGCL we are aware of the risk posed by such criminality to our purpose. The risk varies with each threat, that is, the risk of terrorism is a bigger threat than that of theft. It is common knowledge that potential criminals and terrorists prefer targeting vital installations and strategic assets like our power plants. Most of our power plants are located in remote areas and this increases their vulnerability.

As a mitigation to this risk, UEGCL has put in place a security policy and plan, site emergency response plans, security procedures, and reporting protocols at all our generating facilities. The effectiveness and maturity of risk management within UEGCL security circles determine how internal security is planned and audited.

The following measures are in place to protect Isimba HydroPower Plants from potential attacks or acts of vandalism;

Installation of perimeter security fences around the plant facilities. These barriers help deter unauthorized access and provide clear facility boundaries and adequate facility deployment planned and done for all the UEGCL plants i.e. the Uganda Police, UPDF, and contracted private security services, all to ensure the safety of the plants.

Downstream areas have been fenced to deter trespassers and act as a deterrent to intruders. This keeps bad actors as well as fishermen, accessing restricted areas, which pose hidden dangers from sudden changes in water levels.

Access control points have been established to

regulate entry to power stations and exits. Security personnel and access control/ systems are being used to limit entry to unauthorized personnel.

There is a program for upstream and downstream surveillance patrols, including surrounding areas, following up on project land encroachers this applies to all UEGCL plants. UEGCL has a program for protecting the Plants' reservoir land from being encroached on, through community sensitization by a joint security team protecting the facility.

Security monitoring and surveillance systems have been installed throughout

Routine inspections are done on the vast Isimba reservoir.

the plants to ensure accurate response to incidents. The cameras are strategically installed to cover critical areas such as upstream, tailrace, control rooms, transformer, and generator areas.
Regular inspection and supervision are done in order to identify potential risks and ensure a safe operating environment. Furthermore, UEGCL entered into a memorandum of understanding with Uganda Police for the provision of Fire and Rescue services in every Plant. We now have trained fire wardens and Marshals in every plant promoting plant safety in all the Power stations and faster responding to emergencies.

AWARDS AND RECOGNITIONS

UEGCL CEO Dr. Eng. Harrison E. MUTIKANGA receives a certificate of appreciation from past District Governor, Waggwa NSIBIRWA in recognition towards the contribution of the annual Rotary Cancer Run in August 2023 at the Kololo Independence Grounds

The State Minister for Minerals, Hon Peter Lokeris hands over a Certificate of Recognition to Enock KUSASIRA Head Communication & Corporate Affairs at UEGCL for being the Gold sponsors of the 5th Sustainable Development Goals run under the theme "Running for Energy"

UEGCL CEO, Dr. Eng. Harrison E. Mutikanga (L) receives a Silver Mark recognition award for technology innovation from the Head of Information and Communication Technology, Mr. Albert Murungi (R). UEGCL received the award during the CIO100 Symposium and awards gala held in Nairobi.

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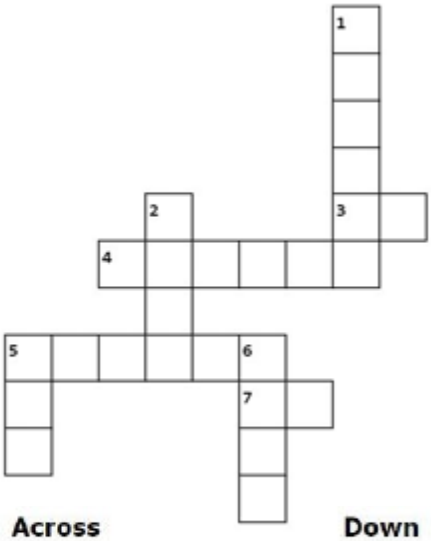
PUZZLE AND SUDOKU



Across

3. Megawatts
4. Email platform
5. Official UEGCL newsletter
7. Recruits and Fires

Down

1. The Elephant
2. Longest river
5. The WhatsApp platform
6. Newest Department

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Obituary of Mr. Patrick Angupale

1970 - 2023

Remembering a soul so kind, a heart so generous. Mr. Angupale's presence graced our lives with warmth and joy.

Though he may be gone, his spirit lives on in our hearts. Rest peacefully, dear friend. You will be forever missed.

A MAP OF UGANDA SHOWING UEGCL FOOTPRINT

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