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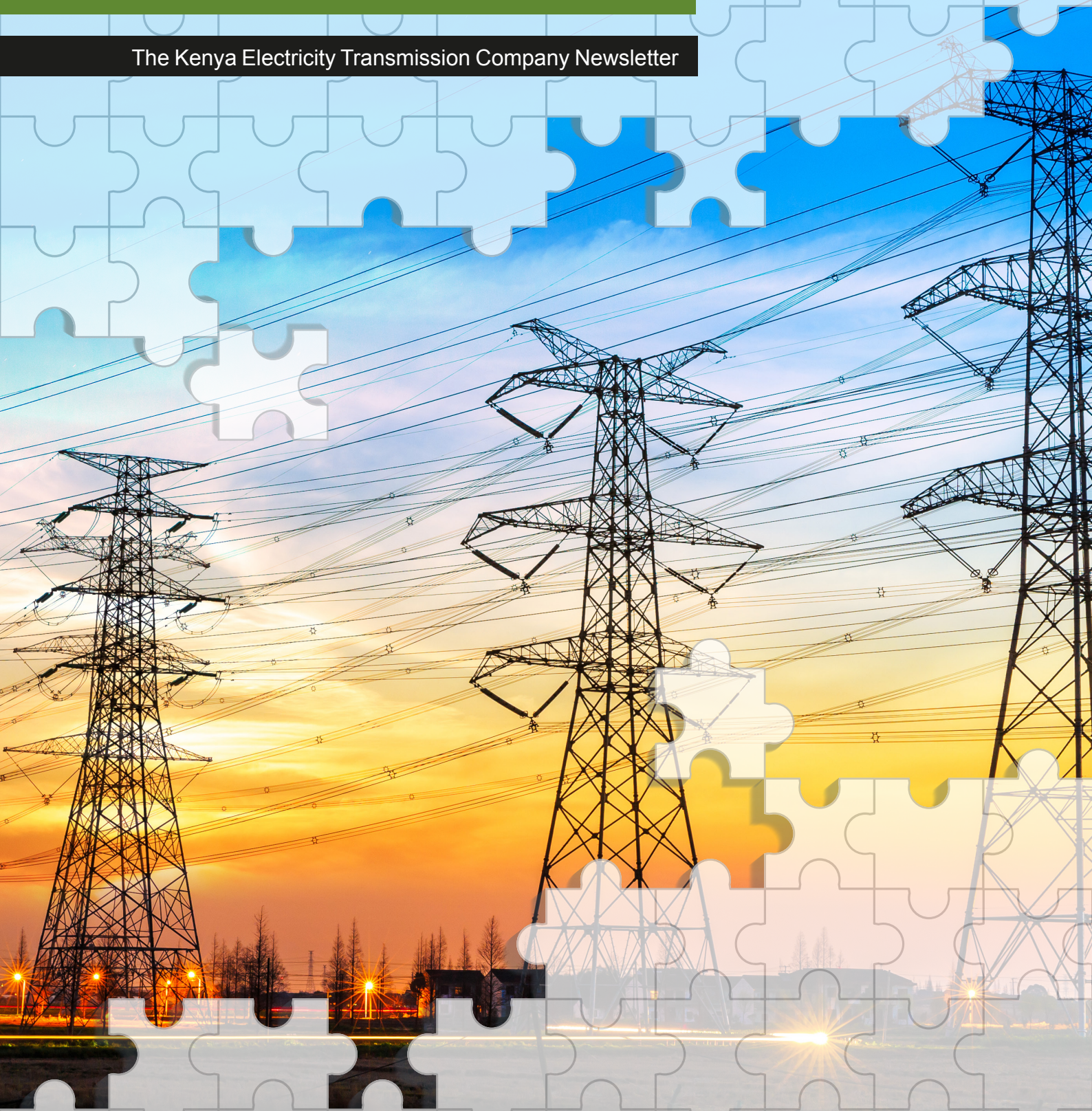
The GRID

The Kenya Electricity Transmission Company Newsletter



Continuous Innovation For Efficiency In Transmission Sector

“Stable Power Grid - Mfumo Thabiti wa Umeme”

The GRID

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Photograpy
- Corporate Communication
- Diana Kemunto
- Joy Ashioya
- iStock

KETRACO
Kenya Electricity Transmission Company Limited

KAWI Complex, Block B, Popo Lane, Off Red Cross Road, South C Nairobi, Kenya.
P. O. Box 34942 - 00100 Nairobi, Kenya
Email: info@ketraco.co.ke
Call: (+254) 20 - 4956000
Mobile: (+254) 719 018 000, (+254) 732 128 000
Website: www.ketraco.co.ke

Kenya Electricity Transmission Company Limited
@KETRACO1
Kenya Electricity Transmission Company Limited
Kenya Electricity Transmission Company Limited
@KETRACO_Kenya

LETTER FROM THE EDITOR

The past one year has been remarkably busy season at Kenya Electricity Transmission Company Limited.

During the period, the Company completed several projects marking tremendous milestones through extension of electricity grid to the various corners of the country. It is also during the same period that the Company launched its Strategic Plan 2023 – 2027.

The plan defines the direction in which the Company must travel and establishes realistic objectives and goals that are in line with the Mission and goals charted out by Dr. Eng. John Mativo, MBS when he took over as Managing Director and Chief Executive Officer of the Company.

We also welcome leadership transition that saw Capt. Mohamed Abdi take over as new Chairperson of KETRACO Board of Directors. This happened on 9th February 2024.

KETRACO completed and energized two major projects: 220kV Turkwel – Ortum Transmission Line Project in December 2023 and 132kV Isinya – Namanga Transmission Line Project in February 2024, bringing additional 148 km (circuit length) of Transmission Line into the grid.

Projects such as Kenya - Tanzania, Sultan Hamud – Merueshi-Loitoktok, Awendo – Masaba (Isibania)are undergoing commissioning tests. Managing Director Dr. Eng. John Mativo, MBS signed contract for completion of the 69km 132kV Sondu (Thurdiboro) - Homa Bay (Ndhiwa) on Wednesday, March 27, 2024. The Transmission Line will offer an alternative route to evacuate power to Homa Bay, Migori and Kisii Counties.

The contractor, Elemech Engineering (Kenya) Limited is expected to hit the ground within two months from date of signing contract.

Additionally, the Company is undertaking the construction of three new High Voltage Transmission Lines. These are 132kV Narok – Bomet Transmission Line and associated substations, 132kV Rumuruti – Kabarnet Transmission Line Project and associated substations and the 220kV Malindi – Weru – Kilifi Transmission Line and associated substations under the Kenya Transmission Network Improvement Project.

Dr. Mativo emphasises teamwork, friendliness, fairness, and firmness to people no matter who they are in the organization. Emphasis on continuous learning and development for the team remains the hallmark for the growth that has been witnessed.

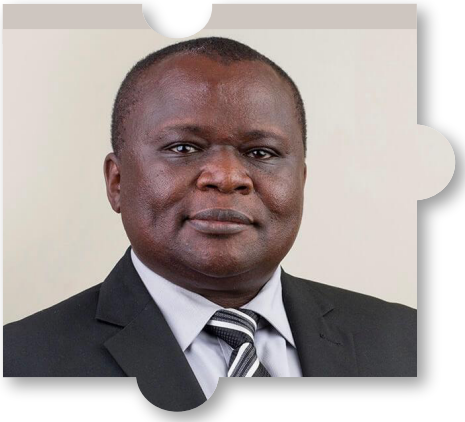
Given the positive trajectory so far registered since inception of The Grid Magazine, it became necessary to have an Editorial Board in place , from 1st of June 2023, to streamline its management, inject professionalism and expand the scope and quality of the magazine.

We believe that with the board's existence, it will be possible to plan, ensure timely sourcing of stories, follow up on resource allocation and schedule publication of the various issues on time. The board will also oversee editorial responsibilities leading to regular publication and release of the Magazine. With my appointment as Editorial Board Chairperson and editor of The Grid, Mr. Raphael Mworia will now be playing advisory and consultancy role in the development of the Magazine. We welcome your contributions and comments which should b e shared to the address in the editorial page.

These and more, we welcome you to enjoy your 12th edition of your favourite Magazine, The Grid.

Jack Nduri, HSC, MPRSK

WORD FROM MANAGING DIRECTOR



The 12th Edition of The Grid gives you an over-view of milestones KETRACO has attained in the transmission sector during the last few months, stamping authority as strategic player and essential partner in the energy sector.

During the last three months the Company has energized key transmission projects, completed transmission infrastructure construction, and signed new contracts.

The projects have been completed within schedule and scope, meeting the defined set of technical (including environmental and social) and financial tests.

Among projects that have been energized during the period are Isinya – Namanga 132kV Transmission Line. This project will enhance power reliability in Namanga border town and surroundings areas.

The area will now receive power from KETRACO 132/220kV substation situated in Namanga. The area was previously served using a 140km 33kV medium voltage line from KPLC 66/33kV substation near Kitengela.

The completion of Turkwel – Ortum – Kitale Transmission Line is a major break-through. It will provide alternative transmission evacuation route for the Turkwel Power Plant and provide efficient power to the recently commissioned cement factory at Ortum and improve power quality and reliability at Kitale, Ortum and their environs.

The completion of the 138km line means, more power dependent activities will be unveiled in West Pokot, Trans Nzoia and some parts of Uasin Gishu County.

Other game-changing projects include 220/66kV Kimuka substation Transmission Line which promises to bring about a more stable and reliable electricity supply to the residents of Kimuka and the surrounding areas. This project is part of the Nairobi ring and associated substation project that once completed will offer an alternative supply path for power into Nairobi region.

The 132kV single circuit Awendo – Masaba (Isibania) Transmission Line will provide additional bulk supply point at Masaba to serve Isibania, Migori and Kehancha area. The project reinforces and expands the electrical power network that shall provide sufficient power transmission capacity and reliable power supply to the region. This shall minimize intermittent power outages.

The project is being implemented under Kenya Power Transmission Expansion Project (KPTEP), which also include Sultan Hamud – Loitoktok, Isinya – Konza Transmission Lines, with financing from Exim Bank of China and the Government of Kenya.

We recently awarded a Sh 697 million contract for the completion of a 69km high voltage power line to link Sondu and Ndhiwa in Western Kenya. The contract was awarded to new contractor, Elemelech Engineering (Kenya) Limited to be completed within 12 months. The initial contractor, CG Belgium went broke and could not continue with work leading to termination by KETRACO. New financing was sought and GoK undertook to finance the project completion.

The line will offer alternative route to evacuate power to Homa Bay, Migori, and Kisii counties, thereby de-loading the existing Transmission Line currently serving these counties plus Kericho, Nyamira and Bomet. This is good news to electricity consumers in Nyanza who have been experiencing load shedding during the day due to high demand.

The Company has also secured funding to undertake construction of approximately 81km of 132kV Transmission Line from Narok substation to Bomet substation. The transmission line will connect Narok and Bomet. Extension of the existing Narok and Bomet 132kV substations by adding additional bays and installing transformers is part of the contract.

With these and many more, enjoy your read!

Dr. Eng. John Mativo, MBS
MANAGING DIRECTOR

NEW KETRACO BOARD CHAIR, CAPT. MOHAMED ABDI UNDERGOES INDUCTION BY BOARD AND MANAGEMENT AT KAWI HOUSE

By Jack Nduri

"Newly appointed KETRACO Board Chairman Capt. Mohammed Abdi (left) is handed Company document by Managing Director Dr. Eng. John Mativo, MBS during his induction at KAWI House."

KETRACO Board of Directors, the Managing Director and Management conducted a one-day induction for the newly appointed Board Chairman Capt. Mohamed M. Abdi.

The induction meeting took place at the Company's Board Room on 4th Floor at KAWI house, South C. Capt. Abdi's appointment is contained in Kenya gazette notice no. 2873/2023 dated February 5.

He will be at the helm at the electricity transmission Company for three years, according to the Gazatte notice. He takes over from Mr. Abdi Bare Duale who has been transferred to Kenya Railways Corporation in the same capacity.

The aim of the induction was to help the new chairman to understand the organisation, the environment in which it operates, and his role in making the organisation a success.

Capt. Abdi was formally introduced to the board team and Management by the CEO Dr. Eng. John Mativo.

In addition to familiarizing the new board chair with the documents, the induction was used to introduce him to the culture of the organization and his role and responsibilities as a board member.

During the meeting, the team urged for collaborative engagement and seamless teamwork that will transform the Company and ensure attainment of the Vision.

"KETRACO Board chairman Capt. Mohammed Abdi (4th left) and MD Dr. Eng. John Mativo, MBS with members of the board at KAWI House during the induction of the new chairman."

GOVERNOR NYONGÓ ATTENDS KETRACO DINNER MEETING IN KISUMU TO FOSTER COLLABORATION, PARTNERSHIP BETWEEN THE TWO INSTITUTIONS

By Gerald Modaki

"Governor, Prof. Anyang' Nyong'o addrsses KETRACO Directors and Staff during a dinner function in Kisumu"

Kisumu Governor Prof. Anyang' Nyongó was the chief guest at a dinner hosted by KETRACO Board of Directors to accelerate collaboration and partnership with stakeholders in the region.

The occasion provided excellent opportunity for leaders and residents to bond with KETRACO directors and staff.

The directors and staff who were on inspection visit to KETRACO transmission projects in South Rift and Nyanza regions had invited Prof. Anyang' Nyongó as a strategic stakeholder to onboard him and seek his partnership in the implementation of transmission projects in the region.

Former MP Prof. Julia Ojiambo, Maj. (Rtd) Marsden Madoka and former National Assembly Deputy Speaker David Musila accompanied the Governor to the function. Kisumu County Commissioner Mr. Benson Leparmarijo also attended the occasion.

KETRACO Board members present were Mercylynate Rotich, Janerose Gitobu, Eng. Michael Malomba, Eng. Thomas Karungu, Judith Nyauncho, CPA CS Hon. Kiwa Stephen Bitok. Also present were Gneral Manager, System Operation and Power Management Eng. Kibias Kipkemoi, Ag. Company Secretary CS Lydia Wanja, Senior Manager Operation and Maintenance Eng. Samson Akuto, among others.

"We appreciate our collaboration with KETRACO and Kenya Power in improving power supply quality and load management in our county," said Prof. Nyong'o in his address to staff.

He added "The Olkaria – Lessos – Kisumu Transmission Line project's completion has positively influenced trade and investments in Kisumu. Congratulations to KETRACO for achieving this significant milestone!"

The Line evacuates renewable energy from Geothermal Power Plant at Olkaria, through Lessos , to Kisumu City. It has led to supply of reliable , affordable, and stable power to Kisumu Port as well as strengthened the National Grid.

Currently KETRACO is undertaking the completion of Sondu – Homa Bay – Awendo Transmission Line project. The project whose contract was terminated due to fiscal challenges was initially being implemented by CG Belgium.

CG had supplied 80% of the material for the Transmission Line and had and had done 90% of the foundation works before the termination.

The project requires consolidated efforts from KETRACO Management , County Governments of Kisumu and Homa Bay and the various stakeholders for construction works to go on smoothly.

"KETRACO Directors pose with Kisumu Governor Prof. Anyang' Nyong'oh(4th left), County Commisioner Mr. Benson Lerparmarijo (far right) and other guests during the dinner event."

PRIVATE SECTOR FINANCING OF TRANSMISSION LINES TO SUPPORT GREEN RENEWABLE ENERGY

Executive Writer

KETRACO Transmission Lines evacuate power from renewable energy sources.

Since inception in December 2008, KETRACO has made concerted efforts at strengthening and expanding Kenya's national transmission grid and regional interconnectors. This has enhanced the quality, reliability, and security of electricity supply in Kenya, promoted regional power trade and enabled regional integration of power markets. The national transmission infrastructure stood at 3,408km circuit length before 2008, it is now at 9,011km circuit length while 3,281km circuit length is under construction.

Taking cognizance of the essential role played by transmission infrastructure in the transition towards a less carbon-intensive power market, KETRACO has particularly focused on green projects that promote the utilization of clean power within the country. Case in point, the Kindaruma-Mwingi-Garissa line which connected the North-Eastern region – that previously relied on diesel generators – to the national grid, and now receives cheaper, clean hydropower from Kindaruma dam; the Mombasa-Nairobi Transmission Line project which supplies the coast region with geothermal power from Olkaria; the Nairobi Ring project which supports evacuation of geothermal power from Olkaria to supply the greater Nairobi metropolitan and several other projects. This shift to green renewable energy has gone a long way in ensuring access to affordable energy within the country and mitigation of climate change effects.

Investment in transmission infrastructure is costly and capital-intensive. The total investments requirement for all the planned projects in KETRACO are estimated to be USD 4,778 Million of which approximately USD 987 Million is secured, leaving an estimated financing gap of about USD 3,791 Million. KETRACO projects have majorly been financed by exchequer and sovereign borrowing from development financial institutions. However, the looming financial pressure piling on exchequer because public debt is at an all-time high due to external borrowing, could potentially challenge financing of transmission infrastructure. In this regard, for KETRACO to maximise the contribution of transmission infrastructure towards transitioning Kenya into a less carbon-intensive power market, the company seeks to tap into the private sector's potential, which is not only limited to mobilising funding capital but also execution efficiency, cost control, risk mitigation, technological and project management expertise.

The common narrative across experiences from other markets is that if the existing market actors (government, utility, regulator) can bring clarity and predictability to the transmission sector, the private sector can deploy its expertise and capital to overcome the infrastructure financing gap. In this respect, the Government of Kenya has demonstrated its commitment to Public Private Partnerships (PPPs) by establishing the PPP Act, 2021 which is expected to foster efficiency and accountability in the governance of PPP projects and lead to higher quality transactions. On the other hand, development partners such as IFC, Power Africa, World Bank and AfDB have equally devoted considerable effort to support institutions such as KETRACO to build their PPP capacity by offering technical assistance, workshops, and training courses, among others.

The unprecedented interest to explore alternative sources of project financing, has seen KETRACO make great strides on the PPP procurement front. KETRACO – with support from the Ministry of Energy and Petroleum, National Treasury, and the PPP Directorate – is implementing 6 transmission projects on a PPP competitive basis while 7 will be undertaken as a privately initiated proposals under the PPP Act 2021. Of the 13 projects, 7 projects directly support the evacuation of green energy from various parts of the country to load centres. They include: Loosuk-Lessos line and Lessos substation which shall evacuate geothermal power from Olkaria and Baringo, hydro from Turkwel and solar from nearby regions; Kiambere-Maua- Isiolo and Kiambere-Rabai LILO(Mutomo)-Mutomo-Makindu lines which shall provide alternative evacuation paths for hydro power from Kiambere; Rongai substation and Rongai-Keringet-Chemosit line which shall evacuate geothermal power from Menengai and Olkaria to the rift valley region; and Menengai-Olkalou-Rumuruti line which shall evacuate geothermal power from Menengai to central Kenya.

In conclusion, while private investment is not as widespread in the transmission sector as in power generation, there is considerable experience worldwide. Private transmission has become prevalent in the last twenty years in countries such as Peru, Brazil, Chile, India, Kazakhstan, and the Philippines. KETRACO plans to leverage the experience from these countries to move past the traditional focus of publicly financed transmission infrastructure and instead foster a dynamic marketplace that is driven by private investment.

NAIROBI REGION TO GET STABLE POWER AS KETRACO ENERGIZES 220/66kV KIMUKA SUBSTATION TRANSMISSION LINE

By Rispah Karenju

"Energized KETRACO Sub-station (source Files)"

Kenya Electricity Transmission Company Limited (KETRACO) energized the 220/66kV Kimuka Substation transmission infrastructure project on Sunday 24th March 2024. The development took place approximately 6.50 pm East African Time. The energization team proceeded to energize 220/66kV transformers and the first set of 66kV feeders on 25th and 26th March 2024 respectively.

"Today at approximately 6.50 pm we successfully energised the 220kV Kimuka Substation. The target is to energize the 220/66Kv transformers tomorrow and the first set of 66Kv feeders on Tuesday," said KETRACO MD, Dr. Eng. John Mativo, MBS in a communique to staff.

He added "Really want to appreciate the whole KETRACO family. It's been such a long journey since feasibility study, resource mobilization, wayleave and substation acquisition, procurement, design, construction, commissioning and now energization."

This development means that residents from Kimuka and its environs will now benefit from stable and reliable electricity supply.

The Kimuka energization will further assist in de-loading the existing 220kV Suswa-North lines and 220/66kV transformers at Nairobi North Substation by transferring load (~80MW) from Nairobi North substation to Kimuka station.

This will help reduce the risk of system instability and improve security of evacuation of power from green sources (geothermal, wind and hydro imports) from Suswa to Nairobi.

"This project supports Bottom-Up Economic Transformation Agenda (BETA) by increasing access to affordable power and improvement of system efficiency and reliability for existing and proposed industrial and domestic loads in Magadi and Ngong, Karen and its environs hence improve social economic benefits of those areas," said the MD.

The Kimuka substation line is part of the Nairobi Ring and Associated substations project which once completed will offer an alternative supply path for power into the Nairobi Metropolitan region. It will additionally remove the load from the existing overloaded substations.

The scope of the project involves the construction of 103km 400kV double circuit line from Suswa substation to Isinya substation rated at 1200MW, two 220kV substations at Suswa and Isinya as well as 220/66kV substations at Kimuka, Athi River and Komarock.

The project has been financed by Agence française de développement (AFD), European Investment Bank (EIB) and the Government of Kenya (GoK) to the tune of Kshs.16.9 billion.

The Nairobi Ring Associated Substations infrastructure project falls under the country's

Vision 2030 flagship projects within the energy sector.

The project which has a 1,700MW evacuating capacity is part of the system strengthening/capacity enhancement projects that will improve transfer capacity of electrical energy and address the challenge of low voltages, high transmission losses, unreliability of supply and network security.

In 2004, the capital city was connected to Olkaria Geothermal Power Stations using a line from Olkaria through Nairobi North to Dandora. Any interruption in power supply at generation level or on the transmission infrastructure in/near Juja/Dandora substations resulted in a power outage in Nairobi and in some cases a national power outage (affecting Uganda).

The Nairobi Ring and Associated substations project will ensure that Nairobi Is supplied power within a robust and redundant system.

The Suswa – Isinya transmission line will link the grid from the Coast to rest of Kenya and neighbouring countries of Tanzania, Uganda and Ethiopia meaning it will ensure that the interconnector from Ethiopia – Kenya – Tanzania is firm and stable.

Konza Technopolis and electrified SGR will also benefit from reliable power from multiple sources once the project is completed.

The project will additionally ensure that the geothermal generations at Olkaria, wind generation at Lake Turkana, Ngong Hills, Kipeto amongst others are reliably evacuated into the grid.

PRESIDENT RUTO, ETHIOPIAN PRIME MINISTER TOURS KETRACO'S SUSWA CONVERTER SUBSTATION IN AN INSPECTIONS VISIT

By Risper Kemunto

President Dr. William Samoei Ruto, and Ethiopian Prime Minister Abiy Ahmed Ali, conducted an inspection tour of KETRACO Suswa Convertor Substation in Kajiado County on February 28th, 2024.

The Sub-station which facilitates cross-border transfer of power between Kenya and Ethiopia is a power hub where electricity from different sources converges, making it the biggest switchyard in the region.

The scope of this project is a bipolar 500 kV HVDC line with a power transfer capacity of 2000MW which originates from Wolayita Sodo in Ethiopia and terminates at Suswa. The total length of the transmission line is approximately 1045 km, out of which approximately 433 km is in Ethiopia and 612 km in Kenya.

Energy Cabinet Secretary Mr. Davis Chirchir, PS State Department for Energy Mr. Alex Wachira, Chairman KETRACO Board of Director Capt. Mohamed Abdi and KETRACO Managing Director, Dr. Eng. John Mativo also accompanied the President.

The project which has been undertaken by Kenya Electricity Transmission Company (KETRACO) Ltd. and Ethiopia Electric Power Company (EEP) was financed by different agencies through grants and loans.

The project cost was Kshs.75,281,650,000. Out of this, World Bank contributed Kshs.55,040,000,00, African Development Bank Kshs.10,930,800,000, Agence Francaise de Development Kshs.9,310,850,000 and the government of Kenya Kshs. 8,585,000,000.

"The principal objectives of this project are to contribute to the integration of the electricity markets of the East African Power Pool through the interconnection of the two countries power systems as well provide reliable and affordable energy from a regional base." Said Dr. John Mativo.

He further added that the project will provide revenues to Ethiopia through the export of electricity from Ethiopia to Kenya and other neighbouring countries. The sub-station will additionally facilitate cross boarder transfer of power with Tanzania via 400kV Isinya Substation. Tanzania plans to have an import capacity of 100MW from Ethiopia through Kenya in the next few weeks.

Since completion of the project in January 2022, it has realized some key benefits including increased volume of power supply at lower tariff, reduced cost of electricity supply in Kenya by more than 90,000,000.00 average Bulk purchase cost and a direct support to an additional 9,000,000 customers in the country.

The transmission line has further realized more than 99 per cent availability level since its commissioning.

Currently Kenya imports 3990 MWh per day from Ethiopia under the signed Power Purchase Agreement (PPA) capacity of 200MW. The capacity is planned to increase to 400MW by end of 2026.

The project will further allow access to considerable clean regional energy resources, reducing pollution and vulnerability to climate change, thus strengthening environmental resilience.

Sources of power for the Suswa sub-station include Olkaria 1AU 140MW (geothermal), Olkaria IV 140MW (geothermal), Olkaria II 105MW (geothermal), Lake Turkana Wind 310MW (wind), Ethiopia 200MW (hydro).

President Dr. William Ruto (5th right) and Ethiopian Prime Minister Abiy Ahmed (5th left) pose with delegates from the two countries at Suswa Converter Station during inspection tour to the facility on 28th February 2024.

UGANDA INSTITUTE OF PROFESSIONAL ENGINEERS (UIPE) TOUR OF SUSWA SUBSTATION

By Gerald Mudaki

A group of Engineers from Uganda Institute of Professional Engineers (UIPE) visited KETRACO's Suswa HVDC Converter Substation on Friday 22nd March 2024.

The engineers who were on an industrial substation visit were hosted in the country by The Institute of Engineers of Kenya (IEK).
Suswa HVDC converter station was identified as ideal for the mission being the largest substation in the region and most relevant to the area od study being undertaken by the visiting engineers.

KETRACO General Manager, System Operation & Power Management Eng. Kipkemoi Kibias and Eng. Victor Iganga who received the delegation at Suswa gave them a detailed step by step overview of the facility. The purpose of the visit was for the Engineers understand the functionality and benefits of being part of a power pool.

Eng. Kibias and Eng. Victor inducted the visiting delegation ensuring that all their questions were sufficiently answered. Of great importance to the engineers was the issue of how a power pool operates.

The engineers learnt the significance of pooling together power trade and supply networks to increase reliability of the region's (East Africa) electricity flow.

Through the pools, the region generates abundance as well as receive what they lack which then makes it easy to compensate and solve the problem at hand.
The delegation expressed satisfaction noting that they learnt the fluid functionality of the electricity transmission infrastructure facility at Suswa.

They conceptualized the idea and operationalization of East Africa Power pool noting that the tour also contributed to strengthening of relations between Kenya and Uganda.

"KETRACO GM, System Operation and Power Management Eng. Kibias Kipkemoi (right) conducts a team of engineers from Uganda Institute of Professional Engineers(UIPE) during a visit to Suswa HVDC converter station. He is accompanied by Eng. Victor Ingaga (regional engineer, suswa) and Charity Kirui (Safety officer)."

132KV AWENDO-MASABA (ISEBANIA) TRANSMISSION LINE PROJECT

By Diana Matesero

KETRACO is in the process of implementing various transmission line projects and their associated substations in the FY 2023/2024 with the overall aim of reinforcement and extension of the power transmission grid to enhance the quality, reliability, and security of electricity supply in Kenya.

Some of the ongoing projects include the 28km 132kV Awendo-Masaba (Isebania) single circuit transmission line, a project under the Kenya Power Transmission Expansion Project (KPTEP), whose main aim is to transmit power from the existing 132/33Kv Awendo substation to the new 132/33kV substation in Masaba area in Kuria.

The main contractor for the project is China Aerospace Construction Group with financing from the Export Import Bank of China and the Government of Kenya.

Construction activities within the line commenced in late February 2023 and completion is expected in January 2023. Currently, the contractor has achieved 100% tower foundation works, 98 % tower erection and more 100% conductor and OPGW stringing.

Migori town and its environs is alternatively fed from Awendo substation through 2 dedicated 33kv lines spanning over about 22km. The long distance is a contribution to voltage losses on the distribution network.

While the main Distribution company (Kenya Power) work tirelessly to keep its existing large power customers in the region in supply like Migori County Referrals Hospital, Sony Sugar factory, Bansi wholesalers Macalder Gold mines and the public in Migori, Kehancha and Isebania towns, but any fault occurring on the dedicated feeders greatly affects the access and reliability of power supply within the region.

With completion of Masaba substation in March 2024, easy access to reliable power is guaranteed for the many livelihoods in the region coupled with improving regional trade across the border to our neighbors Tanzania.

"Engineer Njeri Nthiga(gesturing) explains the ongoing commissioning testing works at Masaba substation in Migori county during inspection visit by KETRACO Directors to Awendo-Masaba(Isebania) Transmission Line project."

NURTURING SOCIAL LICENSES FOR SUSTAINABLE TRANSMISSION PROJECTS

By Clifford Siocha

Implementing electricity transmission projects in Kenya is a multifaceted process that hinges on securing and safeguarding a social license to operate (SLO). This indispensable element serves as the linchpin for the seamless planning and execution of expansive infrastructure endeavors, with its core lying in fostering positive relationships with the diverse local communities directly impacted by the installation of Transmission Lines.

Proactive stakeholder engagement is paramount in acquiring and preserving SLO in Kenya's electricity transmission initiatives. This involves tailoring comprehensive social impact assessments specific to the region, actively listening to local concerns, and incorporating community insights into the project planning process to build credibility and trust collectively.

Transparent communication regarding the potential benefits and risks associated with electricity transmission lines is vital. Ensuring that communities are well-informed fosters understanding and aids in managing expectations.

Continuous community engagement programs throughout the project's lifecycle is critical for preserving and strengthening SLO. Addressing environmental and social concerns within the Kenyan context, such as potential land use impacts and disruptions to local livelihoods, is pivotal for sustaining the social license. The implementation of effective grievance mechanisms, coupled with prompt responses to community feedback, underscores a commitment to responsible project management.

Enhancing the positive impact of electricity transmission projects on Kenyan communities involves contributing to local development initiatives, supporting environmental conservation efforts, and facilitating job creation. Integrating social responsibility into the project's strategy ensures equitable sharing of benefits, contributing to the overall well-being of the affected areas.

Recognizing that transmission projects traverse long distances, engaging with diverse communities of dissimilar views, needs, and cultures, is fundamental. Striking this intricate balance correctly, from the initial planning and design phases to construction, operation, and maintenance, is essential for cultivating a lasting relationship with these communities.

The significance of SLOs in the context of electricity Transmission Lines in Kenya cannot be overstated. These agreements underscore a sensitive and delicate relationship built on trust, transparency, and collaboration between project developers and the diverse local communities involved.

Acknowledging the fragility of SLOs underscores the need for ongoing diligence, adaptability, and a commitment to safeguarding these relationships throughout the project's lifecycle.

Consistently prioritizing open communication, addressing concerns promptly, and integrating community feedback into decision-making processes become instrumental in fortifying the foundations of social licenses.

In this delicate dance of engagement, project developers play a crucial role in safeguarding the bonds forged with local communities, recognizing the intrinsic value of these relationships in the successful realization of vital infrastructure projects.

"KETRACO team members bonding and building community connections at a social engagement program."

MENTORSHIP BEYOND THE OFFICE: AN ENGINEER'S JOURNEY OF SELFLESS SERVICE

By Vivian Kemboi

In today's fast-paced work environment, it's easy to get caught up in the daily grind and forget about the importance of giving back.

As professionals, we have a wealth of knowledge and experience that can be incredibly valuable to young people looking to develop their skills and pursue their passions.

Taking the time to mentor and volunteer not only benefits those we're helping, but it can also have a positive impact on our own personal and professional growth.

Eng. Dennis Busolo, has been passionately engaged in mentoring different groups of young people to have better lives today and in their futures.

"Eng. Busolo conducting a mentorship session at Samuli Primary School in Kajiado County."

Who is Engineer Busolo?

Eng. Dennis Busolo is a Professional Civil Engineer in Kenya. He is a registered member of the Engineers Board of Kenya, the Institution of Engineers of Kenya (IEK), and the Association of Consulting Engineers of Kenya (ACE-K)-Future Leaders.

Eng. Busolo has more than 11 years cumulative working experience in both the public and private sector accumulating extensive experience in buildings, Highways, Oil and Gas, Consultancy, and Power Transmission sectors. He currently works as a Resident Engineer in the Kenya Electricity Transmission Company (KETRACO), and he is responsible for coordination, supervision, inspection, and approval of construction works for Transmission Line and Substation works.

Why Mentorship?

"Mentorship is the selfless giving of oneself to the service of those you have gone before, either in the professional, social, or academic spheres of life. This service is aimed at offering advice and guidance for individual and/or group development so that those who come after you make the best choices and progress," Eng. Busolo explains. He asserts that "your greatest gift to the world is your mentee who becomes better than yourself."

The journey

As part of his involvement in various mentorship programs, Eng. Busolo was trained and certified in 2006 as a scout master by the Kenya Scouts Association, where he led and guided young students to become responsible adults in the future.

He was also appointed in 2022 to the IEK Mentorship Program, where he coordinated mentorship for graduate engineers, helping them to transition to professional engineers. Eng. Busolo volunteers as a mentor in the 3Es Experience Organization school mentorship program at Samuli Primary School, Kajiado.

As part of the program, students from the school receive mentorship on various non-academic skill sets, including communication skills, time management, goal setting, and planning, among other topics.

To ensure that students can apply skills they learn, fun games are incorporated into the sessions that encourage them to put theory into practice. After each session, the students demonstrate improved answers and explanations, and Eng. Busolo finds it fulfilling to see the positive impact these sessions have had on their development.

Volunteer work, and what inspired him

Growing up in his professional

journey, Eng. Busolo experienced little, or no mentorship services expressed to most of them. Be it in the choice of the best career paths, academic progression paths, professional growth, etc. much of what was achieved was using whatever was available. Thus, upon transitioning to being a professional engineer, he endeavored to do whatever little he could to guide graduate engineers in the same journey and any other professional and academic advice he could offer.

Challenges

Eng. Busolo explains that the biggest challenge of being a mentor includes managing limited time as balancing competing activities is a challenge. Additionally, there are expectations from some mentees and fellow mentors that a mentor has all the solutions and answers to all questions, which is an unrealistic expectation. Lack of commitment from some mentees and poor attitude from some mentees who want quick fixes to life's challenges can also be challenging.

Other life's passion

Eng. Busolo is passionate about environmental conservation, and green and sustainable building technology.Eng. Busolo encourages individuals not to amass all the knowledge, skills, and expertise in the world and not bother to pass some of that to another person—for free! To be great is to plant trees today, under whose sheds we are not sure we shall ever get to sit.

There are already existing platforms, groups, or forums in the various professional associations/disciplines for one to be engaged. If lacking, several individuals have established programs of mentorship for pupils and students, and one can easily ask to join and be involved.

In conclusion, mentorship beyond the office can have a positive impact on both the mentor and the mentee. By taking the time to give back and share our knowledge and experience with others, we can make a difference in their lives and our communities. We hope that Eng. Busolo's story inspires more professionals to engage in mentorship and volunteering.

"Eng. Busolo (Left) and China Aerospace Contractor staff hosting Energy and Petroleum Cabinet Secretary Mr. Davis Chirchir (Center) at Konza Substation"

"Eng. Busolo (In red) engaging in a Mentorship game with students."

KETRACO HOSTS HOLISTIC WELLNESS DAY

By Arnold Otieno
Communications Officer, KETRACO

KETRACO hosted a holistic wellness day on Friday, May 24, 2024, at the College of Insurance-The Edge Convention Centre with the aim of addressing mental, physical, social, intellectual, financial, Environmental and spiritual wellness.

Mental health and psychological well-being are frequently sacrificed in favor of efficiency and performance in today's fast-paced workplace. However, failing to prioritize employees' overall well-being can have serious ramifications for both individuals and company.

Mr. Peter Njehia, Senior Manager, Supply Chain management, while making an opening remarks on behalf of the Managing Director, noted that KETRACO is determined to ensure holistic health of every staff, ensuring productivity and efficiency at the workplace.

"KETRACO team engaging in a team building activity during the Holistic Wellness Day."

"If we don't take care of our holistic wellness and more importantly mental health, our stress levels are likely to spike, and our productivity would plummet," said Mr. Njehia. "Therefore, as management, we've taken staff wellness seriously, making this an annual event." He added.

A team from Career Route Solutions Limited led the workshop, taking staff through mental health, stress and money matters. Other facilitators and service providers for the day included Home Health Education Service Limited, AAR South C, Kenya Police Counselling Unit, and Kenya Commercial Bank Limited.

The employees were also treated to a team-building session that emphasized collaboration, communication, and problem-solving abilities, which is consistent with KETRACO's focus on teamwork and innovation.

The event was attended by all staff based at KAWI-Headquaters and nearby offices such as AFRAA, APPEX and a few staff from nearby substations such as Suswa, Mangu, Gatundu, Isinya, Athi River, Konza and Machakos. The other staff located in far away substations followed the event virtually via ZOOM.

May is Mental Health Awareness Month, a crucial time for staff to become more educated on mental health issues in the workplace.

THE ROLE OF ENERGY SECTOR ENGINEERS IN PUBLIC POLICY

By Winfred Mutinda

"Engineers undertaking Transmission Line stringing work. At KETRACO engineers recognize and embrace their role in shaping public policy."

A fundamental component of engineering leadership entails an in-depth knowledge of public policy. However, studies show that the involvement of engineers in public policy development is lacking.

An understanding of public policy is key for engineers to make effective economic, social, environmental and technical decisions. Also, engineers have moral and ethical obligations, including upholding the integrity of the profession and using their knowledge for the betterment of society.

Globally, the energy sector is a heavily regulated industry. Recently, the intersection of energy, environmental, and economic issues has witnessed a particularly robust interaction between engineering insights and the development of public policy.

Public policies have an impact on engineering because all aspects of development must conform to laws, rules, and regulations. Moreover, the guidelines for engineers to ensure sustainability and sound engineering principles are captured in policies.

Engineers in the energy sector have a crucial role to play in public policy development. They are well-equipped problem solvers with the ability to leverage their technical knowledge and skills to make informed recommendations to policymakers.

By serving in technical advisory committees and contributing to the dialogue on policy formulation, engineers in the energy sector can ensure that project implementation aligns with public policy goals such as diversifying energy sources, reducing greenhouse gas emissions, promoting renewable energy adoption, and improving energy access for underserved communities.

Furthermore, engineers are uniquely equipped to offer valuable insights into the feasibility and impact of proposed policies. Their technical expertise positions them as critical stakeholders, capable of providing data-driven perspectives that contribute to well-informed decision-making.

This collaboration between the technical and policy spheres is essential for creating robust, effective policies that stand the test of implementation. By participating in industry forums, engaging with policymakers, and staying abreast of evolving policy landscapes, engineers enhance their ability to influence positive change.

Should engineers disengage from the public policy process, they risk jeopardizing their own profession. Effecting change requires the proactive involvement of those willing to speak up for that change to occur.

Engineers must assume a more participatory role in public policy development to guarantee the formulation of policies aimed at fostering the common good and promoting societal welfare.

As we navigate the dynamic field of power transmission at the Kenya Electricity Transmission Company (KETRACO), it is imperative for engineers to recognize and embrace their pivotal role in shaping public policy.

Power transmission is a critical component of our nation's infrastructure and plays a foundational role in economic development. The intricacies of our work directly intersect with policy decisions that govern the energy sector. It is not merely about erecting transmission lines; it is about fostering sustainable energy solutions, ensuring accessibility, improving reliability, and contributing to national development goals.

As a matter of fact, engineers are not just builders of infrastructure; they are architects of change. Their commitment to shaping public policy is integral to the holistic impact of their work.

By actively participating in policy discussions, engaging with policymakers, and advocating for innovative solutions, they elevate their role in advancing the public good. Engineers must recognize their duty goes beyond constructing the physical infrastructure of the nation; they should also actively contribute to the policy frameworks that shape its future.

The writer is a Transmission System Planning Engineer at KETRACO.

KETRACO, KENGEN COLLABORATE TO LAUNCH STAFF TREE GROWING INITIATIVE

By Joy Ashioya

In a significant step towards environmental stewardship and sustainability, KETRACO joined hands with KenGen to launch its inaugural Staff Tree Growing Initiative on April 3rd, 2024, at KAWI. This collaborative effort saw KenGen generously donating 3000 tree seedlings towards this cause.

The launch event witnessed an impressive sense of enthusiasm and dedication among KETRACO staff members as well as a team from KenGen represented by Frank D. Ochieng – Manager Marketing and Corporate Communications, Evelyn Mwaura – Corporate Communications Officer and Charity Wanjohi – Sustainability Development Officer, as they all gathered at 9:30 am to kick off this initiative. Addressing the audience on behalf of the Managing Director, the General Manager, Finance, Tom Imbo, extended gratitude to both KETRACO staff and the KenGen team for their commitment to environmental protection and conservation.

Highlighting the broader context of environmental initiatives in Kenya, the GM Finance reiterated the Government's plan to plant 15 billion trees by 2032. This initiative aims to combat climate change by reducing greenhouse gas emissions, halting deforestation, and restoring millions of hectares of degraded landscapes. Within this framework, KETRACO was tasked with growing 2,000,000 tree seedlings nationwide over a 10-year period, with a minimum target of 200,000 seedlings annually.

One of the innovative aspects of KETRACO's tree growing program involves compensating for trees cut during construction activities by planting new ones in project areas, particularly targeting Community Forest Associations (CFAs), schools, degraded forests and individual Project Affected Persons' (PAPs) farms. Currently, the program has achieved a commendable 67.5% (translating to 135,000 seedlings) of its target, aiming for full completion by the end of the financial year 2023/24.

Mr. Tom Imbo also emphasized the critical role of trees in mitigating environmental degradation, noting the various threats to Kenya's forest cover, including overexploitation for agricultural expansion, charcoal production, and infrastructure development. Through initiatives like the Staff Tree Growing Initiative, KETRACO further aims to underscore its commitment to improving the state of forests in Kenya and promoting environmental conservation.

In conclusion, stakeholders present were urged to recognize their collective responsibility towards a sustainable future and to take inspired action to protect the environment. By planting trees, KETRACO and its partners are not only contributing to a healthier planet but also safeguarding human dignity for generations to come. This symbolic gesture serves as a reminder of the urgent need for concerted efforts towards environmental preservation and sustainability.

#JazaMitiJengaKenya
#Roadto2MillionTrees

"KETRACO GM,Finance CPA Tom Imbo plants a tree seedling at KAWI House to mark the launch of KETRACO/KenGen Tree Growing Initiative collaboration on April 3rd 2024. On his right is KenGen's Manager Marketing and Corporate Communications Mr. Frank Ochieng."

KETRACO SIGNS SH697M CONTRACT FOR SONDU-HOMA BAY PROJECT

By Gerald Modaki

The Kenya Electricity Transmission Company Limited (KETRACO) has awarded a sh 697 million tender for the completion of a 69-kilometre high-voltage power line to link Sondu (Thurdibuoro) and Homa Bay (Ndhiwa) in Western Kenya.

KETRACO managing director Dr. Eng. John Mativo said the 69 km 132-kV line will be constructed by Elemelech Engineering (Kenya) Limited and completed in 12 months.

"The Transmission Line will offer an alternative route to evacuate power to Homa Bay, Migori and Kisii counties." Said Dr. Mativo.

"this will de-load the existing transmission line currently serving these counties plus Kericho, Nyamira and Bomet," he added.

The tender award was undertaken by KETRACO after the initial contractor, CG Belgium went broke and could not continue with the work.

The new contractor is expected at the site in two months from the date of signing the contract with KETRACO.

"Termination of CG Belgium contract was done after which KETRACO took over the site materials supplied. New financing was sought and GoK agreed to finance the completion. Bid document for completion of the project was prepared internally and floated to the public restricting participation to local contractors on. Evaluation of the submitted bids was done and contract awarded as per procurement rules," said the MD.

Previous contractor had done 95% of the tower foundations, erected 5% of towers. New contractor is to complete the remaining works for the foundations and towers, do stringing, design, supply towers, cast foundations for the line entering proposed Thourdiboro substation which is approx. 1.5km.

The completion of the line will be a major boost to electricity consumers in Nyanza who have been experiencing frequent and disruptive load shedding during the day due to high demand.

This means that during peak demand, some areas must be taken off supply to prevent the grid from tripping.

Once the 132kV line is competed, all areas with great "blue economy" potential along southern part of Lake Victoria from Kisumu to the Kenya – Tanzania border, i.e. Kendu Bay, Homa Bay, Sindo, Sori and Muhuru Bay in Karungu will be within reach of using 33kV distribution lines.

Last year, increased demand for electricity from the Western region saw the 132 kV Kisumu- Muhoroni Transmission Line trip, leading to a nationwide blackout.

"Members of KETRACO Board during a courtesy call to Homa Bay County Commissioner's office on 18th April 2024 in regard to the 132kV single circuit Sondu-Homa Bay Transmission Line project. With them is Homa Bay town DCC Mr. Jude Wasonga(centre)."

KETRACO MEMBERS TAKE PART IN PINK ENERGY FORUM TO MARK INTERNATIONAL WOMEN'S DAY 2024

By Rispah Karenju

"KETRACO staff at the pink-energy celebrations organized by KENGEN."

KETRACO took part in the Pink Energy celebrations organized by KenGen on 8th March 2024 to mark the International Women's Day and promote gender equality and empowerment.

The President's Advisor on Women's Rights, Republic of Kenya Hon. Harriette Chiggai, gave a keynote address, President of The Institution of Engineers of Kenya (IEK) Eng. Eric Ohanga led the panelists that included Human Rights Lawyer Ivy Kihara, and Chairlady Pink Energy Helida Koske.

The event is a commemoration to reflect on the progress made, and the challenges that lie ahead in the realm of women's rights and empowerment in Kenya and beyond. The Theme was "Invest in Women: Accelerate Progress".

Pink Energy was founded in November 2016. It was formed as a major initiative to advance change, enhance the potential of women in our workplace, and drive women's empowerment in business as well as in our communities.

"Through initiatives like the Pink Energy program, we are not only empowering individual women but also catalyzing broader social and economic transformation," said Eng. Ohanga.

International Women's Day is reminder of the significant strides women have made throughout history. However, it is also a call to action to address the persistent inequalities that still exist.

Across the globe, millions of people, regardless of their gender, unite on International Women's Day to advocate for women's rights. These rights include the right to work, to vote and to hold public office. The main goal is to end gender discrimination.

" Indeed, there is a chance for everyone to thrive in a gender-balanced workplace and improve the lives of all employees. I view women as creators and innovators. The role that women play both at home and at work is nothing but sheer magic, you bring passion to any discussion, attention to detail, organize our lives and make everything beautiful." KenGen MD and CEO Eng. Peter Njenga.

Beyond the home, women have taken the workplace by storm, painting offices, boardrooms, and businesses in their magical colors. They have come with the same passion and success from home and using it to do great things at work.

"We must 'Inspire Inclusion' that opens women's access to opportunities. We must also 'Inspire Inclusion' that encourages women's voices. We must 'Inspire Inclusion' that expands women's potential in economic, socio-cultural, and political spaces," Hon. Harriette Chiggai.

When women are given equal opportunities to thrive, they become agents of change in their communities, driving progress and prosperity for all. By breaking down barriers and biases, we

Unlock the full potential of our societies and pave the way for a more inclusive and equitable future.

The great Malala Yousafzai, a 2014 Nobel Peace Prize laureate at the age of

Seventeen. She said, "We cannot all succeed when half of us is held back."

It is up to each of us to 'Inspire Inclusion', challenge the status quo, create a world where women's rights are human rights, and where every woman can shine brightly like the Pink

Energy that powers our future.

GRADUATE ENGINEERS' VISIT TO THE 132/66KV JUJA ROAD GAS INSULATED SUBSTATION (GIS)

By Muganda John Caleb

Recruited into KETRACO in October 2023, the company's 'lastborns' as they are popularly known have been an active group in quickly grasping current as well as future technologies deployed in the transmission of high voltage power.

In the spirit of learning on the job through active participation, the graduate engineers got a chance to visit the GIS facility located at the National Control Centre (NCC) in January 2024; a visit that facilitated the acquisition of practical knowledge on the composition and working principles of GIS, and how it compares with the typical Air Insulated Substations (AIS) operated by KETRACO and other major power utility companies.

GIS consists of components where the active parts on high voltage potential are in the middle of aluminum alloy pipes and held in that location by epoxide resin insulators.

The aluminum pipes are in turn filled with insulating gas, typically Sulphur hexafluoride (SF6). In comparison, a conventional AIS makes use of atmospheric air as the insulation medium.

High voltage components enclosed within GIS include bus bars, voltage & current transformers, circuit breakers, disconnectors, and earthing switches. Going with this form of arranging the electrical switchgear equipment in an indoor GIS setting, land space savings of up to 80% are attained.

This space saving was the case for the GIS facility on Juja Road that replaced the Air Insulated Substation that initially occupied a massive land space but had operational challenges because of birds short circuiting crucial components of the AIS leading to frequent power supply interruptions.

The deployment of GIS in an indoor setting, therefore, presented a lasting solution whose benefits in terms of improved power reliability to customers served by this critical substation in our country's power grid continue to be felt to this day.

Commissioned in 2017, the coming on board of the GIS significantly boosted power transfer capacity by more than 50 percent. The main contractor for the works was ABB whose works included substation design, supply, installation, and commissioning.

Graduate Engineers were reliably informed that besides the GIS installed at the NCC on Juja Road, other GIS facilities have been deployed in other sections of the Kenyan grid including the City Centre 220/66kV substation, 220/66kV Thika Road substation just next to Kenyatta University, and the 66/11kV Konza substation.

The deployment of GIS facilities on the power grid is part of a larger strategy of network modernization plan seeking to improve supply reliability while at the same time making the maximum possible use of the small and expensive substation land available within our country's fast growing urban areas.

We observed that the 132/66kV GIS facility on Juja Road is hermetically sealed thus offering fewer pathways for outside contaminants to enter. This has the advantage of ensuring fewer opportunities for equipment failure due to environmental factors like dust, humidity, and rain.

The other major benefit of GIS substations over the traditional AIS substations is lower long term

maintenance costs with a long useful life that outweighs the depreciation cost over a long period of time. In fact, a GIS substation can operate very well during the first eight years of operation since the time of commissioning before the first routine maintenance is called for.

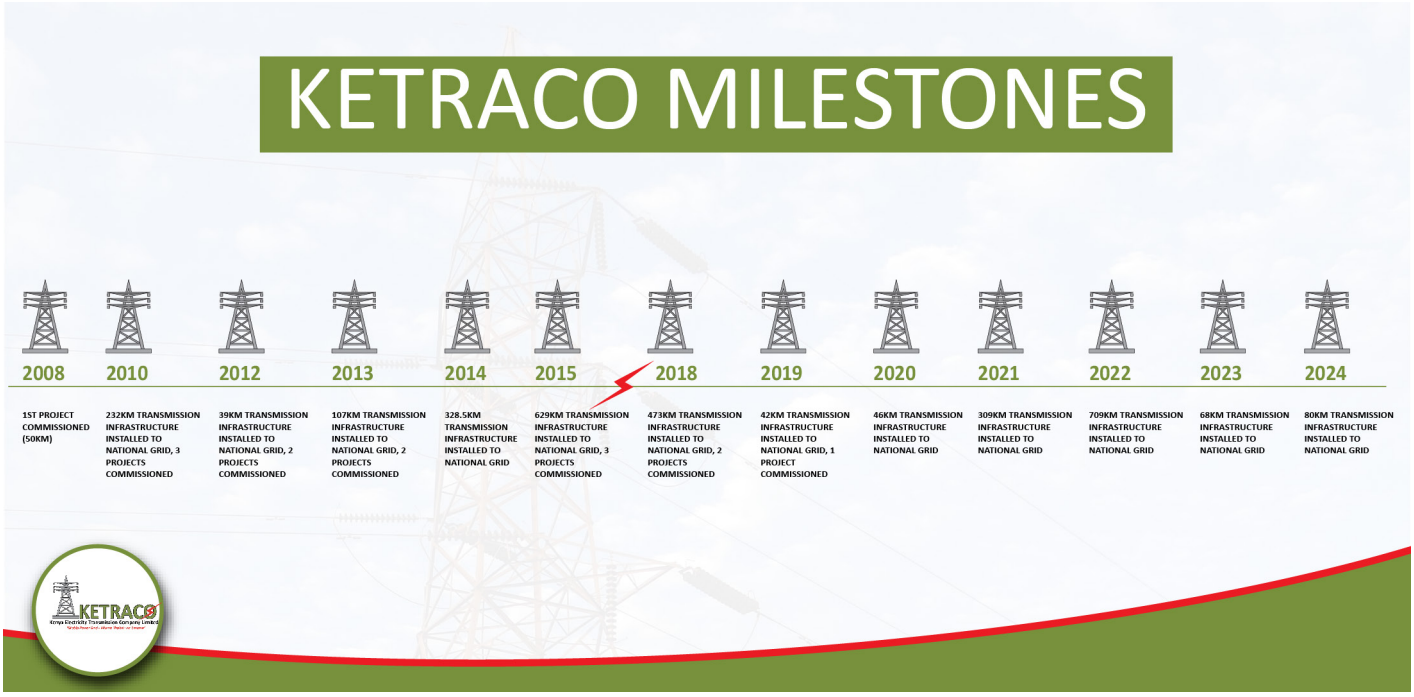
In addition, the total land requirement for a GIS is about 10% to 20% of the total area required for an AIS since AIS requires a large area for insulation space whereas a GIS only needs a few inches between the live conducting parts.

The smaller footprint immediately reduces site preparation and potentially site acquisition while at the same time offering the possibility of future expansion at negligible cost with some advanced planning when choosing the initial site. This will be a cost saving measure when planning future GIS substations for KETRACO, especially those around critical load centres where available land is both small and expensive.

Historically, Sulphur hexafluoride (SF6) gas has been the predominant insulating medium for GIS substations around the world. However, its environmental impact has recently led to its regulations, thus making it no longer the only option for GIS substations. Graduate Engineers were informed during this visit that new alternative insulation gas mixtures are being developed to eliminate the use of SF6 gas, to help meet environmental sustainability goals. When fully developed and deployed to all power utility companies like KETRACO, the non-SF6 formulations will eliminate one of the most serious concerns about GIS by offering insulating properties that are as effective as SF6 with up to a 99 percent reduction in global warming potential.

Despite its higher initial capital investment, GIS substations offer a variety of benefits to power utilities from both a cost and operational standpoint. Alternative insulation gases can also eliminate the usage of SF6 gas, thus helping KETRACO to meet our country's environmental sustainability goals.

The visit by Graduate Engineers to the 132/66kV GIS Substation on Juja Road helped us gain valuable insights into this technology. Being that we are the fresh blood within the company's engineers' body, we hope to learn more developments around GIS and Digital substations to spearhead KETRACO's goal of ensuring 99.9 percent grid availability in the implementation of current and future substations.



KETRACO'S CONSCIOUS COMMITMENT TO ESMF

By Clifford Siocha

In a transformative and conscious stride, KETRACO has charted a deliberate path towards sustainability by developing an Environmental and Social Management Framework (ESMF). This strategic decision underscores KETRACO's unwavering commitment to responsible project development, with the ESMF serving as a guiding beacon toward a sustainable and socially inclusive energy future.

At its essence, the ESMF embodies KETRACO's dedication to mitigating environmental impact and fostering social well-being. It represents a structured approach, ensuring that KETRACO operations align with the principles of preservation, inclusivity, and ethical responsibility.

"An environmental compliant KETRACO substation."

KETRACO's progress in implementing the ESMF has been marked by tangible strides and a collaborative spirit. In a significant partnership with Power Africa, KETRACO orchestrated a Stakeholder Engagement Forum on February 27, 2024, at the Boma Hotel. This pivotal event brought together 60 participants, including representatives from sister sector companies and state agencies. The resounding applause that followed attested to the success of KETRACO's conscious efforts towards sustainability.

The forum served as a dynamic platform for disclosure, where KETRACO not only shared its commitment to the ESMF but also tapped into the extensive knowledge and experiences within Kenya's energy community. This collaboration has fortified KETRACO's journey towards a sustainable tomorrow, enhancing the depth and breadth of its sustainable practices.

As the ESMF nears its final stages, there is anticipation and hope for board approval by March 2024. This milestone marks a significant step in solidifying KETRACO's dedication to environmental and social responsibility. The resounding applause from stakeholders echoes their collective recognition and appreciation for KETRACO's strides towards sustainability. With the ESMF becoming an integral part of its ethos, KETRACO not only illuminates the path to a sustainable future but stands as a beacon for responsible energy development, forging a lasting and inclusive legacy for generations to come.

"At its essence, the ESMF embodies KETRACO's dedication to mitigating environmental impact and fostering social well-being."

MAINSTREAMING OCCUPATIONAL SAFETY AND HEALTH IN THE PUBLIC SECTOR NOW A REQUIREMENT – PS

By Winstone Audi

"Health And Safety in the workplace must be a fundamental right."

The Directorate of Occupational Safety and Health Services, Ministry of Labour and Social Protection, on 18th December 2023, held a one-day sensitization program on occupational safety and health (OSH) mainstreaming in the public sector, at Maanzoni Lodge, Machakos County.

The objective of the workshop was to familiarize participants with the provisions and regulations governing OSH and the responsibilities of persons in charge of OSH. It was attended by 65 representatives of Ministries, Departments and Agencies.(MDAs).

During the meeting, Occupational Safety and Health Management System Toolkit for the public sector was launched.

KETRACO was represented by Mr. Winstone Audi, the Company's OSH Focal Person. Mr. Winstone briefed the participants on how KETRACO was implementing its OSH management system.

Commissioner for Labour Ms. Hellen Apiyo represented Cabinet Secretary (CS), Ministry of Labour and Social Protection Ms. Florence Bore as Chief guest for the day. Ms. Apiyo also delivered a Speech from Principal Secretary (PS), State Department for Labour, and Skills Development.

In his speech, the PS noted that the Ministry was proud to have OSH focal persons appointed in every MDA. He said that productivity thrives in a safe working environment, adding that it always pays to invest in OSH.

Statistics, he said, indicated that every shilling invested in OSH yields four shillings in return, hence worth the investment.
The PS said that Kenya being a member of the International Labour Organization had relied on ILO conventions in crafting OSH laws and regulations. These include Employment Injury Benefits Convention, 1964 [Schedule I amended in 1980] (No. 121); Occupational Safety and Health Convention, 1981 (No. 155); Occupational Health Services Convention, 1985 (No. 161); Safety and Health in Construction Convention, 1988 (No. 167); Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187); and Violence and Harassment Convention, 2019 (No. 190).

In the 110th International Labour Conference on 10th June 2022, the Conference added safety and health to Fundamental Principles and Rights at Work, becoming the 5th category. The landmark decision meant that all ILO Member States committed to respect and promote the fundamental right to a safe and healthy working environment, whether they had ratified the relevant Conventions.

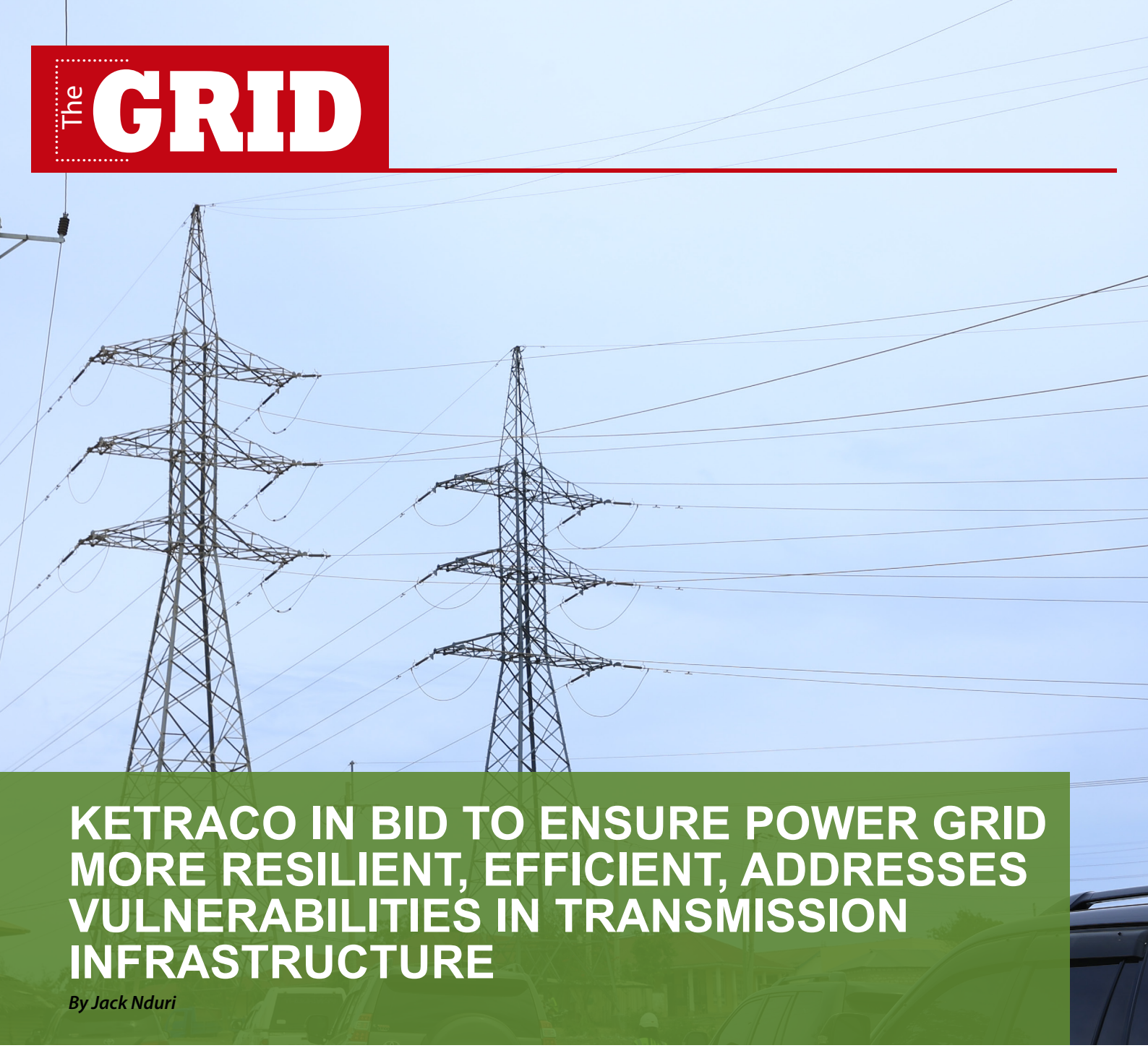
The other four Fundamental Principles and Rights at Work are Freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.

The Ministry of Labour therefore, the PS said, looks forward to MDA's having high productivity through improved OSH status, vibrant OSH committees and thousands of work hours with no lost time injuries.

Dr. Andrew Muruka, Director WIBA reminded participants that attachees and interns were considered employees under the Work Injury Benefits Act and organizations must ensure that they are covered in case they got injured out of and in the course of employment.
He also guided on how appeals could be made where employers and injured workers disputed the percentage of permanent disability awarded following medical examination carried out upon recovery following a disabling injury.

DOSHS will also require MDAs to complete a checklist to be submitted quarterly for purposes of monitoring progress in the implementation of OSHMS in their organizations.

KETRACO
Kenya Electricity Transmission Company Limited
"Stable Power Grid – Mfumo Thabiti wa Umeme"



KETRACO IN BID TO ENSURE POWER GRID MORE RESILIENT, EFFICIENT, ADDRESSES VULNERABILITIES IN TRANSMISSION INFRASTRUCTURE

By Jack Nduri

KETRACO is actively working on a comprehensive strategy to make its power grid more resilient and efficient by addressing vulnerabilities in its transmission infrastructure. The plan involves proactively tackling potential threats like Extreme Weather Events (EWEs), climate change impacts, terrorism, and other disruptions. To overcome acknowledged weaknesses in resilience and redundancy, KETRACO is connecting existing infrastructure with more Transmission Lines, aiming to create a network that is better prepared for natural disasters, climate-related issues, or deliberate actions. They are also incorporating advanced technologies like STATCOMs and shunt reactors to stabilize voltage and manage reactive power, improving overall grid stability.

Alongside infrastructure improvements, KETRACO is collaborating with industry partners such as KenGen and independent power producers to address challenges linked to renewable energy integration. Activities like deploying Battery Energy Storage Systems (BESS) help manage the intermittency of renewable sources, ensuring a steady and reliable power supply. Moreover, KETRACO has implemented security measures to protect against disruptions like flooding and cyberattacks. It's important to note that while disruptions remain potential challenges, the ongoing efforts to fortify and enhance the grid's resilience showcase KETRACO's commitment to continuous improvement in the face of evolving energy sector challenges.

KETRACO'S SYMPHONY: METALLIC TOWERS AND THEIR GREEN COMPANIONS DANCE TO THE BEAT OF SUSTAINABILITY!

By Winfred Mutinda

In the grand fabric of progress, each grey metallic tower that rises becomes a beacon of support for Kenya's socioeconomic structure.

However, what adds a touch of enchantment to this tale is the birth of multiple towering green woody comrades, breathing life into the very lungs of our planet.

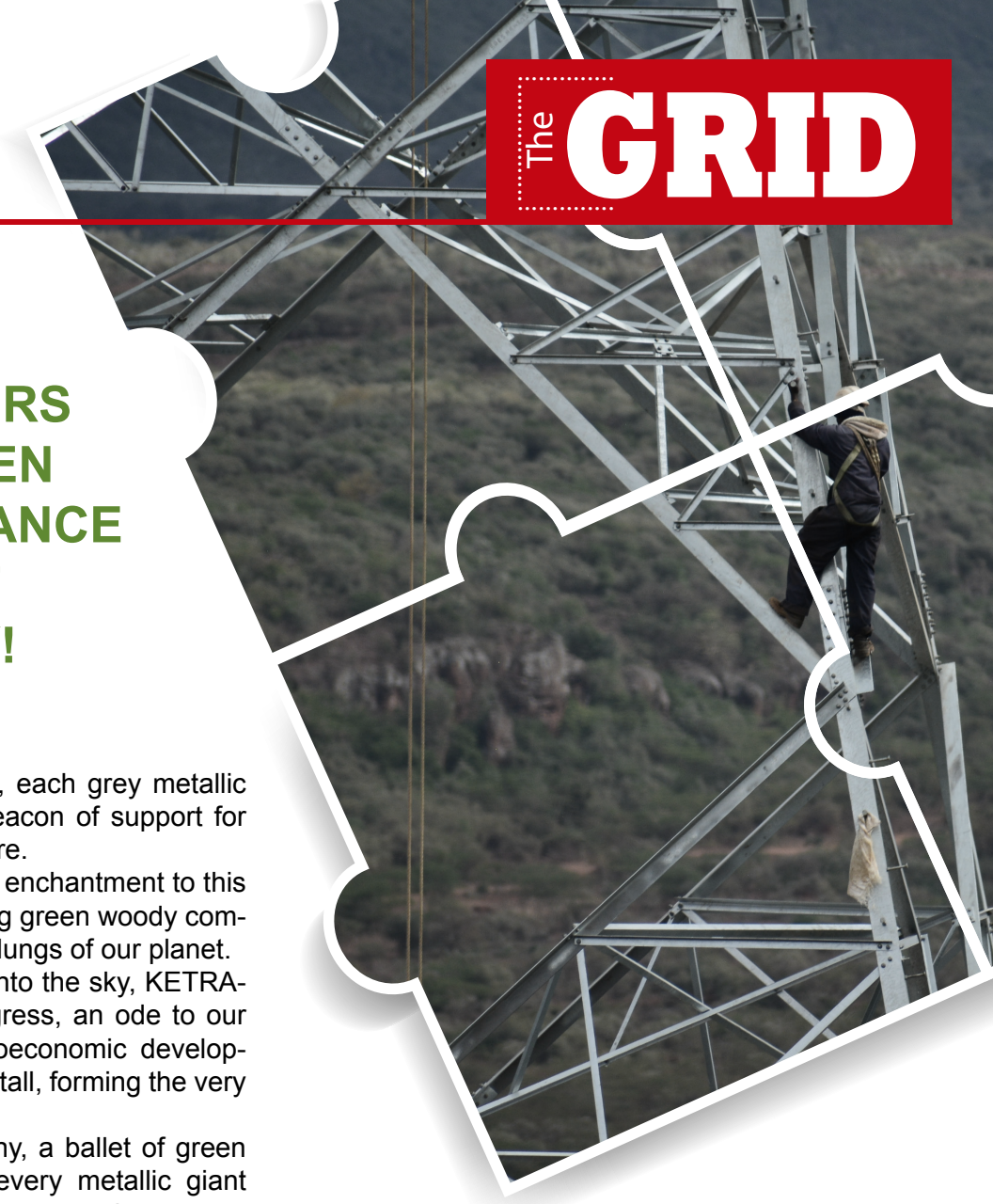
As each metallic tower ascends into the sky, KETRACO paints a vivid picture of progress, an ode to our unwavering commitment to socioeconomic development. These grey sentinels stand tall, forming the very framework of our growth.

Yet, amidst this metallic symphony, a ballet of green towers stealthily emerges. For every metallic giant asserting progress, multiple green comrades sprout, invigorating the planet's lungs. It's a delicate balance where infrastructural progress harmonizes with sustainability.

These towering green woody and leafy towers are not just a spectacle; they are the breath of life for our planet, enhancing its sequestration prowess. Each leaf, each branch, contributes to the well-being of planet Earth. KETRACO's commitment is intricately interwoven with sustainability.

As of now, KETRACO's green initiatives have successfully planted 134,950 trees across strategic locations, including Kabunda Forest, Mt. Elgon, Ontulili Forest, Kibwezi Forest, and Aberdare Forest, aiding in carbon sequestration efforts.

This eco-symphony is directed by the collective efforts of our directors, CEO, entire management, and staff, orchestrating a harmonious blend of progress and sustainability. As we aim to etch our names onto metallic members, let a leaf within the boundaries of this beloved nation be ascribed to each one of us, acknowledging our intentional stand for the environment.



"A KETRACO transmission tower paints a picture of progress, an unwavering commitment to the country's social eceonomic development."

As KETRACO continues to build, let the metallic towers rise, and let the green companion's flourish. In this symphony of progress and sustainability, we find a melody resonating with the heartbeat of our planet. Join us as we dance towards a future where each tower, gray or green, contributes to a harmonious and sustainable world.

KETRACO
Kenya Electricity Transmission Company Limited
"Stable Power Grid – Mfumo Thabiti wa Umeme"

THE ROLE OF SOCIAL SAFEGUARDS IN INFRASTRUCTURE DEVELOPMENT.

By Mildred Ogendo

Social safeguards policies are essential tools that prevent and mitigate undue harm to people during the development process.

They can also be described as policies, procedures and measures intended to prevent, reduce, mitigate, or compensate for intended negative impacts of development of a project.

When identifying and designing a project, safeguards should help assess the potential risks, (positive and negative), associated with intervention.

The principle of social safeguards is Avoid, Minimize, or mitigate. This means that when designing or conceptualizing a project or infrastructure development, the first instinct should be to avoid any harm to people.

If you can't avoid any harm to people, society and all that appertains to how people live, minimize the effect or impact that your development or project may have on the people in any geographical setting that the project is.

If you can't minimize any impact, then you must mitigate. More often, the mode of mitigation that is always preferred is compensation. Other mitigation measures include total resettlement including purchasing of land to resettle the affected families.

Compensation therefore is to ensure that the effect or impact that any project has on the people affected is bearable.

Role of social safeguards

The main objectives of social safeguards are to ensure that the communities and people, through with projects or infrastructure passes through are well sensitized through organized awareness initiatives including meetings, well informed about the project, especially the positives and negative impacts of the project,

It is also to ensure social safeguards are given opportunity to air their views regarding management of issues including grievances likely to occur during implementation of the projects,

-informed on the repercussions of the projects in their lives

- informed of the mitigation measures put in place to ensure restoration of livelihoods,

-informed about the timelines of the mitigation measures put in place as enshrined in the constitution including fair and prompt payment of compensations as part of mitigation measures

Often, the role of social safeguards is mistaken to clear the way for the contractor in any given project to work. One would argue that in a sense the overall objective is to have clearance for construction to continue, but the main objective is to ensure compliance with the best practices even as we build infrastructure. Best practices demand that all these activities as outlined above are carried out before the construction phase of the project.

Social safeguards experts can undertake these roles by using not only skills learned in institutions of higher learning, but by using subtle skills including skills that ensure they build trust amongst the people affected by projects. This is important for the buy-in of the projects. Other subtle skills include the ability to pick warning signs of hesitation to give out important significant information. These are skills acquired by experience and working with Projects Affected Persons over time.

It's important to give social safeguards experts time between the inception of the project before the construction phase begins. This coupled with proper resources allocation and facilitation will ensure the success of a given project.

> *"The principle of social safeguards is Avoid, Minimize, or mitigate. This means that when designing or conceptualizing a project or infrastructure development, the first instinct should be to avoid any harm to people."*

"Members of KETRACO Board of Duirectors during a safety induction at Olkaria Geothermal Power Plant"

The writer is Manager, Social Safeguards and Resettlement - KETRACO

"KETRACO MD Dr. Eng. John Mativo, being introduced to Ethiopian PM Abiy Ahmed by the Kenyan President H.E Dr. William Samoei Ruto."

"KETRACO and Kengen Staff during the Tree Planting Initiative collaborabion between the two companies at KAWI House."

"KETRACO MD Dr. Eng. John Mativo recieves a gift from Nation Media Group CEO Mr. Stephen Gitagama during a courtesy call to NMG offices at Nation Center."

"A group of engineers from Uganda Institute of Proessional Engineers (UIPE) during a visit to KETRACO'S Suswa HVDC onverter substation on Friday 22nd March 2024."

"KETRACO staff at the Holistic Wellness Day on Friday 24th May 2024."

"Kisumu Governor professor Anyang Ny'ongo (4th left) and County Commisioner Mr. Benson Leparmorijo (5th right) with KETRACO Directors during projects inspections visit to Kisumu."

KETRACO ENGAGES IN CRITICAL ENERGY DISCUSSIONS AT EASTERN AFRICA POWER POOL MEETING

By Eva Kibicho

Kenya Electricity Transmission Company Limited (KETRACO) recently played a pivotal role in shaping the future of energy cooperation in the Eastern Africa region.

The company actively participated in the Eastern Africa Power Pool Steering Committee and Council of Ministers meeting, held at Emara Hotel in Nairobi from 26th to 29th February 2024.

The event served as a crucial platform for stakeholders across the region to deliberate on key issues pertaining to energy integration, infrastructure development, and sustainable power supply.

With energy demand steadily rising across Eastern Africa, collaborative efforts and strategic initiatives are essential to ensure reliable and affordable electricity access for all citizens.

During the meetings, KETRACO highlighted its commitment to advancing regional energy goals through its expertise in transmission infrastructure and project management. As a leading player in Kenya's energy sector, KETRACO emphasized the importance of cross-border cooperation in enhancing grid reliability, promoting renewable energy integration, and fostering economic growth.

One of the highlights of KETRACO's engagement was its active involvement in discussions surrounding the development of interconnector projects aimed at facilitating power exchange among Eastern African countries. By linking national grids and promoting cross-border trade, these projects have the potential to unlock vast opportunities for energy access and economic development in the region.

Moreover, KETRACO reiterated its dedication to promoting sustainability and environmental stewardship in energy infrastructure projects. Recognizing the significance of renewable energy sources in addressing climate change and reducing carbon emissions, the company emphasized the need for collaborative efforts to harness the region's abundant renewable resources effectively.

The Eastern Africa Power Pool Steering Committee and Council of Ministers meeting provided a valuable platform for KETRACO to exchange insights, forge partnerships, and contribute to the collective effort towards a more integrated and resilient energy landscape in Eastern Africa. By fostering dialogue and cooperation among stakeholders, the event laid the groundwork for future collaborations that will drive progress and prosperity across the region.

Looking ahead, KETRACO remains committed to its role as a catalyst for positive change in the energy sector, both domestically and regionally. Through continued collaboration and innovation, the company aims to play a transformative role in advancing energy security, sustainability, and economic development across Eastern Africa.

KETRACO
Kenya Electricity Transmission Company Limited
"Stable Power Grid – Mfumo Thabiti wa Umeme"

FACT SHEET

Overview:
The Eastern Africa Power Pool (EAPP) is a regional organization established to facilitate the development, and integration of power infrastructure across Eastern Africa. Formed by member countries in 2005, EAPP aims to enhance energy security, promote sustainable development, and foster collaboration and trade in the power sector.

Member Countries:
Burundi, Democratic Republic of Congo, Djibouti, Egypt, Ethiopia, Kenya, Libya, Rwanda, Somalia, South Sudan, Sudan, Tanzania, and Uganda.

Objectives:
- Regional Integration: Foster cross-border electricity trade and cooperation in the planning, operation, and development of power infrastructure.
- Energy Security: Enhance the reliability and security of the electricity supply system through regional collaboration and resource sharing.
- Renewable Energy Development: Promote the utilization of renewable energy sources for sustainable power generation.
- Capacity Building: Facilitate knowledge exchange, capacity building, and skill development in the power sector across the region.

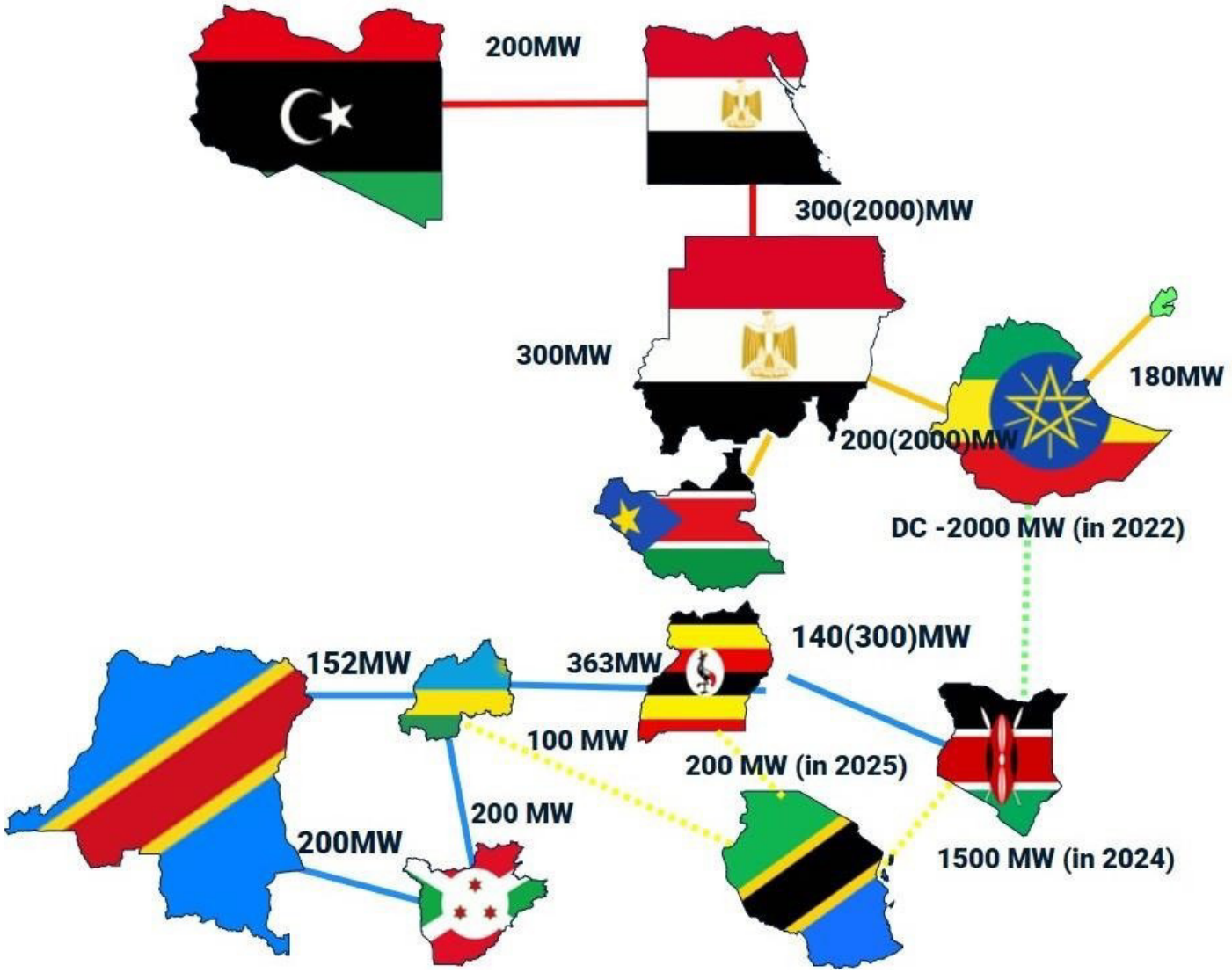
Key Achievements:
- Cross-border transmission projects and facilitation of financing to enhance regional connectivity. For instance, the Ethiopia-Kenya, Uganda-Rwanda, Kenya-Tanzania interconnections.
- Successful implementation of joint power projects, contributing to increased energy access.

Current Projects:
- Power system interconnection projects: Ongoing projects to strengthen the interconnection of national grids, promoting increased efficient power exchange.
- Development of Power Market: After running a successful Shadow Market where member countries simulated how the real power market would run, EAPP is now working to set up the interface for the day-ahead and intra-day market to be launched in 2025.

CURRENT EAPP INTERCONNECTION & TRADE

Eastern Africa Power Pool

Pool Energétique d'Afrique Orientale



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