

THE

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ENERGY

POST

KenGen's Place
in the Eastern
Africa Power
Pool and
Beyond

KenGen
Green
Energy
Park

Geothermal
Treasure

KenGen Scholarship
Changing Lives



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A Word from the Managing Director and CEO



Eng. Peter Njenga, Managing Director and CEO



Each story in this newsletter is a testament to our unwavering commitment to innovation, sustainability, and inclusive growth.



Dear Readers,

As we unveil the third edition of *The Energy Post*, we do so at a pivotal moment in our company's—and our nation's—energy journey. Today, the demand for sustainable, resilient, and inclusive energy solutions has never been greater. I am proud to affirm that KenGen stands at the forefront of this global transition, leading with innovation, operational excellence, and an unwavering commitment to shaping a secure energy future.

KenGen's strategic investments in renewable energy technologies, from geothermal and hydro to wind, directly support Kenya's ambition to achieve a low-carbon economy in line with our national development goals and global climate commitments. Our operations are not just about generating megawatts; they are about creating long-term value for

communities, protecting our environment, and building a foundation for shared prosperity.

This edition of *The Energy Post* captures the spirit of transformation that drives us: stories of ingenuity from our geothermal fields, milestones in expanding our clean energy portfolio, and our continued dedication to empowering communities across the country. Each initiative featured here reinforces KenGen's policy mandate to deliver sustainable, affordable, and reliable energy for all.

As you explore these pages, I invite you to reflect on the broader impact of our work—how each project, innovation, and partnership contributes to Kenya's energy security and to a greener, more resilient future for generations to come.

Together, we are not only powering the nation; we are shaping its destiny.

Message from the Editorial Director



“You’ll find this issue rich with ideas, voices, and aspirations from across the energy ecosystem. Whether it’s pioneering innovations, bold sustainability.”



**Ronoh Kibet, General Manager,
Commercial Services**

Dear Readers,

Welcome to a new chapter of *The Energy Post*, where stories come alive with energy, insight, and ambition. In this edition, we invite you to see beyond the numbers and kilowatts—to the heart of what truly drives our work: a belief in a cleaner, more sustainable tomorrow.

You will find this issue rich with ideas, voices, and aspirations from across the energy ecosystem. Whether it is pioneering

innovations, bold sustainability actions, or reflections on the journey ahead, these pages are filled with purpose and perspective. It’s a mosaic of progress told through the eyes of our people and partners—each piece a spark in the greater mission of powering the nation responsibly.

Our role as storytellers is not just to inform, but to inspire. We hope this edition encourages you to think deeper, engage more, and perhaps even contribute your own voice in shaping the energy conversation.

Enjoy the read—and the energy within.

Message from the Editor

Dear Readers,

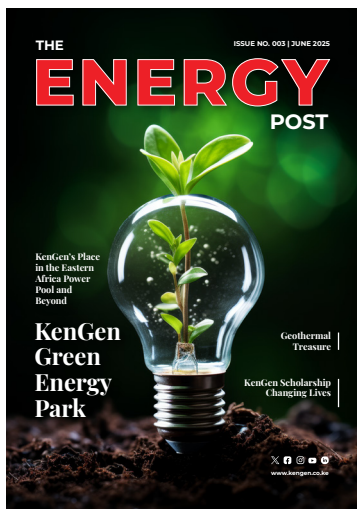
Welcome to the third edition of *The Energy Post* - a publication that seeks to illuminate the evolving dynamics of energy not just in Kenya, but across Africa and the global stage. As Editor, I am deeply honoured to present this issue at a time when the world is undergoing a seismic shift in how it produces, consumes, and perceives energy. Nowhere in our history have we seen the kind of debate and discourse we are having today on energy.

This edition is a narrative of bold ambitions and tireless effort, of communities coming together, policymakers responding with urgency, and technologists rewriting what is possible. Most of all, it is about the power of energy to transform lives.

Across continents, the global energy transition is gathering momentum. From the European Green Deal to the Inflation Reduction Act in the United States, from Asia's scaling of battery storage and solar farms to Africa's bold moves in geothermal and cross-border integration – we are staring at history in the making, we are part of history. Energy is no longer just about megawatts, it is about equity, opportunity, and climate justice.

In this edition, we take you deep into Kenya's heart of geothermal excellence at Olkaria, where KenGen is anchoring a model of green industrialization through its Green Energy Park. We explore how nuclear energy is emerging as a strategic pathway for African nations, with Kenya poised to be a regional pioneer. From solar mini grids lighting up villages like Balesa to women engineers breaking ground in deep earth drilling, each story in this edition is a testament to progress powered by purpose.

But we also look beyond borders, to the lithium supply chain wars, to artificial intelligence revolutionising grid resilience in IDA nations, to Germany's partnerships in Olkaria, and to how the



world's youth are reshaping climate diplomacy.

Here at home, we take pride in KenGen's strategic G2G 2024–2034 plan, aimed at accelerating Kenya's journey to a low-carbon economy. We are proud of the recognition KenGen and its people continue to receive on international stages, reaffirming our role not just as a power producer, but as a thought leader.

As you read through these pages, may you be inspired by the voices of visionaries, innovators, and everyday heroes working to ensure that no one is left behind in the energy transition. Our hope is that this edition will challenge you to think differently, dream bigger, and act more boldly, whether you are a policymaker, investor, engineer, student, or simply a curious mind.

My friends, the journey to a just, inclusive, and sustainable energy future is not a sprint, it is a marathon paved by courageous steps. At *The Energy Post*, we are committed to walking that journey with you, one edition at a time.

Thank you for your continued readership and trust. Keep sending us your stories for publication and also share with us ideas to help us improve for the good of Kenyans and Africans as a people.

With energy and purpose.



Frank D. Ochieng,
Manager, Marketing
and Corporate
Communication



“This edition is a narrative of bold ambitions and tireless effort, of communities coming together, policymakers responding with urgency, and technologists rewriting what is possible. Most of all, it is about the power of energy to transform lives.”

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Africa's Green Industrialisation taking shape in Olkaria: KenGen Green Energy Park

By Paul Kimanzi, Principal Officer, Communication

“The Green Energy Park is not just about power—it is about possibility. This is where cutting-edge industries, from AI-driven data centers to electric mobility, will converge with sustainable energy solutions to shape the future. We are building an ecosystem where innovation thrives on clean, reliable, and affordable power.” Eng. Peter Njenga.

Step into the future of industry, where clean energy fuels innovation and sustainability leads the charge. KenGen's Green Energy Park in the heart of Naivasha, Olkaria, is not just a hub; it is a revolution, setting a global standard for how green energy powers manufacturing, digital infrastructure, and beyond.

The Green Energy Park sits within the newly designated Olkaria Special Economic Zone (SEZ), a status that cements its place as a premier destination for investors seeking cost-effective, reliable, and clean power solutions. The government's move to declare Olkaria an SEZ signals Kenya's dedication to accelerating industrialisation, job creation, and economic transformation. Covering approximately 8,292 acres, this space is set to become a haven for industries ranging from agro-processing and textiles to high-tech data centres and electric mobility production. With tax incentives, world-class infrastructure, and access to one of the world's most reliable sources of renewable energy, Olkaria is primed to attract investors seeking an operational environment that aligns with global sustainability standards.

FACTS ABOUT THE GREEN PARK



Area it Covers

KenGen Green Energy Park
Covers Approximately 4,510 acres.



Concept

A Billion \$ green data centre
campus that will run entirely on
clean geothermal energy.



Partnerships and Collaborations

KenGen, Microsoft, G42,
Konza Technopolis Development,
Authority (KoTDA)



Results

AI driven innovation
Digital transformation
Long Term Sustainability and Cost
Efficiency for Businesses



“KenGen Green Energy Park is a master class of eco-friendly design and cutting-edge technology. Here, the latest advancement in geothermal comes together to create a thriving ecosystem that is efficient and sustainable. We are onboarding partners who believe in this ideology and doing business responsibly while preserving our planet.” Ronoh Kibet.



754MW

Access to 754MW KenGen's Olkaria geothermal power.



100%

Opportunity to operate on 100% clean cost effective energy.



CO₂

Reduce carbon footprint and lower operational costs.

What sets the Green Energy Park apart is its access to geothermal power—one of the most reliable and sustainable energy sources available today. Olkaria is home to KenGen's geothermal power plants, which collectively generate 754 MW of electricity. This renewable energy resource is not only abundant but also cost-effective, offering industries within the park a rare opportunity to operate on 100% clean energy. The implications of this are enormous. Businesses looking to reduce their carbon footprint, comply with global sustainability regulations, and lower operational costs will find Olkaria to be a perfect fit. With the global transition to net-zero operations, this initiative places Kenya at the forefront of green industrialisation, showcasing how sustainable practices can drive economic growth without compromising environmental integrity.

One of the most exciting developments within the Green Energy Park is the

partnership between KenGen, Microsoft, and G42, a leading artificial intelligence and cloud computing company from the UAE. This collaboration will see the establishment of a \$1 billion green data centre campus that will run entirely on geothermal energy. This initiative, which was cemented during President William Ruto's state visit to the United States, will play a transformative role in the digital landscape of East Africa. The upcoming data centre campus will be the cornerstone of the East Africa Cloud Region, offering Microsoft Azure cloud services and ushering in a new era of AI-driven innovation and digital transformation. This ambitious project underscores the role of clean energy in driving Africa's digital future, ensuring that businesses and governments can harness the power of cloud computing in a sustainable and cost-efficient manner.

As KenGen's Managing Director and

CEO Eng. Peter Njenga, aptly puts it: “The Green Energy Park is not just about power—it is about possibility. This is where cutting-edge industries, from AI-driven data centres to electric mobility, will converge with sustainable energy solutions to shape the future. We are building an ecosystem where innovation thrives on clean, reliable, and affordable power.”

Eng. Njenga states, “Our Green Energy Park represents a transformative shift in Kenya's approach to industrial development. By integrating clean energy solutions into manufacturing and industrial operations, we are not only reducing carbon emissions but also ensuring long-term sustainability and cost efficiency for businesses.”

This strategic advantage is further amplified by Olkaria's prime location. With world-class infrastructure, seamless access to transport corridors, and a steady supply of clean energy,

industries setting up in the Green Energy Park gain an unmatched operational edge.

Eng. Njenga says, “Olkaria is not just rich in geothermal energy—it is strategically positioned at the heart of Kenya’s industrial future. With world-class infrastructure, direct access to clean power, and proximity to major transport corridors, our Green Energy Park is designed to be a powerhouse for industries looking to expand into Africa and beyond.”

The Green Energy Park is not just about digital infrastructure; it is a vibrant ecosystem designed to support a wide array of industries. Investors are already eyeing opportunities in agro-processing, textiles, and electric mobility, drawn by the promise of low-cost, uninterrupted, and eco-friendly power.

With the global demand for sustainably sourced products on the rise, businesses operating within the park will have a competitive edge in accessing both local and international markets. Companies looking to establish manufacturing plants can do so with the assurance of steady power supply, tax incentives, and proximity to key transport corridors, including the Standard Gauge Railway (SGR) and the Nairobi-Mombasa Highway. KenGen’s vision for the Green Energy Park extends beyond industrialisation—it is about creating a holistic environment where businesses, technology, and sustainability converge. The park’s master plan includes office spaces, research and development centers, hospitality facilities, and a visitor experience center, making it a dynamic space for collaboration and innovation.

The inclusion of research hubs will provide a platform for academia and industry experts to explore advancements in renewable energy, clean manufacturing, and sustainable urban planning. It is a space designed not just for businesses but for thought leaders and changemakers looking to shape the future of sustainable development.

The journey to realising this ambitious project has been years in the making. It

began with KenGen’s vision to harness the abundant geothermal resources in Olkaria to power industries. The first step was taken in August 2023 when KenGen, in collaboration with Konza Technopolis Development Authority (KoTDA), broke ground on the park, setting in motion the creation of an environment where industries could



“The Green Energy Park is not just about digital infrastructure; it is a vibrant ecosystem designed to support a wide array of industries.”

operate with minimal environmental impact.

Since then, interest from global investors has surged, with major corporations looking to set up operations within the park. With the continued backing of the Kenyan government, private sector stakeholders, and international

partners, the Green Energy Park is steadily transforming from an ambitious idea into a thriving reality.

For startups and entrepreneurs, the park offers a unique opportunity to be part of a forward-thinking ecosystem.

Recognising that young businesses play a crucial role in driving innovation, KenGen has designed the park to support startups looking to integrate clean energy into their operations. The availability of affordable power means that small enterprises can scale up without the heavy burden of high energy costs, allowing them to focus on product development, innovation, and market expansion. This is particularly significant for tech startups, manufacturing firms, and businesses in the electric mobility sector, which require reliable energy sources to thrive.

This dedication is further exemplified by KenGen’s recently unveiled G2G Corporate 2024–2034 Strategic Plan, a bold 10-year Plan aimed at accelerating Kenya’s transition to a green energy future. Under this ambitious strategy, KenGen plans to add an additional 1,500 MW of renewable energy to the national grid, with 840 MW sourced from geothermal power. This initiative not only underscores KenGen’s role as a leader in renewable energy but also aligns seamlessly with the objectives of the Green Energy Park, providing industries within the park with access to reliable, sustainable, and cost-effective power.

By harnessing Kenya’s abundant geothermal resources, KenGen is paving the way for a future where industrial growth and environmental stewardship go hand in hand, fostering economic transformation while mitigating the impacts of climate change.

As the sun rises over the steaming vents of Olkaria, it illuminates a vision that is bold, green, and limitless. The Green Energy Park is more than a project; it is a legacy in the making. Join us in this journey, and together, let’s power the future with the energy of the earth. ■

Powering Forward: Lessons from 2024 and What to Expect in 2025

By George Aluru, CEO Electricity Sector Association of Kenya (ESAK)

As is customary, I took some time to reflect on 2024 and highlight what to look forward to in the electricity sector in 2025. This year, I review the sector from the perspective of where we stand, areas for improvement, and what to expect in the year ahead.

Where We Stand

The year 2024 witnessed a continued rise in electricity demand in Kenya, peaking at 2,288 MW, while installed capacity held steady at 3,300 MW. Favourable hydrology conditions saw hydropower perform well overall. However, despite this, the reserve margin dropped to as low as 5%, underscoring the need for additional capacity. The year also saw four partial national blackouts, with parts of the grid staying online. These outages were driven by inadequacies in transmission, reactive power compensation at critical grid points, and challenges in synchronizing the Kenya-Tanzania interconnection. Improving grid infrastructure remains a pressing need.

Demand continues to grow by 100 to 140 MW annually, with higher growth anticipated if grid bottlenecks are resolved. The captive power market is expanding, now at 530 MW—equivalent to 16% of grid-based generation. Consumers remain focused on lower electricity prices and improved supply quality.

Every Kenyan associates electricity with KPLC, making it a good place to start. The utility reported significant improvements in profitability, driven by the higher approved retail tariff and the stabilisation of the Kenya shilling, which boosted overall sales. The long-overdue tariff correction helped reverse losses that were bleeding the

utility. However, challenges persist, particularly in reducing system losses and improving the speed of connecting new consumers who have already paid for connections. Addressing these issues could lead to financial gains for KPLC, which EPRA could then leverage to reduce consumer tariffs.

This year saw the commissioning of the Kimuka substation on the Nairobi Ring, which immediately increased peak demand—a clear sign of suppressed demand potential. Overloaded transmission lines into Nairobi and Western Kenya remain a challenge, necessitating focused investments in the transmission system.

The uprating of Mariakani substation is progressing, though bottlenecks persist. It will be interesting to observe how demand behaves once these projects are fully operational. Kenya urgently needs investments in transmission, with KETRACO estimating an annual requirement of USD 250 million over the next 20 years. The controversial Adani transmission deal dragged KETRACO into the spotlight before being cancelled by the president. While public-private partnership (PPP) deals under the Privately Initiated Proposal (PIP) process face suspicion, there's no doubt that Kenya needs private investment in transmission. The challenge lies in getting the process right—ensuring transparency and competition.

I sympathise with professionals in the sector who get these deals forced on them. Interference from higher-ups often leads to public repudiation and misdirected criticism, disarming the very people tasked with addressing sector challenges. This distraction must end, *inshallah*.

Regionally, the Kenya-Tanzania

2024 HIGHLIGHTS



2,288 MW

Peak power demand at 2,288 MW, while installed capacity held steady at 3,300 MW.



5%

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4

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100 - 140MW

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16%

The captive power market is expanding, now at 530 MW—equivalent to 16% of grid-based generation.

interconnection finally went live, synchronising Kenya, Tanzania, Uganda, Rwanda, and Burundi. This milestone opens up opportunities for trade, grid integration, and mutual support, furthering the East African Power Pool (EAPP) ambitions.

Generation Developments

On the generation front, the biggest issue remains the moratorium on new PPAs imposed by the national assembly. This is likely to be lifted in early 2025, though under certain conditions—a mixed bag of opportunities and concerns.

One positive proposal is the introduction of competitive auctions

SOME OF THE 2025 EXPECTATIONS IN KENYA'S ENERGY SECTOR



Lifting of PPA Moratorium

The ban on new power purchase agreements is likely to be lifted under stricter conditions, opening room for new projects.



Competitive Auctions

Kenya plans to introduce competitive auctions for power generation, aiming to lower electricity costs through better price discovery.



Transmission Investment

Massive investment in transmission infrastructure is expected, with a need of about USD 250 million annually and potential for PPP involvement.



Regional Power Trade

With the Kenya-Tanzania grid interconnection live, increased regional electricity trade and integration within EAPP is anticipated.



New Geothermal and Imports

133 MW from geothermal projects and regional imports from Ethiopia and Uganda will help meet growing demand.



Policy and Structural Reforms

Key reforms include net metering, open access, tariff structure adjustments, and clearer roles for KPLC and EPRA.

for generation. This approach will allow for price discovery, attracting bidders and leading to lower prices over time. However, organising a well-designed auction process requires a dedicated office involving multiple stakeholders, including the treasury, state law office, regulator, and the Ministry of Energy. Proper operationalisation will take more than six months.

Conversely, the proposal for national assembly approval of PPAs and tariffs set by EPRA is concerning. This could drag the sector backwards. The national assembly's role is oversight, not operational involvement in specialised areas like energy regulation.

Parliament should focus on legislation that shields the regulator from interference and exercise its oversight through summons and lobbying for executive accountability. EPRA, ranked among Africa's top three regulators, has consistently acted in the best interests of consumers, utilities, and investors.

No new generation capacity came online in 2024, but three geothermal projects totalling 133 MW are under construction. The Ethiopia interconnection offers an additional 200 MW, with Uganda's 500 MW excess and potential future supply from Tanzania's Julius Nyerere Dam. Regional collaboration will be crucial for Kenya's medium-term generation sufficiency as demand continues to

grow.

Sector Structure and Policy

The sector is now at an inflection point. Key decisions need to be made regarding feed-in tariffs for smaller projects, auctions for renewable capacity (excluding geothermal), prioritising geothermal for baseload, expanding or curtailing captive power developments, operationalising net metering, safeguarding distributor revenues, and enacting open access policies.

Challenges from the past—such as transitioning feed-in tariff projects, transferring KPLC's transmission assets to KETRACO, instituting an independent system operator, and balancing national energy security with regional dependence—still hold the sector back.

The appointment of a new cabinet secretary for energy in the aftermath of the "Gen Z protests" is a breath of fresh air. The youth-led push for transparency and good governance is a positive development for the sector.

Opportunities for Improvement

On market reforms, there is room to accommodate various business models while protecting KPLC's obligations. Defining non-contestable customers with a time limit—similar to Namibia—could grant KPLC temporary exclusivity. Contestable customers

and new connections could form the basis for a national day-ahead market or wheeling arrangements under the EAPP. Net metering presents KPLC with opportunities for arbitrage and profit maximisation. Future capacity requirements could be addressed through well-designed auctions, prioritising stalled feed-in tariff projects.

Our utilities must embrace competition and think regionally. KenGen, with its wealth of expertise in geothermal and hydropower, should consider owning power plants across Africa. KPLC's experience managing a large grid could position it to bid for concessions in neighbouring countries.

Just as the private sector expanded into Uganda, Malawi, and Zambia, our utilities must look beyond Kenya's borders. The entry of West African banks into Kenya spurred local banks to expand regionally. A similar awakening could unlock significant potential for our utilities.

In transmission, closing the Africa 50 transmission project is critical. Learnings from this project can serve as a foundation for competitive tendering, attracting local pension schemes and funds to invest in transmission infrastructure. Annuity arrangements could be of interest to pension funds, creating a win-win scenario for the sector and investors alike.



William D. Magwood, IV,
OECD Nuclear Energy Agency
(NEA) Director General

Nuclear Energy in Africa: Kenya Can Be Africa's Pathfinder

By Emmanuel Wandera, Assistant Manager, External Communication and Media Relations

"Africa will have 25% of all humanity by 2050," Magwood notes, emphasising why the continent's energy future isn't just a regional concern but a global imperative. "If you have those kinds of numbers and you don't see development, it's going to be really a very difficult situation for the whole world. We can't let that happen."

In an exclusive interview with The Energy Post Magazine, William Magwood, the OECD Nuclear Energy Agency (NEA) Director General, offered valuable insights into nuclear energy in Africa and Kenya. With a particular focus on Kenya's journey, the OECD-NEA Chief highlights why cooperation and a diverse energy mix is the sure pathway to Africa's energy security and boosting electricity access in the continent by 2050. He tells *The Energy Post* that nuclear energy is a global enterprise and unique due to its global interdependence.

OECD-NEA Chief Sees Promise and Partnership in Kenya's Nuclear Ambitions. In the heart of Nairobi, where East Africa's tech hub meets its energy aspirations, William Magwood, Director General of the OECD Nuclear Energy Agency (NEA), shares a vision of nuclear cooperation that could reshape the continent's energy landscape. With a Coca-Cola in hand – his caffeine of choice since childhood – Magwood speaks with the clarity of someone who has spent decades navigating the complex world of nuclear energy policy. When asked is there hope for Africa towards meeting the energy access target by 2050? He answered.

"Africa will have 25% of all humanity by 2050," Magwood notes, emphasising why the continent's energy future isn't just a regional concern but a global imperative. "If you have those kinds of numbers and you don't see development, it's going to be really a very difficult situation for the whole world. We can't let that happen."

Kenya's Methodical March to Nuclear Energy

Kenya's approach to nuclear energy development has particularly impressed the former U.S. Nuclear Regulatory Commissioner. Kenya's nuclear power programme journey started fifteen years ago when the National Social Economic Council (NESC) in 2010 recommended that Kenya add 4000 MW nuclear energy in the country's energy mix. This was to bolster the realisation of the country's vision 2030 that identified energy as an enabler. Kenya hit the ground running by establishing the Nuclear Electricity Project Committee (NEPC)

under the ministry of energy, which later transformed Kenya Nuclear Electricity Board (KNEB) and to currently Nuclear Power and Energy Agency (NuPEA).

Kenya's nuclear development follows the international standards set by the International Atomic Energy Agency (IAEA), dubbed "IAEA Milestone approach", that identifies nineteen nuclear infrastructure issues that a country must develop to be able to generate nuclear energy. The



"I was super impressed," he says of KenGen's geothermal operations. "KenGen has the right kind of discipline and the right mindset that can be translated really nicely into a nuclear environment."

IAEA Milestones Approach is an internationally accepted methodology that supports a sound development process for a new nuclear power programme, enabling a country to understand and prepare for the commitments and obligations associated with developing a safe, secure and sustainable nuclear power programme. Countries that already have nuclear power can use the Milestones Approach to assess their preparedness for expansion of the installed capacity. So far, Kenya has established a regulatory framework, identified nuclear sites for the construction of the power plant, training of Kenyans to operate Kenya's nuclear power plants, preparing local industries to meet the nuclear

supply requirements, rolled out public awareness campaign, ratified Nuclear International treaties and instruments, and conducted prefeasibility and feasibility studies for the country's program.

With all this, Energy Post asked William of his thoughts about Kenya's nuclear power programme journey thus far, especially regarding Human Resources development.

"Kenya has gone about this in a very good way," Magwood observes, pointing to the country's 12-year journey in building nuclear expertise. Rather than rushing to put out requests for proposals, Kenya has invested in training and developing governmental and regulatory capabilities. This methodical approach began with sending students to institutions like Texas A&M University as far back as 2012. "It would have been very easy for Kenya at that time to decide, that someone come to build a nuclear plant for Kenya," Magwood reflects. "But they didn't do that. The country spent the last 12 years building skills within the government and establishment of a nuclear regulator."

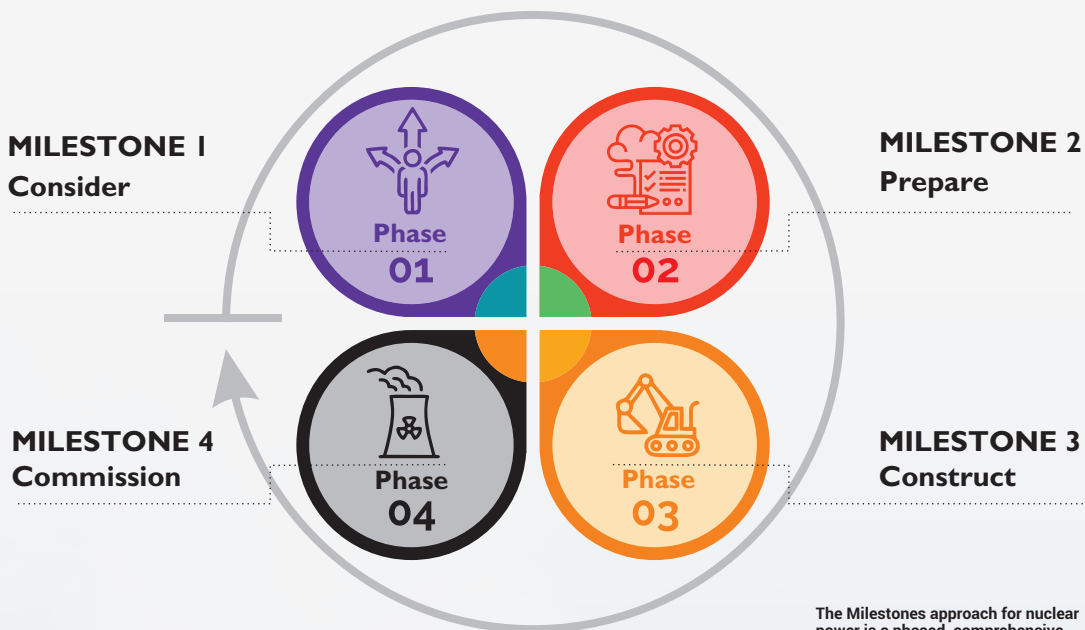
The Role of KenGen in Nuclear Energy Development

During his visit to Kenya Electricity Generating Company Plc (KenGen), Olkaria Geothermal fields, Magwood found promising signs of the technical expertise needed for nuclear operations. He was taken through the geothermal power plants, geothermal steam field and drilling sites where he got the full glimpse of KenGen Geothermal operations. "I was super impressed," he says of KenGen's geothermal operations. "KenGen has the right kind of discipline and the right mindset that can be translated really nicely into a nuclear environment." However, he warns that there is a need to balance optimism with realism: "You have to have a lot of humility and unparalleled commitment to the challenge ahead. Building a nuclear program is not a trivial matter that requires more effort and serious commitment."

Nuclear Energy is a Global Enterprise

Magwood emphasises that nuclear energy development is not just about

INTRODUCING NUCLEAR POWER



The Milestones approach for nuclear power is a phased, comprehensive method to assist countries that are considering or planning their first nuclear power plant.
(Image: IAEA)

building power plants but it's about joining a global community. Once a country goes nuclear, it ceases to be a local matter but an international affair under the watch dog of International Atomic Energy Agency that promotes Atoms for peace and development. "Nuclear is a global enterprise, and no one can escape that," he explains. "If a country has a big problem, it spreads to everybody else. And so, there is an inner connection, an inner reliance, that is very powerful in the nuclear sector."

This global interdependence has led to the NEA's launch of a new initiative called "Our Common Journey," aimed at maximizing the economic development potential of nuclear programs in Africa. The initiative focuses on building cooperation both within Africa and between African organisations and OECD institutions.

Three Critical Challenges

When asked about the key challenges facing Kenya's nuclear ambitions, Magwood outlines three critical areas, citing that it is not unique to Kenya but to all nuclear power countries:

- **Financing:** "Everybody worries about financing," he says, noting this concern spans countries of all sizes and economic standings; thus, it is not unique to Kenya. But there are many options of how countries can finance their nuclear power programmes.
- **Supply Value Chain:** "The industrial supply chain does not exist today to do what everybody is talking about," he warns, highlighting a global challenge. Kenya is working hard to build its local industries towards being part of the nuclear supply value chain.
- **Human Resource:** The need for skilled personnel remains a crucial concern. "You can't run a nuclear program with a few dozen smart people in the government," Magwood emphasises. "You need hundreds of smart people."

Looking Ahead

As Kenya prepares to host the U.S.-Africa Nuclear Summit, Magwood sees an opportunity for greater cooperation. The NEA is working to include Kenya

as an "invitee state," which would allow Kenyan experts to participate in NEA meetings and activities more regularly.

"If all African countries tried to solve all the problems all by themselves, this would set things back a long, long time," Magwood cautions. "It would be much more expensive, and the risk of failure would be much, much higher."

The path to nuclear energy in Africa, while challenging, represents more than just power generation. As Magwood puts it, "Nuclear isn't just about getting electricity. Nuclear is about building skills and capacity." In this light, Kenya's methodical approach might just serve as a model for other African nations looking to develop their nuclear capabilities.

For the NEA chief, the future presents two possibilities: "The world has two choices before it. It either will be more divided than it is now, or it will be more together than it is now." Through initiatives like Our Common Journey, Magwood is betting on togetherness – and Kenya might just help lead the way.

KenGen's Resilient Growth: Powering Kenya's Energy Future with Efficiency and Innovation



By Emmanuel Wandera, Assist. Manager, External Communication and Media Relations

Kenya Electricity Generating Company (KenGen) is proving that resilience, innovation, and strategic efficiency are the cornerstones of a thriving energy sector. As the company navigates the evolving landscape of renewable energy, it continues to achieve remarkable financial and operational milestones, reinforcing its position as East Africa's leading power producer.

At the heart of this success is a focused approach to cost optimisation and operational efficiency, a strategy that has propelled KenGen to an impressive 79% growth in profit after tax for the six months ending December 31, 2024. This achievement, alongside a robust balance sheet, underscores the company's commitment to delivering value to shareholders while powering Kenya's green energy future.

For KenGen's Managing Director and CEO, Eng. Peter Njenga, this performance reflects more than just numbers; it signals a company on a transformational journey.

"This performance is a testament to KenGen's financial discipline and strategic focus on efficiency," he explains. "We are optimizing our assets, streamlining operations, and leveraging our leadership in renewable energy to drive long-term value for our shareholders and the country."

KenGen's financial strength is evident. With a net profit increase to Ksh.

5.30 billion from Ksh. 2.96 billion in the previous period, the company is demonstrating how disciplined cost management and innovation can yield tangible results. Operating profit saw a significant jump of 49.4%, reaching Ksh. 6.65 billion, supported by a 13.7% reduction in operating expenses. Meanwhile, revenues remained stable at Ksh. 27.5 billion, reinforcing KenGen's ability to maintain steady growth despite market fluctuations.

Beyond financial gains, KenGen continues to power Kenya's renewable energy ambitions. During the half-year period, the company supplied 4,291 GWh of electricity, marking an increase from the previous period. This growth was primarily driven by improved hydrology and enhanced performance across its generation fleet. With a strong foundation in geothermal, hydro, and solar energy, KenGen is playing a pivotal role in ensuring Kenya's energy remains both sustainable and reliable.

Looking ahead, KenGen is aligning its long-term vision with Kenya's green energy transition. Under the G2G 2034 Strategy, the company is embarking on an ambitious plan to expand its renewable energy portfolio. Between 2025 and 2027, KenGen aims to add 194.4 MW of installed capacity across geothermal, hydro, and solar projects. Additionally, a 100 MWh battery energy storage system is in the pipeline, designed to enhance grid stability and reliability. The company's strong financial performance also comes with

a strategic focus on reinvestment. While the Board has opted not to declare an interim dividend for this period, the decision reflects KenGen's long-term growth priorities. By channeling resources into expanding its clean energy footprint, the company is reinforcing its commitment to a future powered by sustainability.

KenGen's journey is not just about numbers; it's about impact. As the company continues to strengthen its renewable energy leadership, its role in shaping Kenya's energy future remains undeniable. With a resilient business model, innovative strategies, and a commitment to operational excellence, KenGen is well-positioned to drive Kenya's transition to a low-carbon future.

"We are driving the future of energy in Kenya," says Eng. Njenga. "Our commitment to operational excellence and innovation ensures that Kenyans will continue to benefit from reliable and affordable electricity for years to come."

From the boardrooms to the power plants, KenGen's vision is clear: a sustainable energy future, powered by efficiency, innovation, and unwavering commitment to Kenya's growth.

As the company continues to chart new frontiers in renewable energy, one thing is certain; the future of Kenya's power sector is in capable hands.

Key Highlights of KenGen's Half-Year Results (HY2024)



8.4%



Net Revenue: Increased by 8.4% to Ksh 24.7 billion.



79%



Profit After Tax: Increased by 79%



7%



Hydro-Generation: Boosted by 7% due to favorable hydrology.



3.5%



Thermal Generation: Decreased by 3.5% due to reliance on hydro power.



0.3%



Electricity Units Generated: Slightly increased by 0.3% to 4,211 GWhs.



2,170.56 MW



National Electricity Demand: Peaked at 2,170.56 MW in December 2023.



16%



Operating Expenses: Increased by 16.4% due to higher plant operating and maintenance costs.



78%



Earnings per Share (EPS): Surged by 78% to Ksh 0.80

Energy Cooperation: KenGen's Place in the Eastern Africa Power Pool and Beyond

By George Aluru, CEO Electricity Sector Association of Kenya (ESAK)



"In early 2025, the EAPP will launch a day-ahead market, with final preparatory meetings held in December 2024 in Mombasa. This long-anticipated move marks a new chapter in the regional electricity trade. Currently, power trade occurs through bilateral contracts and exchanges between national utilities. The day-ahead market will enable short-term contracts, allowing electricity to be traded within a 24-hour window."

770M

23 countries boasts a population of 770 million.

120 GW

A growing demand for electricity currently at 120 GW,

130 GW

Installed capacity stands at 130 GW.

The 13 countries of the Eastern Africa Power Pool (EAPP) are steadily progressing toward their goal of regional power integration. This initiative will facilitate cross-border electricity trade from Libya in the Northeast to Tanzania in the Southeast and connect to the Southern Africa Power Pool (SAPP).

The combined market of 23 countries boasts a population of 770 million, with a growing demand for electricity currently at 120 GW, while installed capacity stands at 130 GW. Despite this, a significant portion of the population still lacks access to power, with most countries having youthful populations and fast-growing economies—offering immense growth potential.

In early 2025, the EAPP will launch a day-ahead market, with final preparatory meetings held in December 2024 in Mombasa. This long-anticipated move marks a new chapter in the regional electricity trade.

Currently, power trade occurs through bilateral contracts and exchanges between national utilities. The day-ahead market will enable short-term

contracts, allowing electricity to be traded within a 24-hour window.

Generators will submit their capacity forecasts a day in advance, similar to the current practice, but with one key difference: pricing will be based on marginal pricing. This means the price of electricity will be determined by market forces—supply and demand—at hourly intervals, ensuring efficiency and fair valuation.

So, what does this mean for KenGen? Why is this development important? How can KenGen seize this opportunity to maximise shareholder value?

KenGen's Current Position

KenGen remains Kenya's leading power generator, with a diversified portfolio across hydropower, geothermal, wind, thermal, and solar energy. The company's highly skilled staff and operational expertise have solidified its reputation as a regional leader, particularly in geothermal resource development and hydropower.

KenGen's 2024 financial reports show a solid performance, with Shs. 56 billion in revenue, Shs. 6.7 billion in profit after tax, and assets nearing KES 500 billion.

With a weighted average cost of capital (WACC) of 2.25%, KenGen stands out as a trusted partner for lenders, who offer favourable terms for developing new power plants. The company's installed capacity stands at 754 MW of geothermal, 826 MW of hydro, 26 MW of wind, and 120 MW of thermal.

The EAPP Region's Landscape

The EAPP covers 13 countries, with Kenya's closest neighbours—Ethiopia, Tanzania, Uganda, and Rwanda—being synchronized and interconnected. These countries collectively have a daily demand ranging from 4 GW to over 10 GW, supported by an installed capacity of just over 19 GW as of 2025.

Yet over 600 million Africans still lack access to electricity, with Ethiopia, Tanzania, and Uganda accounting for a significant portion. This represents substantial headroom for growth in electricity demand, especially if the Democratic Republic of Congo (DRC) is included. The DRC, for example, has several derelict hydropower stations

that once served towns with populations of over half a million people. Reviving these stations could be a game-changer for KenGen and the region.

Could KenGen partner with the DRC's rural electrification agency (ANSER) to rehabilitate these legacy hydro assets? Such joint ventures could also serve the mining industry in the DRC and neighbouring Zambia, supported by accessible funding through initiatives like Power Africa and the M300 initiative.

Seizing the Opportunity

For KenGen to capitalize on the regional power pool, it can draw lessons from Kenyan banks like Equity Bank, which successfully expanded into the region to grow their portfolios. A similar approach would require KenGen—or a dedicated subsidiary—to operate regionally as an independent power producer (IPP), leveraging its track record and access to concessionary capital.

Joint ventures are one way forward, where KenGen could take majority or minority stakes in struggling state generators, much like Ethiopian Airlines has done with national airlines across Africa. By combining resources with public or private partners, KenGen can reduce regulatory hurdles and gain

easier entry into new markets.

Another viable strategy is to bid for long-term concessions to rehabilitate and operate power plants, as seen with successful models in Europe and closer to home with Eskom's hydro concessions in Uganda. KenGen could also develop strategic generation assets outside Kenya targeted for trading in the SAPP and EAPP markets.

The Bigger Picture

Looking beyond Kenya's borders presents a significant opportunity for KenGen to diversify its income streams, expand staff capacity, and contribute to regional electrification and industrialisation. By strategically positioning itself as a key player in the EAPP, KenGen can raise its brand profile and help power Africa's growth story. There are risks, of course—such as payment defaults and political instability—but these can be mitigated through facilities offered by development institutions that have successfully supported IPPs across the continent.

The opportunity is clear. If KenGen does not step up, regional and extra-regional competitors will. The time to act is now.

Shs.

56 Billion

Revenue

Shs.

6.7 Billion

Profit

KenGen's 2024 financial reports show a solid performance, with Shs. 56 billion in revenue, Shs. 6.7 billion in profit after tax, and assets nearing KES 500 billion.

Countries Within the EAPP



- Burundi
- Djibouti
- Democratic Republic of Congo
- Egypt
- Ethiopia
- Kenya
- Libya
- Rwanda
- Somalia
- South Sudan
- Sudan
- Uganda
- Tanzania



Deep Earth Drilling: Inside Africa's Home of Geothermal

By Paul Kimanzi, Principal Officer, Communication

KenGen's commitment to sustainability goes beyond just harnessing the earth's heat. As the company drills deeper and expands its geothermal operations, it is acutely aware of the need to protect and preserve the environment. Rigorous social and environmental impact assessments are conducted before any drilling begins, ensuring that ecosystems remain undisturbed, and wildlife habitats are safeguarded.

7,000M

KenGen's rigs can drill as deep as 7,000 meters.

3,650M

The company's deepest well reached 3,650 meters—a substantial improvement from its earlier limit of 2,200 meters using the older N370 rig.

*"We are industry leaders in matters of exploration and production drilling,"
Dr. Mwangi asserts*

In the face of East Africa lies Kenya, a nation that has managed to tap into the earth's hidden energy source in an ambitious venture to power its future.

At the forefront of this endeavour is the Kenya Electricity Generating Company PLC (KenGen), East Africa's leading electric power generation company, which has embarked on a futuristic geothermal journey, transforming Kenya's energy landscape through deep drilling and recovery of heated fluid that runs geothermal powerplants.

Dr. Anna Mwangi, a Geophysicist at KenGen, provides insight into this transformative journey.

"Geoscientific surface exploration plays a crucial role in developing a geothermal conceptual model, which helps identify optimal drilling sites. The target depth is guided by geothermal exploration findings and, during drilling, by the formation's conditions, including permeability. However, drilling deeper comes at a higher cost," she explains. The maximum drilling depth depends on the available technology, and KenGen has significantly advanced its drilling capabilities over the years. In an interview with The Energy Post, Dr. Mwangi noted that KenGen's rigs can drill as deep as 7,000 metres. As of the time of the interview, the company's deepest well reached 3,650 metres—a substantial improvement from its earlier limit of 2,200 metres using the older N370 rig.

With deeper drilling, KenGen has unlocked new reservoirs of steam, the lifeblood of geothermal power.

"As we drill deeper, we encounter higher temperature and permeability, allowing us to intercept more feeder zones and extract more fluid to the surface. An increase in output is also attributed to drilling methodologies where the capability to deviate from vertical to intercept dipping structures allows exploiting from multiple feeder zones," Dr. Mwangi elaborates. This increased output has been instrumental in boosting Kenya's geothermal power production, making it the seventh-

largest producer globally and number one in Africa.

Moreover, the advent of directional drilling has been a game-changer for KenGen, allowing the company to access multiple deeper and hotter geothermal reservoirs from a single well pad, previously deemed unreachable, thus minimizing environmental impact.

But how did Kenya, a developing nation, achieve such a remarkable feat in geothermal power generation? Dr. Mwangi credits a combination of historical foresight and evolving energy needs. "The resource in Olkaria was identified during pre-independent Kenya," she says.



"As we drill deeper, we encounter higher temperature and permeability, allowing us to intercept more feeder zones and extract more fluid to the surface. An increase in output is also attributed to drilling methodologies where the capability to deviate from vertical to intercept dipping structures allows exploiting from multiple feeder zones," Dr. Mwangi

Italy pioneered the use of steam to generate electricity, laying the groundwork for Kenya's geothermal journey. Over time, Kenya had to seek alternatives and shift its focus from the over-reliance on hydroelectric power, which was vulnerable to droughts, but geothermal energy, which proved to be a reliable, green, and sustainable alternative. "Geothermal is renewable, coal is finite and dirty," Dr. Mwangi emphasises, highlighting the environmental advantages of



geothermal energy over coal, which many developed nations still rely on.

Japan's expertise in turbine technology has played a crucial role in this transition. Companies like Mitsubishi, Fuji, and Toshiba have supplied steam turbines that enable the efficient generation of electricity.

Yet, geothermal exploration drilling is not without its challenges. Drilling deep into the earth's crust can present logistical and geological complexities. "Deep drilling, in the range of 4,000 meters, is a new frontier," Dr. Mwangi notes. While drilling up to 3,000 metres is considered ideal within the geothermal industry in Kenya, KenGen has ventured even deeper, reaching depths of 3,650 metres to explore the potential beyond 3000 metres. However, drilling deeper doesn't always guarantee increased output. Dr. Mwangi explains that there was not much added advantage because of decreased permeability beyond 3,000 metres in that area, hence underscoring the need for continuous research and technological advancements.

KenGen's geothermal exploration has also extended beyond Kenya's borders, with projects in Ethiopia, Djibouti and Eswatini showcasing the

company's expertise in deep drilling. "We are industry leaders in matters of exploration and production drilling," Dr. Mwangi asserts, highlighting the synergies between geothermal and oil and gas exploration.

Looking ahead, Dr. Mwangi sees immense potential for geothermal energy in Kenya and beyond. "We need to explore new fields," she says, emphasizing the importance of identifying and developing new geothermal sites to meet growing energy demands. Collaboration with the private sector and leveraging international expertise will be key to unlocking this potential.

KenGen's commitment to sustainability goes beyond just harnessing the earth's heat. As the company drills deeper and expands its geothermal operations, it is acutely aware of the need to protect and preserve the environment. Rigorous social and environmental impact assessments are conducted before any drilling begins, ensuring that ecosystems remain undisturbed, and wildlife habitats are safeguarded.

In the Olkaria region, where much of KenGen's geothermal exploration takes place, efforts are underway to

mitigate the environmental impact of drilling activities. KenGen has implemented innovative solutions such as reforestation programs and wildlife corridors to minimise disruption to local ecosystems. By working together with conservationists and local communities, KenGen is creating a harmonious balance between energy production and environmental preservation.

Through deep drilling and continuous exploration, Kenya has harnessed the earth's hidden energy, paving the way for a greener and more prosperous future. As Dr. Mwangi aptly puts it, "Geothermal should be given the priority because it's a base load, it's reliable, and it's our natural resource, with a perpetual nature when prudently managed."



"Geothermal should be given the priority because it's a base load, it's reliable, and it's our natural resource, with a perpetual nature when prudently managed."



Changing Destinies with Education: KenGen Scholarship Changing Lives



By Ernest Nyamasyo, Communication Officer - KenGen Foundation

In a remote village of Kisumu County, Beatrice Oriwo's dreams of higher education seemed as distant as the horizon. As the eldest of nine siblings, her academic excellence at St. Francis Rang'ala Girls Secondary School—where she scored an A Plain—was a beacon of hope, but the financial constraints of her large family cast a shadow over her aspirations. Everything changed for Beatrice when KenGen offered her a full scholarship. The scholarship opened a new world of opportunities for Beatrice to pursue a Bachelor of Science degree in Electrical and Electronics Engineering at Kenyatta University.

KenGen's commitment to education and community support is exemplified through its scholarship program, which has transformed over 1,500 students lives since its inception in 2005. By providing opportunities for bright but needy students, the program covers tuition and offers stipends, ensuring a stress-free academic journey.

Beatrice's journey from a humble background to becoming a Graduate Electrical Engineer intern at KenGen's Ngong Power Station is a testament of the transformative power of education. Her duties include the operation and maintenance of 30 wind turbines; providing technical and engineering support; and participating in major component failure investigations. Her dedication has led to significant achievements, including implementing the 5S Kaizen Methodology, identifying continuous improvement areas, and upgrading existing electrical systems. Beatrice shared her story in an interview with Energy Post writer Ernest Nyamasyo. "My dream of joining Kenyatta University seemed out of

The main objective of the KenGen scholarship program is to help beneficiaries realize their dreams through a well-rounded education that will help them become exemplary citizens and help Kenya reach its social and economic goals.



"My dream of joining Kenyatta University seemed out of reach due to financial constraints, but the KenGen scholarship was a beacon of hope in my life."

- Beatrice Oriwo



reach due to financial constraints, but the KenGen scholarship was a beacon of hope in my life.”

Beatrice story is similar to Ekitela Lokol from Turkana County who also excelled academically. As the fourth-born in a family of seven raised by a single mother, Ekitela achieved the highest grade of B+ in his year at Katilu Boys Secondary School. This outstanding performance also earned him a full scholarship from KenGen to pursue a Bachelor of Science in Nursing at Kabarak University.

Graduating on December 15, 2023, Ekitela is currently a Nursing Officer Intern at Lodwar County Referral Hospital. His responsibilities include providing patient care, administering medications, monitoring patient health, assisting in surgical procedures, offering emotional support, educating patients on wellness practices, and collaborating with other healthcare professionals. His dedication and commitment have earned him recognition in his field.

In his heartfelt thank you note to KenGen, Ekitela expressed his deepest gratitude: “I am deeply grateful for the immense support KenGen granted me throughout my undergraduate studies. Your scholarship not only made my dream of becoming a nurse



“I am deeply grateful for the immense support KenGen granted me throughout my undergraduate studies. Your scholarship not only made my dream of becoming a nurse a reality but also empowered me to strive for excellence. Your investment in my education has shaped my future and allowed me to give back to my community through healthcare.”

- Ekitela Lokol

a reality but also empowered me to strive for excellence. Your investment in my education has shaped my future and allowed me to give back to my community through healthcare.”

KenGen, through its philanthropic arm, the KenGen Foundation, is dedicated to sustainable development, aligning with the United Nations’ Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 13 (Climate Action). Through initiatives like reforestation projects, education scholarships, and community-based conservation programs, the Foundation mitigates the impact of climate change, supports sustainable education programs, and empowers communities to take care of their environment.

By fostering partnerships with local organisations and engaging community members, the KenGen Foundation enhances educational opportunities and cultivates a sense of responsibility towards environmental stewardship. The holistic approach guarantees the present and future benefits of these initiatives, fostering a more sustainable and educated society.

The main objective of the KenGen scholarship program is to help beneficiaries realise their dreams through a well-rounded education that will help them become exemplary citizens and help Kenya reach its social and economic goals. In addition to paying school fees, the program gives university students stipends to make sure they have a stress-free academic journey. This holistic approach not only alleviates financial burdens but also encourages students to focus on their studies and personal development. By investing in the education of these young leaders, the KenGen Scholarship Program is fostering a new wave of innovation and progress that will ultimately benefit all of society.

Beatrice Oriwo and Ekitela Lokol story is an example transformative impact of KenGen’s Education Scholarships. KenGen’s ongoing commitment to supporting bright but needy students continues to inspire and empower future generations, driving Kenya toward a sustainable and prosperous future.



Why Energy Tourism Should Be Your Next Holiday Adventure

By Eng. Peter Njenga, Managing Director and CEO, KenGen

While Kenya is celebrated for its iconic wildlife safaris and pristine beaches, energy tourism represents an untapped niche with tremendous potential. It aligns seamlessly with the growing trend of experiential tourism, where travellers seek out unique, educational, and immersive experiences. For Kenyan families, energy tourism offers a chance to explore their country's innovations while fostering a sense of pride and environmental stewardship.



During festive season, I challenge you to step outside the ordinary. Explore the marvels of energy production, discover the beauty of renewable energy, and inspire the next generation to think critically about sustainability. Whether it's a trip to a solar farm, a geothermal spa, or a wind turbine site, energy tourism promises to illuminate your family's holiday season in a way that few other activities can.

As we navigate through different seasons of the year, families often find themselves engaging in familiar routines—gathering for meals, reconnecting with loved ones, and celebrating shared traditions. While these moments are cherished, they can sometimes start to feel repetitive. So, the question naturally arises: What next? This year, I invite you to consider an extraordinary and enriching alternative—energy tourism.

Energy tourism, an emerging trend at the intersection of education and adventure, offers families a rare opportunity to witness firsthand how the power that fuels our modern lives is generated and distributed. From the roaring turbines of hydroelectric dams to the quiet elegance of solar farms and wind turbines, these experiences blend discovery and inspiration. They offer a refreshing take on the holiday season, one that goes beyond material gifts and into the realm of meaningful shared experiences.

Energy tourism offers something

special for families seeking to make the holidays more engaging and purposeful. Picture this: children gazing in awe as sunlight is transformed into electricity at a solar farm, sparking their curiosity about Science and technology. These moments don't just entertain; they ignite a sense of wonder and provide valuable lessons that stay with them long after the holiday season ends.

In Kenya, the opportunities for energy tourism are as vast as they are diverse.

At KenGen's Olkaria Geothermal Spa in Naivasha, families can immerse themselves in Africa's only geothermal pool, enjoying its therapeutic waters, while exploring the nearby Hell's Gate National Park—a unique space where geothermal energy production coexists harmoniously with wildlife. This blend of natural beauty, technological innovation, and recreational opportunities creates memories that no traditional activity can rival.

For those looking for a scenic adventure closer to Nairobi, the KenGen Ngong Wind Farm is an excellent option.

Families can enjoy a picnic while taking in the panoramic views of Nairobi and Kajiado counties. The experience becomes even more rewarding when paired with a hike up the iconic Ngong Hills, offering not just spectacular views but also insights into renewable energy and its role in sustaining our future.

Kenya is no stranger to the transformative power of tourism. The sector has demonstrated remarkable resilience and growth, with international arrivals increasing by 21.3% in the first half of 2024, according to the Kenya Tourism Board. Over one million visitors generated KSh 142.5 billion in revenue during this period, underscoring the country's global appeal.

While Kenya is celebrated for its iconic wildlife safaris and pristine beaches, energy tourism represents an untapped niche with tremendous potential. It aligns seamlessly with the growing trend of experiential tourism, where travelers seek out unique, educational, and immersive experiences. For Kenyan families, energy tourism offers a chance to explore their country's innovations



while fostering a sense of pride and environmental stewardship.

Incorporating energy tourism into your holiday plans adds a refreshing twist to traditional festivities. While family gatherings and celebrations remain central, an “energy adventure” offers a novel way to create lasting memories. Because energy production facilities operate year-round—even during Christmas—visits can be planned to suit any schedule, making them a convenient addition to holiday itineraries.

Beyond its novelty, energy tourism is a deeply impactful experience. It provides families with an opportunity to reflect on their relationship with energy and the environment. Children and adults alike gain a newfound appreciation for the intricate systems that sustain modern life. These trips foster meaningful conversations about sustainability, transforming eco-consciousness from

an abstract concept into a tangible, shared responsibility.

Imagine, for instance, discussing household energy use with your children after witnessing the mechanics of a wind turbine or the conversion of geothermal steam into electricity. These experiences can inspire practical family initiatives, such as adopting energy-saving practices or exploring renewable energy solutions for the home. In this way, energy tourism has the potential to not only enrich holiday traditions but also create long-term benefits for families and the planet.

As we search for ways to make our holiday traditions more meaningful, energy tourism stands out as an inspiring option. It offers the perfect blend of recreation, education, and environmental consciousness. Beyond the joy of shared experiences, it cultivates a deeper appreciation for

the complex systems that sustain our lives and a renewed commitment to protecting our planet for future generations.

During festive season, I challenge you to step outside the ordinary. Explore the marvels of energy production, discover the beauty of renewable energy, and inspire the next generation to think critically about sustainability. Whether it’s a trip to a solar farm, a geothermal spa, or a wind turbine site, energy tourism promises to illuminate your family’s holiday season in a way that few other activities can.

By embracing energy tourism, you’re not just creating memories; you’re fostering curiosity, innovation, and environmental stewardship. Who knows? You may even start a new holiday tradition that will enlighten and inspire your family for years to come. Let energy tourism brighten your season and your future.

Building Together: KenGen Moves to Strengthen Western Kenya's Power Reliability with Gogo Hydropower Upgrade

By Paul Kimanzi, Principal Officer, Communication

Kenya Electricity Generating Company (KenGen), East Africa's leading renewable energy producer, has taken a major step toward transforming the western Kenya energy landscape by issuing 45 title deeds to members of the Gogo community.

This landmark event clears the way for the upgrade of the Gogo Hydropower Plant, increasing its capacity from 2 megawatts (MW) to 8.6 MW, a critical boost for reliable power in Western Kenya.

The issuance of title deeds ceremony, held in partnership with the local leadership including National Government, County, Constituency level stakeholders, underscores KenGen's commitment to integrating community engagement into its energy development strategy.

According to KenGen, the title deeds not only secured land for the project but also symbolises KenGen's dedication to fostering economic growth and sustainability for local residents.

"This is a testament to the spirit of mutual respect and collaboration," said KenGen Chairman, Hon. Alfred Agoi Masadia. "We are not just upgrading a power plant; we are building a future where energy projects improve lives, empower communities, and drive Kenya's development agenda."

KenGen's Managing Director and CEO, Peter Njenga, emphasised the project's wider impact, "This is more than a legal transaction. It is a step toward economic empowerment and long-term security for these families. The Gogo redevelopment project will stabilise

the Western region's grid, deliver clean energy, and support improved infrastructure and livelihoods."

For his part, Migori Governor Dr. Ochilo Ayako praised the project's potential to transform the region saying, "We sincerely appreciate the National Government headed by the President, H.E. Dr. William Samoei Ruto, through the Ministry of Energy and Petroleum under the leadership of Cabinet Secretary Hon. James Opiyo Wanda, as well as KenGen and other utilities, for the expansion of the Gogo Power Generation Station in Migori County."

He went on to add, "As the Governor of Migori County, I am committed to fostering partnerships between the county and the national government to ensure we maximize these opportunities for the benefit of our residents."

Local leaders, including Hon. Mark Nyamita, the Member of Parliament for Uritu, celebrated the milestone as a turning point for the community. "This project is a beacon of hope for our people," he said. "By securing title deeds and initiating redevelopment, KenGen has created a foundation for opportunities that will transform lives for generations beyond power supply."

Once upgraded, the Gogo Hydropower Plant will generate 32 gigawatt-hours annually, reducing power outages and transmission losses while contributing to Kenya's broader sustainable energy goals. The project aligns with the country's Bottom-Up Economic Transformation Agenda (BETA), a blueprint for driving equitable economic growth.

Beyond energy production, KenGen



has committed to a robust corporate social responsibility program for the Gogo community, in line with feedback received during the sensitisation program KenGen conducted with the community ahead of the power station's construction.

KenGen said the project is scheduled to begin construction in mid-2025, representing a €38.8 million investment funded by KenGen and development partners from Germany. It positions Western Kenya as a model for community-centred energy projects, with the potential to drive economic transformation while addressing critical infrastructure needs.

The redevelopment will directly benefit the local community through employment opportunities during construction, skilled, semi-skilled, and unskilled labour.

Improvements to school perimeter fences and local road networks are also planned, along with economic opportunities, including the supply of construction materials and food kiosks. Bridges over the Kuja and Oyani Rivers will enhance connectivity.

Pictorial

Gogo Hydropower Upgrade





Japan Beckons KenGen to Explore More Partnerships

By Emmanuel Wandera, Assistant Manager, External Communication and Media Relations



KenGen recently hosted a high-level Japanese delegation led by Japan's State Minister of Foreign Affairs, H.E. Hisayuki Fujii, in Olkaria for a familiarisation tour. The tour was public-private and brought together Japanese government officials and forty Japanese investors to explore areas of partnership and witness the impact of the KenGen-Japan Partnership in geothermal development through JICA in action.

The KenGen team was led by the General Manager, Geothermal Development Peketsa Mangi, who was representing the Managing Director and CEO Eng. Peter Njenga, accompanied by Ag. General Manager Commercial Service Ronoh Kibet, General Manager Operations Eng. Julius Odumbe, and managers in hosting the delegation. Mangi presented KenGen's success story in geothermal to the visitors through the partnership with JICA and called upon the Japanese team to partner with KenGen in delivering the company's 2024-2034 G2G strategy. "KenGen recently launched the company's G2G 2024-2034 strategy that seeks to add 1500 MW of electricity to the national grid in the next ten years,

with 840 MW coming from geothermal. This presents a unique opportunity for Japan to partner with KenGen to deliver our strategic goals by leveraging our past successes to deliver the 1500 MW capacity target by 2034," said Mangi.

"Your visit is coming at the beginning of the year with over forty Japanese investors representing different companies, is a sign of good things to come, and KenGen is keen on exploring partnerships in realising the company's 2034 G2G strategy," he added.

On his part, the Japanese state minister of foreign affairs, H.E. Hisayuki Fujii, lauded KenGen for the impactful partnership his country, through JICA, has enjoyed over the years. "KenGen and Japan, through JICA, have enjoyed a cordial relationship in the development of renewable energy in Kenya and we are proud of what we have achieved thus far. We are looking forward to more partnerships. During my tour, I have witnessed Japanese technology at your power plants and KenGen's expertise in generating power from geothermal sources. Good job," said H.E Fujii.

The visit by the Japanese State

"KenGen recently launched the company's G2G 2024-2034 strategy that seeks to add 1500 MW of electricity to the national grid in the next ten years, with 840 MW coming from geothermal. This presents a unique opportunity for Japan to partner with KenGen to deliver our strategic goals by leveraging our past successes to deliver the 1500 MW capacity target by 2034," said Mangi.

Minister of Foreign Affairs joins a list of high-level government officials who have visited Olkaria geothermal fields to witness KenGen's geothermal success story.

During the visit, the Japanese delegation visited the Olkaria V power plant and had a presentation from the KenGen team. The visit showed KenGen's geothermal prowess and the power of collaboration and partnership in geothermal development.







Olkaria's Hot Secret: KenGen's "Whipstock" Tech Breaks New Ground in Geothermal Drilling

By Nelly Kosgei, Principal Technician

Imagine the vast, green hills of Kenya's Rift Valley, where the air is fresh, and the earth breathes. It is a place of peace, a place where nature's beauty unfolds. But beneath this serene landscape, something extraordinary is happening.

Right behind the Olkaria IV power plant, a drilling rig stands tall, a symbol of innovation. They are using a new trick called "whipstock," a bit like giving an old well a brand-new path. A whipstock is a directional drilling technique used to alter the trajectory of an existing wellbore. This method is commonly employed to sidetrack a well drilling a new bore from the same wellhead as the original. It serves various purposes, such as accessing multiple reservoirs from a single well or re-entering a previously abandoned well like OW 929A. Think of it as a doctor performing a delicate surgery, but on a giant scale, deep underground.

At geothermal well OW 929A, KenGen's team pulled off a first. They used the whipstock, a special tool built to handle the intense heat deep within the earth, to change the direction of the well. Why? To reach more of that precious geothermal energy, our clean, natural power.

Now, this was not easy. Days turned into sleepless nights. The Well Integrity Services (WIS) team, like a group of skilled surgeons, planned every move with incredible precision. Koisomau watched the pressure like a hawk, George kept track of every piece of equipment, and Ken made sure everyone stayed safe.

They started by setting a special valve to point the whipstock in the right direction.

Then, they anchored it, pushing it against the well's walls with a force of 3,500 psi – that's like the weight of a big elephant! Finally, they lowered the whipstock, with special cutters called millers, ready to carve a new path.

The day of the "sidetrack" was tense. Eng. Samuel Ng'ang'a, our drilling hero, stood at the controls, his team around him. "Let's make history!" he declared. And they did.

With a flick of a switch and a well-coordinated effort, guided by Mr. Heinrich and Mr. Amani from WIS, the whipstock did its job. The drillers cut through the well's casing, and the drill moved along its new path. The excitement was palpable. When the telemetry showed they had hit the geothermal formation, the place erupted with cheers!

This was not just luck. It took careful planning. Everything was tested and prepared beforehand, from the whipstock itself to the pumps and pressure lines.

This was KenGen's first time using this whipstock technique. It's a big deal.

It shows how we are pushing the boundaries in geothermal energy, finding new ways to get the power we need. It's like discovering a new way to tap into the earth's own power, right here in Olkaria. KenGen is writing history, one well at a time, showing the world what Kenya can do.

KenGen Clinches Three Prestigious Awards

By Emmanuel Wandera, Assistant Manager, External Communication, Media Relations



2024 Financial Reporting (FiRe) Awards

1 KenGen was named the top State Corporation for financial reporting under IFRS Accounting Standards.



2024 Kenya Institute of Supply Chain Management (KISM) Awards

2 KenGen was named the top State Corporation for financial reporting under IFRS Accounting Standards.

3 KenGen's Supply Chain Manager, Beatrice Koskei, won the inaugural Supply Chain Women Leader award.

KenGen secured three prestigious awards that underscore KenGen's commitment to excellence in sustainability, financial reporting, and supply chain management at the 2024 FIRE Awards and Kenya Institute of Supply Chain Management awards respectively. The accolades come as KenGen forges ahead with its ambitious 10-year 'Good to Great (G2G) strategy, aimed at transforming operations and scaling renewable energy capacity.

At the 2024 Financial Reporting (FiRe) Awards, KenGen was named the top State Corporation for financial reporting under IFRS Accounting Standards. This accolade celebrates the NSE-listed company's outstanding achievements in financial reporting and ESG integration, marking it as a benchmark for corporate transparency and governance.

The Fire Awards, widely regarded as the most prestigious financial reporting recognition in East Africa, are organised by the Institute of Certified Public Accountants of Kenya (ICPAK) in partnership with the Nairobi Securities Exchange (NSE), Capital Markets Authority, and other key stakeholders.

"These awards are more than recognition, they are proof of KenGen's dedication to financial responsibility, integrity, innovation, and sustainable development," said Eng. Peter Njenga,

the company's managing director and chief executive officer. "As we celebrate this success, we are equally focused on the next decade, guided by the transformative goals of our G2G strategy."

KenGen also emerged victorious at the 2024 Kenya Institute of Supply Chain Management (KISM) Awards, earning the Sustainable Procurement Award. This honour recognised KenGen's exemplary efforts in embedding environmental stewardship into its supply chain operations.

The company's innovative protocols for managing sensitive materials like fuel and its significant investments in eco-friendly infrastructure have set a new industry standard. In securing this award, KenGen outperformed giant corporations in private and public sectors, further cementing its reputation for responsible business practices.

In a pioneering achievement, KenGen's Supply Chain Manager, Beatrice Koskei, won the inaugural Supply Chain Women Leader award. Competing against industry stalwarts, Koskei was lauded for her visionary leadership and transformative impact in a traditionally male-dominated field. This award, introduced in 2024, is a significant step forward in recognising the role of women in shaping supply chain excellence.

"We are proud of our team who continue to inspire me every day. The awards are a testament to our team's commitment not only to grow KenGen but to exceeding stakeholder expectations and advancing Kenya's sustainable development goals," said Eng. Njenga.

Njenga emphasised that the accolades align with KenGen's strategy of operational excellence across all business dimensions, from financial transparency to environmental stewardship. He added, "This recognition inspires us to continue leading by example, setting new benchmarks for corporate responsibility for the good of all Kenyans."

Koskei, speaking about her historic recognition, highlighted her focus on empowering women in the supply chain sector. "Through mentorship programs and supplier diversity initiatives, we are breaking barriers and creating meaningful opportunities for women in this field. It is an honour to represent KenGen and to pave the way for more women leaders in their respective careers," she said.

KenGen's recognitions at the FiRe Awards and KISM Awards are a powerful affirmation of its position as an industry trailblazer. They underscore the company's role in shaping a sustainable, inclusive, and innovative corporate landscape for Kenya and the region.

Regional Power Trade: Ushering in a New Era of Energy Collaboration

By Sulea Murambi, Ag. Assistant Manager, Marketing and Branding



From left to right: KenGen Board Member Mr. William Rahedi, Chairman of the Board Hon. Alfred Agoi Masadia, Board Member Eng. Frank Konuche, and KenGen Managing Director & CEO Eng. Peter Njenga during the Eastern Africa Power Pool Regional Trade Conference 2024 in Mombasa, Kenya.

1

Regional Commitment to Power Trade and DAM Launch

The EAPP Regional Power Trade Conference, hosted by Kenya in December 2024, reinforced commitment to regional power integration, with a key focus on launching the Day Ahead Market (DAM) in early 2025 to enable efficient, transparent cross-border electricity trading.

2

Kenya's Leadership and Infrastructure Development

Kenya was recognized for its leadership in regional power efforts, particularly in geothermal energy through KenGen, and highlighted progress on major transmission projects with Tanzania, Uganda, and Ethiopia aimed at building a robust, interconnected grid.

3

Support from Development Partners and Long-term Vision

Institutions like the World Bank and AfDB reaffirmed their support for regional power integration, citing major economic and social benefits, while conference speakers emphasized that power trade is a driver of sustainability, resilience, and shared regional prosperity.

In December 2024, Kenya was honored to host the Eastern Africa Power Pool (EAPP) Regional Power Trade Conference, bringing together Energy Ministers, utility Board leaders, CEOs and key stakeholders from member states and other similar

regional power initiatives.

The conference, officially opened by Council of Ministers Chairman, Uganda's Minister of Energy, Okaasai Opolot and Kenya's Cabinet Secretary for Energy and Petroleum, Hon.

Opiyo Wandayi, reinforced regional commitment to advancing power trade, with a specific focus on launching the Day Ahead Market (DAM) in the first quarter of 2025.

The conference emphasised the

significant potential of regional power trade in harnessing Eastern Africa's vast renewable energy resources, driving affordability, reliability, and sustainability in power supply. A centralized power market promises transformative benefits, including enhanced resilience to climate-related shocks, improved electricity access, and economic efficiency.

"Aligning regional and national policies is key to achieving a seamless transition to a unified market framework. By championing the benefits of regional integration-lower costs, enhanced resilience, and accelerated renewable energy development, we can inspire the collective action needed for sustainable progress," said Hon. Opolot.

Kenya's Leadership in Regional Power Integration

Kenya's central role in advancing regional energy collaboration took center stage, with KenGen's expertise in geothermal development earning special recognition. As a leader in geothermal exploration, consultancy, and drilling, KenGen's contributions were underscored as integral to the region's energy future.

Speaking at the CEO's roundtable, KenGen Managing Director and CEO, Eng. Peter Njenga, detailed the company's initiatives to harness geothermal energy, emphasising its commitment to innovation, regional partnerships, and delivering impactful solutions to meet Africa's growing energy demands noting.

He said: "KenGen is proud to lead in geothermal innovation, providing expertise in exploration, consultancy, and drilling. Our G2G 2034 Strategy reaffirms our commitment to advancing regional energy solutions that empower communities and drive sustainable development,"

Other efforts highlighted included the completion of a 400 kV transmission line linking Kenya to Tanzania and ongoing projects with Ethiopia and Uganda. By 2027, Kenya aims to operationalize a second interconnector with Uganda and a new National System Control Centre to manage both power systems and market operations.



"KenGen is proud to lead in geothermal innovation, providing expertise in exploration, consultancy, and drilling."



"The interconnection projects are milestones in our commitment to creating a sustainable and integrated power market," remarked Hon. Wandayi. "These initiatives emphasise our dedication to renewable energy and regional prosperity."

Pathway to the Day Ahead Market (DAM)

As part of its strategy, the EAPP envisions to establish a transparent and competitive regional power market. Dubbed "Day Ahead Market (DAM)," the concept will allow countries to trade electricity more efficiently, ensuring better price discovery and fostering trust among stakeholders. DAM is on cause for launch in Quarter One of 2025.

Speaker after speaker emphasised the critical building blocks necessary for the successful implementation of the Day Ahead Market (DAM), including regulatory harmonization to create a

seamless trading environment across member states, capacity building to equip stakeholders with the technical and operational expertise required for efficient market operations, and stakeholder alignment to foster trust and collaboration among governments, utilities, and consumers.

While giving his remarks, Eng. James Wahogo, the EAPP Secretary General affirmed the Pool's commitment to DAM a reality noting "As we finalize the comprehensive market rules and agreements, the technical design of the market trading platform is also approaching completion. The EAPP power market is designed for adaptability, accommodating national differences and aligned with international standards. This ensures seamless collaboration among member states and paves the way for future integration with other power pools."

Development Partners Bolster Efforts

The World Bank and African Development Bank (AfDB) among other Development partners reaffirmed their strong support for regional power integration highlighting key partnerships that have revolutionized the sector over the past few years.

"Regional integration is key to achieving energy transition goals and universal access to electricity. Our analysis shows power trade could yield \$14 billion in economic benefits over 25 years." Highlighted Eric Fernstrom from the World Bank.

Similarly, the AfDB underscored its role in funding regional interconnection projects and emphasized the need for a robust, free power market to ensure consumer benefits.

A Vision of Sustainable Growth

As the conference concluded, the overarching message was clear, regional power trade is not merely an economic endeavor but a catalyst for social and environmental transformation. Hon. Opolot, the Chairperson of the EAPP Council of Ministers summed it up best: "The journey to a fully integrated power market is complex, but with the collective resolve demonstrated at this conference, we are on track to unlock unprecedented opportunities for our region."



KenGen CEO Eng. Peter Njenga Named Among Top 100 Influential Kenyans in 2024

By Alex Misuko, Communication Officer

KenGen Managing Director and CEO, Eng. Peter Njenga, has been recognised as one of the Top 100 Influential Kenyans of 2024, a prestigious accolade that highlights the exceptional achievements and leadership of influential individuals in various sectors across the country.

The Top 100 Kenyans list honors individuals who have demonstrated outstanding achievements, innovation, and leadership across diverse fields including business, politics, technology, arts, and social advocacy. Eng. Njenga's recognition is a testament to his unwavering commitment to advancing Kenya's

energy sector, which continues to be a key driver of economic growth and development.

Eng. Njenga, a seasoned leader in the energy sector, has played a pivotal role in shaping KenGen into Africa's leading renewable energy companies. Under his leadership, KenGen has made significant strides in promoting the development of geothermal, hydro, wind, and solar energy, contributing immensely to Kenya's energy security and sustainability goals.

Under the helm of Eng. Njenga KenGen broadened its focus on renewable energy expansion and innovative solutions to address Kenya's and by

extension, Africa's energy and climate challenges.

"In 2024, KenGen, led by Njenga, showcased its ability to come up with innovative solutions to address emerging and current challenges in the energy sector. In a strategic move to diversify energy sources, KenGen launched a 42.5 MW solar project in the Seven Forks area. This initiative is aimed at enhancing the company's capacity to produce renewable energy, marking a significant milestone in Kenya's energy landscape." Quoted *Kenyans.co.ke* adding "Further, under Peter Njenga's leadership, KenGen reported a significant boost in hydropower generation due to high water levels at key dams, particularly the Masinga Dam. This increase in output has been crucial for stabilizing electricity costs in Kenya and adds to the vital steps towards achieving a fully green energy supply by 2030."

Eng. Njenga's inclusion in the Top 100 Kenyans of 2024 is not just a celebration of his past achievements but also a reflection of his continued drive for excellence and innovation. As KenGen moves towards its goal of transforming Kenya into a regional energy hub, Eng. Njenga's leadership will undoubtedly continue to guide the company to new heights, ensuring that Kenya's energy sector remains a cornerstone ---of the country's economic development.

In a statement following the announcement, Eng. Njenga expressed gratitude for the recognition, dedicating it to the entire KenGen team for their collective efforts in advancing the company's mission. He also reaffirmed his commitment to accelerating Kenya's transition to clean, renewable energy, driving sustainable development, and empowering communities through affordable electricity access.

"Asante sana! Honoured to have been listed, amongst other great Kenyans, as one of the Top 100 Kenyans, 2024. I purpose to continue leading the largest #GreenEnergyKE brand in the region, KenGen in the provision of renewable energy solutions, for the social-economic development of every Kenyan. This is all in the JenGa KenGen, Inua Mapato spirit," he said.

Germany in Olkaria: Bright Future as Germany Comes Knocking Again

By Sulea Murambi, Ag. Assistant Manager, Marketing and Branding



Kenya's renewable energy sector received a significant boost with the visit of the German Vice Chancellor, Dr. Robert Habeck, to Olkaria on December 1, 2024. The trip is the second visit by a high-ranking German government official after the Chancellor's visit a year earlier. This visit was a testament to the enduring partnership between Germany and Kenya in the pursuit of sustainable energy solutions.



"I am inspired by Kenya's strides in geothermal energy," said the Vice Chancellor. "The Olkaria Geothermal Complex is an engineering marvel and a beacon of hope for a future powered by renewable energy."

The visit endorsed Kenya's leadership in geothermal energy production and underscored opportunities for future collaboration in green energy development.

Dr. Habeck toured Olkaria 1AU power plant and the renowned Olkaria II Viewpoint. Impressed by the scale of operations and the innovative use of geothermal resources, he lauded Kenya's commitment to renewable energy, emphasising that the country stands as a global model in utilising clean energy

for sustainable development.

"I am inspired by Kenya's strides in geothermal energy," said the Vice Chancellor. "The Olkaria Geothermal Complex is an engineering marvel and a beacon of hope for a future powered by renewable energy."

The Vice Chancellor also took a moment to share a light-hearted anecdote, joking, "I wish someone had told me earlier to pack my swimming wear—I would have gladly taken a dip in this magnificent

spa!" His remark brought laughter and demonstrated his admiration for the integration of renewable energy with tourism and wellness at the Olkaria Spa.

Speaking further on the significance of the visit, the Vice Chancellor remarked, "Kenya has shown the world how geothermal energy can power not just economies but also innovation and livelihoods. I am inspired by what I have seen here today and look forward to deepening our cooperation to combat climate change and foster sustainable development."

Representing the Cabinet Secretary for Energy was Dr. Margaret Ngung'u, the immediate former Cabinet Secretary for Information, Communications, and the Digital Economy (MICDE). In her remarks, Dr. Ndung'u highlighted the pivotal role of strategic partnerships in Kenya's energy journey. "Kenya is proud to be at the forefront of renewable energy in Africa," the CS said. "Our collaboration with Germany has been instrumental in this success, from capacity building to financing critical projects. Together, we are proving that Africa can lead the way in clean energy transitions."

KenGen's Managing Director welcomed the Vice Chancellor, giving him and his delegation an in-depth presentation on Olkaria's operations, insights into the company's achievements and future aspirations noting "At KenGen, we see ourselves as custodians of Kenya's green future," he remarked. "This visit is a testament to our shared vision with Germany, not only in generating clean energy but also in creating a sustainable ecosystem that supports industries, communities, and tourism. Geothermal energy is a cornerstone of this strategy."

KenGen's leadership expressed gratitude for Germany's support over the years, citing the invaluable contributions of German agencies in financing and technical expertise for geothermal projects. They emphasised that the visit marked a new chapter in the partnership, with both nations exploring innovative solutions to combat climate change and accelerate the transition to clean energy. As the tour concluded, the commitment to explore further areas of cooperation was clear with the Vice Chancellor concluding that "Kenya and Germany share a common goal: a sustainable, green future. What I have seen here today reinforces my belief that together, we can make this future a reality."

The visit was a celebration of Kenya's geothermal success and a call to action for increased international collaboration. With its unique blend of innovation, resilience, and partnership, Olkaria remains a shining example of what is possible when countries unite for sustainable progress.



"Our collaboration with Germany has been instrumental in this success, from capacity building to financing critical projects. Together, we are proving that Africa can lead the way in clean energy transitions."





KenGen MD & CEO, Eng. Peter Njenga, engages Germany's Vice-Chancellor, Dr. Robert Habeck, during his visit to Olkaria.

KenGen CEO Eng. Peter Njenga Steps up to Lead Global G20 Energy Task Force, A Defining Moment for Africa's Energy Future

By Frank D. Ochieng, Manager, Marketing and Corporate Communication



"It is a defining moment, not just for KenGen and Kenya, but for the African continent," said Eng. Njenga

In what now places Kenya, and indeed Africa at the center of the global energy transition discourse, Kenya Electricity Generating Company PLC (KenGen) Managing Director and CEO, Eng. Peter Njenga, has been appointed Co-Chair of the Business 20 (B20) Task Force on Energy Mix & Just Transition under South Africa's G20 presidency.

This is not just another executive appointment. It is a resounding recognition of Kenya's renewable energy leadership and a powerful nod to the growing influence of Africa's voice in shaping the future of sustainable global energy policy.

From Olkaria to the World: A Clean Energy Champion Goes Global

For decades, Kenya has quietly built one of the most sustainable energy portfolios in the world, now drawing more than 90% of its electricity from clean sources, geothermal, hydro, wind, and increasingly, solar. At the heart of this quiet revolution has been KenGen, whose geothermal-rich fields of Olkaria have become a beacon of what is possible when vision, Science, and national will align.

Now, that story is being told on the world stage, with Eng. Njenga as one of its chief narrators, leading the global charge towards universal access and transition to green energy.

His appointment to the B20 Task Force marks a historic moment: it is the first time that the G20 Summit will be hosted on African soil, and with it, the

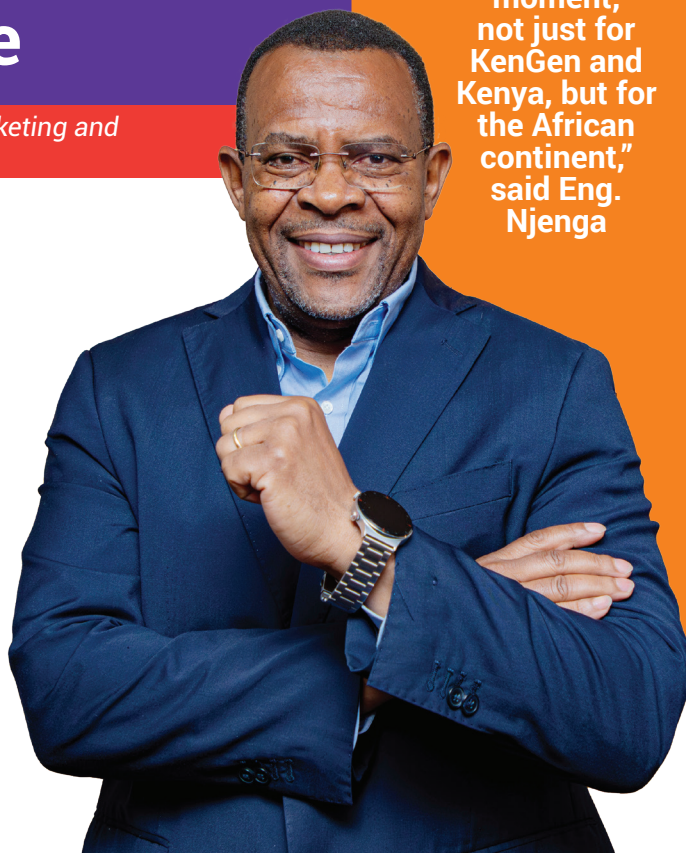
first time Africa gets a real chance to steer the global conversation on energy, climate resilience, and equitable growth from a position of leadership.

"It is a defining moment, not just for KenGen and Kenya, but for the African continent," said Eng. Njenga upon his appointment. "This recognition affirms our achievements in renewable energy, but more importantly, it provides a platform to ensure that Africa's unique realities, challenges, and opportunities are not just included — but prioritised — in global energy policy conversations."

What the B20 Task Force Means

The B20 is the official business engagement group of the G20, providing a structured platform for the private sector to influence global economic and development policies. The Task Force on Energy Mix & Just Transition is one of its most critical arms — tasked with navigating how the world transitions to cleaner energy while safeguarding economic opportunity, social inclusion, and energy security.

As Co-Chair, Eng. Njenga will work with global CEOs, policymakers, financiers, and technical experts to craft policy



recommendations that will ultimately be presented to the G20 Heads of State. This means he will be directly involved in shaping the roadmap that defines how countries — developed and developing alike — make the leap toward sustainable energy futures.

Africa's Time: Championing a Just Energy Transition

While the world races to phase out fossil fuels, Africa faces a unique dual challenge: rapidly expanding energy access to its underserved populations while ensuring the shift to clean energy does not leave its economies behind.

Eng. Njenga's voice — and his lived experience in navigating this very paradox at KenGen — brings a critical dimension to the table. Unlike most executives from the Global North, his understanding of energy transition is not theoretical. It's practical, gritty, and rooted in the real-world challenges of delivering affordable, reliable, and clean power in a developing economy.

Under his leadership, KenGen has not only expanded its geothermal footprint — now the largest in Africa at 754 MW — but also piloted innovations in wind, solar, and hybrid energy solutions. It has become a regional model for green growth, even exporting expertise to neighbouring countries.

This hands-on leadership is exactly what the B20 needs at a time when questions of equity, financing, and implementation dominate the clean energy agenda.

Kenya's Soft Power in Energy Diplomacy

Eng. Njenga's appointment is also a major win for Kenya's soft power. It positions the country not just as a beneficiary of climate finance and green technologies, but as a contributor to global knowledge and policy.

It builds on Kenya's track record — from hosting the inaugural Africa Climate Summit in 2023 to leading international geothermal partnerships through the African Union and United Nations agencies. KenGen itself has been a strategic player, engaging in cross-border energy deals and capacity-building programs with countries such as Ethiopia, Rwanda, and Djibouti.

Now, Kenya's ideas, data, and innovations will influence decisions that affect billions of people — and trillions of dollars in investments — across the globe.

Redefining What Leadership Looks Like

Eng. Njenga's career is emblematic of a new generation of African leadership in energy: technically skilled, globally



754 MW

KenGen has not only expanded its geothermal footprint — now the largest in Africa at 754 MW.

B20

The B20 is the official business engagement group of the G20, providing a structured platform for the private sector to influence global economic and development policies.



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aware, and deeply rooted in local realities. As an engineer by training and a strategist by experience, he understands that the future of energy cannot be built on policy alone — it must be built on infrastructure, innovation, and inclusive growth.

His appointment also speaks to the rising recognition that African leaders are not just implementers of Western-drafted blueprints — they are architects of the future. They bring fresh insights from the frontlines of climate vulnerability, energy poverty, and infrastructure development — insights that are crucial if the global transition is to be truly just.

A Win for KenGen — and the Continent

For KenGen, this moment reaffirms its position as more than a utility company. It is now a thought leader, an influencer, and a strategic player in the global sustainability agenda.

The company's ambition — to be a key driver of Kenya's transition to 100% clean energy and to export green energy solutions across Africa — gains fresh momentum with Eng. Njenga's

appointment. His role will open new doors for partnerships, technology transfer, and green financing, directly benefitting KenGen's strategy and Kenya's Vision 2030 goals.

Looking to the G20 and Beyond

As the world prepares for the G20 Leaders' Summit in South Africa, the energy conversation has never been more urgent. From Europe's post-conflict energy realignments to Asia's industrial decarbonization and the Americas' climate financing debates — all eyes are on how energy powers the next chapter of global development.

With Eng. Njenga at the table, Africa is not just watching. Africa is leading. His voice — steady, grounded, and visionary, leading with God as his guide — will ensure that the continent's needs, strengths, and aspirations are reflected in the new global energy order.

And in doing so, he carries with him not just the hopes of KenGen, but the power of Kenya and the promise of an African continent ready to light itself and inspire the world.

KenGen Sweeps Several Awards at the Africa Renewable Energy Gala

By Nisma Abdalla, Intern Marketing and Corporate Communication Division



If Hollywood has the Oscars to celebrate cinematic brilliance, Africa's energy industry has its own prestigious event—the Africa Renewable Energy Awards. This glamorous gala honors the visionaries and trailblazers driving the continent's renewable energy revolution. This year's theme, GRIT—Growth, Resilience, Innovation, and Transition, perfectly encapsulates the values KenGen lives and breathes.

First, win was by Patrick Gikunju, Assistant Manager of Safety at Olkaria, who won the Health and Safety Champion Award. Patrick's relentless efforts to ensure safety across our power plants and fields earned him this honor. His dedication to creating safe work environments is a shining example of KenGen's commitment to its people.

The second victory went to KenGen Marketing and Corporate Communication, who won the Marketing Campaign of the Year Award for their remarkable Jenga KenGen campaign. Their innovative storytelling and impactful messaging have elevated

KenGen's brand to new heights. The award is a testament to their hard work and creativity. Bravo, Team Marketing!

This year's awards introduced a new category, the Africa Queen Energy Awards, recognising the achievements of women in the energy sector. These awards highlight the vital role inclusivity and diversity play in driving Africa's energy transition. Women are breaking barriers and inspiring change, proving their indispensable contributions to the industry.

The keynote speakers at the event painted a comprehensive picture of Africa's renewable energy landscape. They emphasized immense opportunities, such as scaling up renewable solutions for commercial enterprises, agriculture, mobility, and domestic applications. Climate-smart agriculture, green financing, and digital technologies, like advanced monitoring systems, present promising avenues for growth.

During the gala the speakers also addressed the challenges that remains millions of people lack access to

reliable power, and infrastructure limitations hinder progress, particularly for innovations like electric vehicles.

Additionally, the shift toward renewables has revealed skill gaps and led to job displacement in traditional energy roles. Startlingly, 50% of energy is lost before reaching end-users, while 40% is wasted during use. Curbing these inefficiencies through operational behavior changes, energy monitoring systems, and policy interventions is essential for a sustainable future.

One key takeaway that resonated strongly from the awards is, "If it doesn't need to be used, don't use it." This call to action underscores the importance of fostering a culture of energy efficiency and monitoring. Stakeholder collaboration will be pivotal to ensuring an equitable green energy transition.

Winning these prestigious awards reaffirms KenGen's leadership in renewable energy and commitment to creating value for stakeholders.

As Patrick Gikunju humbly stated, "I pledge to continue working with our teams to promote a safe work environment as we generate electricity." These accolades are a testament to our GRIT—our growth, resilience, innovation, and commitment to transition, added Patrick.

Congratulations, KenGen family! Whether setting new standards in safety, driving impactful campaigns, or championing inclusivity, we're leading Africa's renewable energy journey. KenGen is at the forefront, paving the way for a bright future.





KenGen Joins Elite Team to Lead Kenya's Carbon Market Revolution

By Emmanuel Wandera Assistant Manager, External Communication and Media Relations

Kenya Electricity Generating Company PLC (KenGen) has been appointed to the Multi-Sectoral Technical Committee (MSTC), a high-level team tasked with shaping Kenya's carbon market framework. This prestigious three-year appointment, effective November 22, 2024, was announced by the immediate former Cabinet Secretary for Environment, Climate Change, and Forestry, Hon. Aden Duale, through a gazette notice. The move positions KenGen at the forefront of advancing Africa's carbon trading future and unlocking new opportunities in the fight against climate change.

Reacting to the appointment, KenGen Managing Director and CEO, Eng. Peter Njenga, hailed it as a timely recognition of the company's contributions to sustainable development.

"We are honoured to join this climate-positive committee, which will be a key role in advancing the climate agenda not just in Kenya but across Africa. KenGen's



"This appointment underscores KenGen's leadership in clean energy innovation, driving sustainable solutions that power our nation and contribute to global efforts to combat climate change."

extensive experience in renewable energy and carbon credit generation uniquely positions us to provide valuable insights and help shape a robust carbon market framework for Kenya," said Eng. Njenga.

The Managing Director and CEO added, "This appointment underscores KenGen's leadership in clean energy innovation, driving sustainable solutions that power our nation and contribute to global efforts to combat climate change."

The appointment, made under the Climate Change Act, 2013, and the newly enacted Climate Change (Carbon Markets) Regulations, 2024, establishes a technical structure to oversee the development of carbon projects and facilitate participation in carbon markets.

Reacting to the news, Acting General Manager of Commercial Services, Ronoh Kibet, OGW, congratulated the KenGen team steering the climate action agenda on their "well-deserved appointment to the Multi-Sectoral Technical Committee (MSTC)." "This recognition of your expertise is a significant achievement and a crucial step towards enabling the commercialisation of our carbon credits and positioning KenGen as a climate-positive company. Your efforts in providing technical advice on carbon project assessment will be instrumental in advancing our initiatives and fulfilling our vision," said Kibet. The initiative is expected to catalyse the growth of Kenya's carbon economy, paving the way for the country to monetise its climate actions through the sale of carbon credits. KenGen, a trailblazer in clean energy production, brings a wealth of expertise to the committee, having earned a cumulative 6.9 million carbon credits from six Clean Development Mechanism (CDM) projects registered under the United Nations Framework Convention on Climate Change (UNFCCC). These projects include the Olkaria II Geothermal Expansion, the Redevelopment of Tana Hydro Power Station, and the Ngong Wind Project, among others. The MSTC is a multidisciplinary body comprising representatives from key government

ministries, counties, and agencies. Its primary mandate is to provide technical advice to the Designated National Authority (National Environment Management Authority, NEMA) on carbon project assessments. This collaboration ensures alignment with international climate protocols while fostering local expertise and innovation. KenGen's inclusion in the MSTC aligns

with its strategic focus on renewable energy, with over 90% of its electricity generated from clean sources such as geothermal, hydro, and wind. By leveraging its experience and technical know-how, KenGen aims to strengthen Kenya's position as a leader in climate action and green energy.

Through the MSTC, Kenya is set to establish a robust carbon market, allowing public and private entities to trade emission reduction units, offsets, and mitigation outcomes. This mechanism will play a critical role in driving investments into climate projects and ensuring compliance with national and international regulations.

CARBON CREDITS EXPLAINED



WHAT IS A CARBON CREDIT?

- A carbon credit is a certificate or permit that grants the holder the right to emit a certain amount of CO₂ or other greenhouse gases.
- Each carbon credit represents one metric ton of CO₂ that has either been avoided or prevented from entering the atmosphere.

$$1 \text{ CARBON CREDIT} = 1 \text{ ton CO}_2\text{e avoided/removed}$$



Atoms to the Rescue: Africa's Climate Strategy

By Purity Mawia Mutua, Senior Corporate Communication Officer, NuPEA

Africa is at the frontlines of climate change, where the intertwining crises of water scarcity and energy insecurity grow more urgent each year. From the vast arid plains of northern Kenya to the drought-stricken farmlands of southern Africa, millions of lives are at risk due to dwindling water supplies. Meanwhile, the continent's energy demands continue to soar as populations grow and economies expand. To address these intertwined challenges, Africa must explore sustainable energy solutions that not only provide reliable electricity but also conserve its precious water resources. Nuclear energy, with its low water footprint, emerges as a key player in this effort, offering the continent a path to climate resilience and energy security.

The Water Footprint of Energy Production: Why It Matters

Water is the lifeblood of any economy, yet it is becoming an increasingly scarce resource in many parts of Africa. What many people may not realize is how deeply energy production is tied to water consumption. Traditional energy sources like coal, natural gas, and even some renewable energy technologies require massive amounts of water for cooling and steam production. In a region already battling water shortages, these energy systems are exacerbating the crisis.

Take, for example, coal-fired power plants. These facilities consume millions of litres of water per day just to keep their operations running. To put this into perspective, one coal plant can use as much water in a day



Nuclear energy, with its low water footprint, emerges as a key player in this effort, offering the continent a path to climate resilience and energy security.

as 5,000 households. With Africa's freshwater resources dwindling, the current reliance on such energy sources is unsustainable.

In regions where agriculture and human consumption already stretch water resources to the limit, the additional burden of water-intensive power generation is leading to economic and social strain. Communities that once relied on nearby rivers and lakes for farming are now seeing those sources depleted. If Africa continues to rely heavily on such forms of energy, the strain on water resources will become even more severe as both population and energy demands grow.

Nuclear Energy's Low Water Usage: A Climate-Resilient Solution

Nuclear power offers a stark contrast to these traditional energy systems. While some nuclear plants do use water for cooling, their overall water consumption is much lower compared to coal, oil, or natural gas facilities. In fact, certain advanced nuclear technologies, like Small Modular Reactors (SMRs), have been specifically designed to minimise or even eliminate the need for water cooling, making them ideal for regions where water is scarce.

Unlike fossil fuel plants, which require a continuous intake of water, nuclear reactors can operate with closed-loop systems that recycle water, significantly reducing waste. For water-stressed regions of Africa, this makes nuclear power not just an energy solution, but a lifeline. By adopting nuclear technology, African countries can ensure a stable energy supply without further draining their water resources.

This is especially important for a continent where energy poverty remains a significant barrier to development. With nuclear power, Africa can move toward a future where reliable electricity does not come at the cost of water security. And in doing so, nuclear energy positions itself as a climate-resilient solution—one that addresses both the energy and environmental challenges Africa faces.

Advanced Nuclear Technology: Innovating for Efficiency and Sustainability

Recent advancements in nuclear technology further strengthen the case for nuclear energy in Africa's climate adaptation strategy. Small Modular Reactors (SMRs) are particularly promising. These reactors are designed to be more efficient, safer, and less reliant on water than traditional large-scale nuclear plants. With their smaller size and modular design, SMRs can be deployed more easily across Africa, including in remote areas where access to large water bodies is limited.

In addition to SMRs, other innovations like molten salt reactors and gas-cooled reactors are being developed to operate with minimal water usage. These technologies offer Africa an opportunity to leapfrog past the water-intensive energy systems that have long been the standard, positioning the continent as a global leader in sustainable energy technology.

For countries that have historically struggled to develop large-scale infrastructure projects, the flexibility and scalability of these new reactors present an attractive option. Nuclear energy, powered by such innovations, could offer the ideal solution for Africa's growing energy needs, all while conserving one of its most precious resources—water.

Call to Action: Building Africa's Climate-Resilient Energy Future

Africa stands at a critical crossroads in its energy future. With the looming threats of climate change and water scarcity, the choices made today will determine the continent's ability to thrive in the decades ahead. Nuclear energy, with its minimal water requirements and reliable output, offers a pathway forward that addresses both energy security and climate resilience.

It's time for policymakers, business leaders, and civil society to take decisive action. Governments must integrate nuclear power into their national energy strategies, while also ensuring the right regulatory frameworks are in place to support its safe deployment.



International partnerships, such as those with the U.S. and other nuclear power leaders, can provide the technical expertise and funding needed to kickstart Africa's nuclear energy revolution.

At the same time, public education is crucial. Misconceptions about nuclear energy often hinder progress, and it is essential to foster open dialogues that address safety concerns and highlight the tangible benefits nuclear power brings—particularly in water conservation and climate adaptation. The clock is ticking. With every year that passes, the impacts of climate change become more pronounced, and the strain on Africa's water resources grows. But there is hope. By embracing nuclear energy, Africa can chart a course toward a more resilient, sustainable, and prosperous future—one where energy abundance no longer comes at the cost of water scarcity.



AI: A Game-Changer in Climate Resilience and Energy Management for IDA Nations

By Thuo Njoroge Daniel, Energy Economist, at Canales Auty International

Artificial Intelligence (AI) is emerging as a powerful tool in managing climate change and enhancing resilience in energy systems, especially in International Development Association (IDA) countries like Kenya.

Studies by the World Bank show that approximately 100 million people in IDA countries are affected by climate change almost eight times more than those in other regions.

Analysts warn these nations risk sliding into extreme poverty by 2030. Ironically, despite their negligible contribution to global greenhouse gas emissions, IDA countries face disproportionate climate vulnerabilities.

AI and machine learning provide promising solutions to help these economies transition toward greener, more resilient, and inclusive societies.

AI-driven systems offer tools for weather prediction, slope stability analysis,

and early warning systems that detect natural disasters such as landslides and icebergs while identifying pollution hotspots.

In agriculture, a sector that dominates IDA economies, predictive AI tools help monitor weather patterns and anticipate risks such as crop failure. This allows farmers to take anticipatory action, plan better, and manage harvests effectively during droughts.

For instance, a study by the Central Bank of Kenya highlighted how the 2020–2023 drought, the worst since the 1980s, widened the inequality gap and set back poverty reduction efforts by 20 years. By predicting crop failures, AI can help farmers adopt new farming methods and improve livestock management, boosting food security and sustainability.

AI also optimises the agricultural supply chain, enabling farmers to increase efficiency and reduce waste. This leads to more sustainable production and

better resilience in the face of climate shocks.

In the energy sector, AI enhances reliability and resilience. By analysing electricity demand and consumption patterns, AI can predict potential network failures and detect security threats.

This proactive approach reduces the risk of large-scale power outages, which have increasingly affected Kenyan businesses and households.

While conventional methods rely on manual responses, AI-driven resilience modeling offers utility operators real-time data to make informed decisions and improve grid stability.

Machine learning is also crucial in integrating renewable energy. One of the biggest challenges with renewables like solar and wind is their dependency on fluctuating weather conditions. AI-driven weather forecasting helps optimize energy storage and grid management.

KenGen's recent plan to invest in Battery Energy Storage Systems (BESS) is a step in the right direction. Integrating AI algorithms with BESS technology would ensure efficient charging and discharging, making renewable energy more reliable and guaranteeing better grid stability.

Hydropower, Kenya's oldest power generation technology, also stands to benefit from AI.

Many facilities, such as Kamburu and Masinga, have exceeded their return on investment but now face rising operation and maintenance (O&M) costs.

AI-enabled predictive maintenance can analyse data from sensors to detect potential issues early.

This proactive approach reduces downtime, lowers maintenance costs, and extends the lifespan of hydropower infrastructure.

Finally, AI plays a pivotal role in digitization. As Kenya invests in its digital superhighway, sectors like energy must leverage this infrastructure to accelerate adaptation efforts, protect biodiversity, and drive the green transition.

AI and machine learning will be indispensable in building a sustainable, resilient, and inclusive future.



Never Stop Working, Take a Rest but Work Must Go On

By Frank D. Ochieng, Manager, Marketing and Corporate Communication

My resolution for 2025 and indeed for the rest of my remaining time on earth is this — Never stop working! I know what you are thinking that I am advocating for a relentless call to exhaustion, a glorification of the non-stop hustle that has left many burned out, disillusioned, and detached from the very lives they were working to build. Far from it.

As a matter of fact, when I shared this with my team during our annual strategic workshop, one member particularly took offense and put up a spirited campaign to strike it from the list of 'what we must do in 2025'. Unfortunately for her, (I will not mention names) she was a lone fighter, but she worked hard nonetheless to sell her point. In effect she was still working. For me work is the very reason for existence of life. Anything that lives, works, be it human, an animal, or even plants. All living creatures are constantly working. The difference lies in the quality of work. Most people chose to do the work by taking five every so often.

I define work as the continuous process of growth, learning, and forward momentum, even when you fall, you must fall forward. That is work at its very basics. But do not get me wrong here, let me make one thing clear from the outset. To keep working, you must avoid working yourself to the point of collapse. Instead, have a plan that ensures you are always in motion, always improving, constantly learning, but never stagnant.

One classical theory I subscribe to is the systems theory. According to this theory, the most efficient and effective systems are those that maintain a dynamic equilibrium, constantly adjusting and refining themselves in response to internal and external

factors. The human body is a one good example. Even in your sleep, your heart keeps beating, your cells regenerate, and your brain process and store memories. Frankly speaking, if any of these processes were to stop, the system would collapse. The same principle applies to life and work.

The other day we ordered pizza at home. It was raining cats and dogs, felling trees blocking several roads in the city. Yet, when we dialed up, the call was picked from the other side. Despite the rains-inspired gridlock, and the pounding rains, our pizza was delivered at our doorstep. Now imagine if the pizza companies decided to stop working because of the rains, which by the way is a very good reason to shut down the ovens!

My friends, the moment you stop learning, you start forgetting. The moment you stop adapting, you start falling behind. The moment you stop challenging yourself, you start growing weaker. Let me repeat this, it is not about working at full capacity every second of every day, rather, it is about ensuring that you are always engaged in something that contributes to your long-term goals, whether through action, learning, reflection, or rest that leads to recovery.

If you asked Kipchoge Keino to tell you the secret to his GOAT-class success, I am sure he will say that sustained excellence is not a sprint but a carefully managed series of effort and rest. Thomas Edison for one was known to take short naps to refresh his mind so he could work on his inventions for longer hours.

Even Albert Einstein, a man whose name is synonymous with genius, knew that long walks and idle moments were necessary for groundbreaking ideas to emerge. There is nothing as therapeutic

as a short nap after lunch. When you get up after about 20 minutes, it feels like the day has just begun, you end up having two days in one. Those in the Seven Forks will best relate to this analogy. The Tana River is one animal that never stops working, neither does it thrust at full speed all year round. There are high and low seasons. In some places it bends, some sections it slows, but it never stops flowing, feeding the great Masinga and his four wives. When a river stagnates, it becomes a breeding ground for decay. The same applies to people. When you stop pushing forward be it mentally, physically, or emotionally your productivity starts going south.

Whereas rest is crucial, it should not be mistaken for stopping to work. A farmer does not stop working just because the harvest is over; they prepare the land for the next planting season. Rest is not the opposite of work — it is a part of it. Rest is simply renewing yourself so that you can continue moving forward.

The Bible captures this balance perfectly in Ecclesiastes 9:10, "Whatever your hand finds to do, do it with all your might, for in the realm of the dead, where you are going, there is neither working nor planning nor knowledge nor wisdom."

So, my big take for today is that you need to learn to move like River Tana and learn to rest like an athlete. Keep the mind active, the body engaged, and the spirit growing. Work wisely, work consistently, and most importantly — work in a way that allows you to work forever. If there is forever!

Next week, we will focus on one other item we agreed as a team to stop - No Useless Arguments — I know a number of you are already arguing about this piece, but whether you agree with me or not, one thing remains clear, work will never stop, even if you do.



The Mighty Jewel Gogo: An Energy Colossus for Migori Residents

By Philip Mukusya, Ag Manager, Community Relations

One of the marvels of Gogo Power Station is the resilient spirit of KenGen, which reverberates across the station, just as it does at Stima Plaza, Olkaria, Masinga, and every other area where KenGeners are energising the economy. It's hard to believe that just months before, upgrade work was about to begin, increasing capacity from 2 MW to 8.6 MW.

Men and women were at Gogo power station work as if the station—installed in 1957—was destined to last another century. One of the two Vertical Kaplan machines was undergoing maintenance. Despite the machine's mechanical nature, the work was anything but ordinary. There were no printed boards, no buttons to press—just bolts, nuts, spanners, hammers, turning wheels, and rails.

When you compare the 1957-installed Gogo machines with Masinga's 1981 equipment and Olkaria's 2022 Unit 1 AU (6), the story is clear: energy generation has come a long way. And throughout this 70-year journey, KenGen has remained a household name in Kenya's energy transformation.

Before I get lost in the excitement of telling the energy story, I want to highlight that the Environmental and Social Impact Assessment (ESIA) for Gogo's upgrade has been completed, with approvals awarded. We are now in the final stages of land acquisition, and the upgrade is about to kick off.

Despite this upcoming transformation, the spirit of the staff at Gogo is unwavering. I watched them work tirelessly, weaving shiny steel parts together to return the machine under maintenance back to operation. I



“As it stands, the power station is already a marvel for the community. It provides treated drinking water, phone charging points, and scholarship opportunities.”

overheard a group of technicians seated under an old mango tree overlooking the powerhouse, and let me tell you, they're fully immersed in their craft—the only term I understood was “round file!” Another marvel in the making is the upcoming social hall. The contractor, just as dedicated as KenGen itself, is



bringing the project to life. Changes are noticeable every day as the social hall begins to take shape. Once completed, employees will enjoy a scenic view of the falls and the rock-filled River Kuja Valley, which separates the Uriri and Nyatike sub-counties. This is the famous Nyatike, known for gold mining in Migori County.

Within the power station compound, monumental rocks and ancient trees stand undisturbed by an axe. Among them, a round gazebo offers a unique space where employees gather for lunch. The spirit of family is palpable as they dine together in a home-like setting, complete with a TV and a photo of the President displayed on the wall beside it.

A similar sense of togetherness can only be found in Turkwel. How I wish we could foster this same spirit at the Central Office, where employees tend to avoid each other during lunch breaks.

Among the benefits coming with the Gogo upgrade for the local communities are two bridges. One will span the River Kuja, connecting Uriri and Nyatike sub-counties, a true marvel for the people who have long had to cross the river at the intake of the power station—often in precarious balancing acts on motorbikes or while carrying water and firewood.

Another bridge will cross River Oyani, linking West Kanyamkango and Central Kanyamkango, two neighbouring locations in the Uriri sub-county that become isolated during the rainy

season. This bridge will make travel easier for schoolchildren, traders, and patients seeking medical care.

As it stands, the power station is already a marvel for the community. It provides treated drinking water, phone charging points, and scholarship opportunities. The area also benefits from KenGen's corporate social responsibility (CSR) initiatives, such as the sports kits donated to Gogo FC this week as part of the title deeds issuance ceremony held on December 20, 2024.

For the communities, the upgrade of Gogo Power Station will be another monumental step. The mood on the ground is one of optimism, as people believe KenGen will continue to deliver on its promises.





Where Cycling, Adventure Meet Green Energy

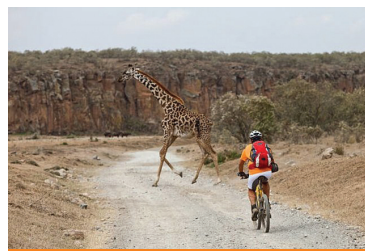
By Jeremiah Njanja, Founder, Whistle Africa Tours & Events, and Team Leader, Hell's Gate Biking Fest



This Spa, naturally heated by geothermal energy, has become a must-visit destination for our participants, offering a soothing, exhilarating swimming experience during and after the races and festivities at Hell's Gate Biking Fest.



Every pedal stroke during Hell's Gate Biking Fest, takes you through KenGen's Olkaria grounds echoing our commitment to reducing our carbon footprint and advocating for clean, renewable energy sources like the geothermal energy that KenGen champions.



By combining cycling, adventure, conservation, and geothermal energy, we are not just cycling for fun but for a future powered by clean energy, where tourism and energy sectors collaborate for a greener planet.

Nestled in the heart of Kenya's Great Rift Valley, Hell's Gate National Park is a breathtaking destination renowned for its dramatic landscapes, geothermal wonders, and diverse wildlife, including buffaloes, zebras, elands, and giraffes among other resident animals. Spectacular sceneries include towering cliffs, deep

gorges, rock towers, and belching plumes of geothermal steam, making Hell's Gate one of Africa's most atmospheric parks.

Beyond its natural beauty, the park has emerged as a hub for adventure and sustainable tourism, exemplified by the annual Hell's Gate Biking Fest. This event creates a fusion where all

adventure seekers, cycling enthusiasts, and conservation champions unite and celebrate at Africa's most unique cycling festival, aimed at uniting the cycling and non-cycling communities for conservation. With the park hosting a geothermal power plant, the synergy between sports and renewable energy is more evident than ever. Cyclists navigate not just through the park's

stunning nature but alongside the pulse of green energy that powers our future.

During this year's edition (HGBF2024), we embarked on an adventure that wasn't just about the thrill of cycling, but about celebrating sustainability and green energy – all thanks to Kenya Electricity Generating Company PLC (KenGen), our proud 'Official Green Silver Sponsor' and the leading player in the region's green energy sector.

KenGen's commitment to harnessing the Earth's heat to generate clean energy through the geothermal power plant has made our event venue, the Olkaria Grounds at Hell's Gate National Park, a symbol of sustainable innovation. This innovative project has not only contributed to Kenya's energy security but has also created a unique tourist attraction: the Olkaria Geothermal Spa – a marvel of engineering and an active contributor to eco-tourism. This Spa, naturally heated by geothermal energy, has become a must-visit destination for our participants, offering a soothing, exhilarating swimming experience during and after the races and festivities at Hell's Gate Biking Fest. It is a unique blend of action and relaxation, demonstrating that tourism, energy, and environmental consciousness can co-exist harmoniously.

Biking is more than just a sport – it's an environmentally friendly mode of transport that aligns with KenGen's green energy mission. At Hell's Gate

Biking Fest, we see cycling as a bridge – a way to connect people with nature, raise awareness about sustainability, and demonstrate how we can use alternative modes of transport to make a tangible difference. The festival is not just a biking event; it is a movement, powered by the energy of the riders and the green energy of KenGen. Every pedal stroke during the event takes you through KenGen's Olkaria grounds echoing our commitment to reducing our carbon footprint and advocating for clean, renewable energy sources like the geothermal energy that KenGen champions.

KenGen's partnership with the event underscores the importance of sustainable tourism and how energy can play a critical role in preserving our natural heritage. The partnership demonstrates that in addition to Hell's Gate being a haven for wildlife and adventure seekers, it is also a beacon of how green energy can coexist with eco-tourism. The geothermal power plants blend seamlessly into the landscape, powering homes, industries, and dreams, while also allowing visitors to experience nature in its purest form.

Our collaboration with KenGen at HGBF2024 wasn't just symbolic – it was active. As part of our commitment to green tourism and environmental stewardship, we mobilised cyclists and event participants to plant trees within Hell's Gate, an initiative sponsored by KenGen. This tree-planting initiative

was aimed at creating a lasting legacy of environmental preservation, ensuring that future generations can continue to enjoy the park's pristine beauty.

As Kenya continues to embrace sustainable tourism, initiatives like Hells Gate Biking Fest will play a crucial role in preserving the country's natural heritage and aiding the economic growth of local communities. The event showcases the immense potential for collaboration between the sports, tourism, and energy sectors in promoting sustainable development. By combining cycling, adventure, conservation, and geothermal energy, we are not just cycling for fun but for a future powered by clean energy, where tourism and energy sectors collaborate for a greener planet. The event strives to continue creating a unique and memorable experience for participants while highlighting the importance of green initiatives.

Our sincere appreciation to KenGen, our 'Official Green Silver Sponsor', HGBF2024 was not only thrilling but also meaningful. Together, we pedaled for a purpose – for sustainability, for green energy, and for the preservation of our planet. Moving forward, we are excited to continue using cycling as a tool to promote sustainability, and we hope to inspire more green initiatives, just like those KenGen continues to champion at Olkaria grounds and beyond.



Nuclear Energy: Kenya's New Frontier for Clean, Affordable Electricity

By Bassett Buyukah, Director, Publicity and Advocacy, NuPEA

Diversification of Kenya's energy mix, energy security and climate change mitigation are the three premises on which the country's quest for nuclear electricity is fathered.

Spawned as part of the Vision 2030 blueprint by the National Economic and Social Council in 2010, its cogency finds a slipstream in the energy needs projected for the country as it aspires for middle-income economic status. The projected demand in manufacturing, industry, infrastructure and even domestic use is the bellwether for innovative approaches geared at ensuring adequate, reliable and clean energy.

Up steps nuclear energy. Indeed, the technology has been deployed for a long time in fields as diverse as health, agriculture, water, research, and industry, among others. When it comes to electricity generation, the basic principle is similar to geothermal and other sources. The sole difference being deployment of uranium as the fuel source to cause a chain reaction that generates heat and thus the steam, which turns the turbine.

One of the key attractions is that the cost of a nuclear power plant compares very well with other sources of electricity, over its full lifetime, which is in the region of 60-80 years. Whereas the cost of initial construction may be high, it more than evens itself out during the operation phase.



300 - 1400 MW

Nuclear power plants come in various sizes/capacities covering the full gamut between 300 – 1400 MW.

Nuclear power plants come in various sizes/capacities covering the full gamut between 300 – 1400 MW. It is important to note that Kenya is considering Small Modular Reactors (SMRs).

A small modular reactor has a capacity of about 300 MW. They are small in physical bulk, modular as components can be factory-assembled and transported to location for installation and reactors since they deploy nuclear technology to generate heat to produce



300 MW

Kenya is considering Small Modular reactors (SMRs) that has a capacity of about 300MW.

energy.

In terms of safety features, these types of nuclear reactors are marked by high safety margins, which significantly reduces the potential for unsafe releases of radioactivity to the environment. Further, Small Modular Reactors may require fueling every 3-7 years, which is less than the current 2 years for conventional plants.

These factors result in less spent fuel, addressing issues often associated with



The current plan is for Kenya's first nuclear power plant for electricity generation to be commissioned in 2034.

415

Statistics from the International Atomic Energy Agency's Power Reactor Information System (PRIS) indicate that there are 415 nuclear power reactors currently operational.

57

In addition, there are 57 new nuclear power plants under construction. These are spread out across Africa, Europe, Middle East, North America, Asia and Latin America.

nuclear waste. Indeed, onsite storage of spent fuel in casks is widely practiced successfully around the world.

An oft-stated concern around nuclear energy revolves around issues to do with the accidents that occurred at Chernobyl, Ukraine in 1986 and more contemporaneously Fukushima Daichi in Japan in 2010.

In the Fukushima aftermath, it is incumbent to note that key improvements have been undertaken that have greatly impacted on design, regulatory and safety protocols of nuclear power plants. Indeed key lessons were obtained that have been deployed in the safe, efficient operation of similar facilities around the world.

Statistics from the International Atomic Energy Agency's Power Reactor Information System (PRIS) indicate that there are 415 nuclear power reactors currently operational. In addition, there are 57 new nuclear power plants under construction. These are spread out across Africa, Europe, Middle East, North America, Asia and Latin America.

Africa has not been left out of this energy evolutionary process as Egypt

leads the way toward joining South Africa, the continent's current sole nuclear power producer. Ghana, Nigeria, Sudan, Kenya, Morocco and Tunisia, have also made good progress within the approach recommended by the International Atomic Energy Agency (IAEA), which is in three key phases: preparatory work, construction and operation, under the framework known as Milestone approach.

Egypt is currently constructing four nuclear power plants that will boost its generation capacity by a total of 4800 MW at a site in El Dabaa: this will be based on four units each generating 1200 MW.

Kenya's programme, being spearheaded by the Nuclear Power and Energy Agency (NuPEA), conduces with the government's efforts to ensure the availability of competitively priced electricity and a low-carbon grid.

The thirty-one countries with operational nuclear power plants enjoy stable baseload power, which provides continuous supply thus spurring industrial growth and development.

Suitable locations for nuclear power

plants are often along the Coastal region. In Kenya's case, spinoffs from the nuclear power programme would include desalination of seawater, which would boost supply to the counties that are in proximity to the Indian Ocean.

Thus, water provision would be advantaged benefiting communities and even industrial/commercial users.

Nuclear electricity is envisaged as part of a robust variety of options. Like a cordon bleu chef's kitchen – complete with all kinds of condiments, the energy mix that is envisaged is appropriately set to serve up a delicious repast of electricity at affordable prices for the benefit of the Kenyan consumer.

Geothermal, hydro, wind, solar et al. fit into this jigsaw. Add into this mix, nuclear electricity generation in about a decade from now and the culinary delight has its dessert. If that whets your appetite, this is not a pipe dream but the reality evolving in this day and age.

To ensure safety and regulatory issues are well addressed, the government transformed the Radiation Protection Board into the Kenya Nuclear Regulatory Authority, (KNRA). Its role is to provide oversight and enforcement of legal requirements for all nuclear applications in Kenya.

Suffice it to say, with the will, desire and determination Kenya can attain the status of a nuclear power generating country with the various benefits that it portends. Indeed, two potential sites, have been identified along the Coastal region in Kilifi and Kwale counties respectively.

The current plan is for Kenya's first nuclear power plant for electricity generation to be commissioned in 2034. In the intervening period, there is a lot of work to be undertaken hence the long lead-time.

This is key for ensuring safety, security and safeguards are in place and all the considerations have been taken into account. Indeed this project could just be the light-bulb moment for Kenya and the East African region's liftoff into economic and industrial nirvana. The master key is to stay switched on, literally and figuratively.



The Versatility of Solar Photovoltaics in Empowering the Future

By Elizabeth Nunga

What do you do when facing an ageing and overloaded power grid? You look for new energy sources that don't necessarily require direct integration into the existing grid. As highlighted by Huawei, these alternative solutions can help ease the strain on traditional grids. The conventional power grid is already grappling with challenges of horizontal balance instability and vertical operation control, severely affecting the secure operation of the power system. This is partly due to the different energy characteristics introduced by various renewables. Despite these challenges, new energy sources such as wind and solar are set to play an increasingly critical role in shaping a sustainable future.

The Solarise Africa report indicates that even with less aggressive photovoltaic (PV) deployment, demand for PV will continue to grow to meet the goals of

the Paris Climate Agreement. According to Huawei's digitalisation trend report, in the journey toward a greener future, energy is the main battlefield, electric power is the primary force, and digitisation is the key. As renewable energy evolves rapidly, fluctuations in power generation will necessitate more advanced grid management through sophisticated control systems and voltage regulation. PV systems, in particular, offer localized, resilient energy solutions that reduce dependency on centralized grids, making them a practical solution for regions with aging power infrastructure. This resilience is especially attractive to commercial and industrial users seeking off-grid solutions that shield them from power outages caused by grid fluctuations.

Among renewable technologies, solar PV stands out for its versatility, high return on investment, and ability to reduce the levelised cost of energy



(LCOE). Solar panels can be installed on a wide range of surfaces, from agricultural lands (agrivoltaics) and water bodies (floatovoltaics) to rooftops, fences, and even apartment balconies. Innovations such as thin-film solar on glass surfaces and mini-modules have further expanded their application. Advanced technologies

like 5G, the Internet of Things (IoT), and cloud computing enhance the remote management of PV plants. A great example of this is KenGen's use of IoT to optimise its geothermal power plants, demonstrating how technology can improve efficiency across different energy sources.

We are all accustomed to seeing the typical horizontal or tilted monofacial solar panels with an opaque backing. However, Vertical Bifacial Photovoltaic (VBPV) systems are gaining traction in developed countries. Unlike traditional panels, VBPVs capture sunlight on both the front and rear sides, increasing overall energy yield through dual-surface capture. This design is particularly beneficial in regions with highly reflective surfaces or arid and semi-arid lands. Studies have shown that VBPVs are more aerodynamically stable, making them durable and safer in extreme weather conditions. These panels also meet peak energy demands during mornings and late afternoons, improving the balance between supply and demand.

Additionally, VBPVs operate at cooler temperatures than conventional panels, minimizing energy loss from overheating. Research indicates that VBPVs can achieve up to a 25% increase in energy yield, with typical figures ranging from 3% to 10%. While the upfront costs may be higher due to specialised mounting equipment, their long-term return on investment is promising, thanks to minimal maintenance requirements and a lifespan of up to 30 years.

VBPVs are well-suited for various applications, including solar fences that serve as boundary markers and privacy screens while generating energy without additional land usage. In agriculture, VBPV panels act as windbreakers, protecting crops from harsh winds while allowing farmers to generate clean energy alongside traditional farming activities. On rooftops, they offer sustainable energy solutions for commercial and industrial buildings with large roof areas and consistent energy needs. Hybridisation with wind farms is another exciting opportunity.



The Solarize Africa report indicates that even with less aggressive photovoltaic (PV) deployment, demand for PV will continue to grow to meet the goals of the Paris Climate Agreement.

Integrating VBPVs with wind projects like KenGen's planned Marsabit and Meru wind farms could significantly boost energy output and contribute toward Kenya's goal of 2.5 GW by 2030.

Even as VBPVs gain popularity, tilted monofacial photovoltaics (TMP) continue to dominate due to their lower initial investment costs. Kenya's potential for TMP is immense, with annual global horizontal irradiation levels among the best in sub-Saharan Africa. To achieve the country's Vision 2030 and support the Bottom-Up Economic Transformation Agenda (BETA), it is essential to explore all economically viable green energy solutions. Distributed PV systems combined with energy storage solutions (ESS) offer a practical path forward. These systems store excess energy generated during peak sunshine hours for later use, ensuring a stable supply even when generation fluctuates.

The rise of Virtual Power Plants (VPPs) is also revolutionizing energy management. These connected systems allow users to sell excess energy back to the grid using technologies like Wi-Fi, Bluetooth, and 5G networks. VPPs turn consumers into "prosumers"—a term coined by Huawei to describe consumers who produce energy. Tesla's solar roofs and Powerwall storage systems are great examples of how this model is

transforming the energy landscape.

Floatovoltaics—solar panels installed on bodies of water—present another promising solution. These systems provide natural cooling that helps maintain panel efficiency while minimising land use and reducing water evaporation. If installed on reservoirs behind dams, they can complement hydropower generation and significantly boost electricity output. Reports suggest that Africa holds the world's largest potential for energy generation through floatovoltaics, making it a highly viable option for the continent.

Agrivoltaics, or the integration of solar panels with agriculture, further enhances sustainability by optimizing land use. Panels mounted as canopies above farmlands shield crops from excessive sunlight while reducing water evaporation, making farming more resilient. In countries like the Netherlands and Germany, agrivoltaics has proven successful, with crops flourishing under the partial shade of solar panels. While adoption may be slow due to community reluctance, pilot projects on government land could help demonstrate the benefits and encourage wider acceptance.

Solar roofs offer yet another innovative approach. Solar shingles, which integrate directly into roof structures, provide an attractive and cost-effective alternative to traditional panels. In addition to their aesthetic appeal, solar shingles are fire-resistant and blend seamlessly with concrete or asphalt roofs, making them a popular choice for residential properties. By potentially lowering utility bills by up to 40%, they offer an impressive return on investment.

The future of energy is bright, with solar photovoltaics leading the way. Whether through vertical bifacial panels, tilted monofacial systems, floatovoltaics, or agrivoltaics, these technologies offer scalable solutions for a greener and more sustainable world. As we continue to innovate and integrate advanced technologies, the potential for solar PV to empower the future is limitless.

Nuclear Role in Africa's Energy Future: It's Time for Africa to bolster Universal Access to Electricity

By Emmanuel Wandera, Assistant Manager, External Communication and Media Relations



OECD NEA Director General William D. Magwood, IV (Centre) accompanied by His Colleagues Ursula Diffu (Left) and Tamara Yankovich during the interview with the Energy Post Magazine in Nairobi, Kenya.

The global energy transition is at a critical juncture, particularly for Africa, where the stakes couldn't be higher. In a wide-ranging interview, Bill Magwood, Director General of the OECD Nuclear Energy Agency (NEA), offers a sobering yet hopeful perspective on the continent's energy future and the role nuclear power might play in it.

"Africa will have 25% of all humanity by 2050," Magwood notes, underlining why the continent's energy development isn't just a regional concern but a global imperative. "If you have those kinds of numbers and you don't see development, it's going to be really a very difficult situation for the whole world. We can't let that happen."

The Reality Check Post-COP26

Magwood's assessment of the global energy transition is both pragmatic and urgent. He points to a significant shift in thinking that emerged after COP26 when many countries realized their initial strategies weren't adding up. "For many years, we watched as countries really believed that they could reach net zero by 2050 relying entirely on renewables and conservation," he explains. "What we have seen is that over the course of time, it really became clear that numbers were not adding up. They were not reaching net zero. In fact, in some cases, emissions were going up."

This realisation has led to a broader acceptance of nuclear energy's role in the climate solution. At COP28, leaders

from 25 countries signed a declaration calling for a tripling of global nuclear capacity – not as a gesture, Magwood emphasizes, but because "they felt that this was essential to meet the climate challenge."

No Magic Solutions

One of Magwood's key messages is that there are no easy fixes or future technological silver bullets for the energy transition. "For the energy transition that we have been talking about for the last several years, there is not going to be a lot of new technology. The tools we have today are the tools we're going to use by 2050," he states firmly. "There's no magic that's going to save us. We have to use what we have."

He particularly warns against the



OECD NEA Director General William D. Magwood, IV (Left to Right) pose with his team Ursula Diffu, Tamara Yankovich and Emmanuel Wandera Energy Post writer during the interview with the Energy Post Magazine in Nairobi, Kenya.

one-size-fits-all approach to energy solutions. “Every country has different resources. They all have different electricity systems. They have different traditions and legal structures, and that’s going to affect the choices they make,” Magwood explains. This diversity of approaches, he argues, is not just inevitable but necessary.

Africa’s Path Forward

For Africa specifically, Magwood outlines several key considerations for the path ahead. The NEA’s new initiative, “Our Common Journey,” aims to maximize the economic development potential of nuclear programs in Africa. However, he emphasises that nuclear power isn’t just about electricity generation – it’s about building broader capabilities.

“Building nuclear programs is about building skills, building capacity, building expertise that can be used for things far beyond just nuclear,” he explains. “If you train someone to be a welder because you’re building a nuclear facility, that person has a skill that can be used everywhere for everything.”

The Three Critical Challenges

Drawing from recent ministerial meetings, Magwood identifies three major challenges that need to be addressed for successful nuclear development in Africa:

The Way Forward

Magwood advocates strongly for an “all-of-the-above” approach to energy development. “No country is going to be 100% nuclear, no country is going to be 100% wind, no country



“We’re all in this together, we all have the same problems, we all have the same challenges. We’ll solve them together.”

is going to be 100% solar,” he states. “It’s all part of the same agenda.” He particularly emphasises the importance of regional cooperation in Africa. “If all African countries tried to solve all the problems all by themselves, this would solve things back a long, long time,” he warns. Instead, he advocates for shared solutions and collaborative approaches, particularly in areas like education and training.

As Africa stands at this crucial juncture in its energy development, Magwood’s message is clear: the path to energy security and universal access by 2030 will require a diverse energy mix, strong international cooperation, and a realistic assessment of each country’s unique needs and capabilities.

The challenge is enormous, but as he puts it, “We’re all in this together, we all have the same problems, we all have the same challenges. We’ll solve them together.”

1



Financing

“Everybody worries about financing,” he notes, explaining that this concern crosses all national boundaries, regardless of economic status.

2



Supply Chain

“The industrial supply chain does not exist today to do what everybody is talking about,” he warns, highlighting a global challenge that needs urgent attention.

3



Human Capacity

The need for skilled personnel remains crucial. “You can’t run a nuclear program with a few dozen smart people in the government. You need hundreds of smart people,” he emphasizes.



Is the Workplace Ready for Gen Z? Do We Understand Them?



By Anne Njeru, Senior Office Administrator

Imagine a generation wired for change, born into a world of constant connectivity. That is Generation Z popularly known as “Gen Z”, those born between 1997 and 2012. And as a parent of one, I can tell you: they are not waiting for the future – they’re building it. Armed with innovation and a digital fluency that’s second nature, they are set to disrupt everything from our social structures to our business models.

This group is more than just a continuation of the previous generations. It is a force unto itself marked by distinctive characteristics that are composed to redefine the world. Unlike their predecessors, they

are digital natives. Having grown up at a time dominated by the internet, smartphones, and social media, extensive digital presence has not only shaped the communication style but has also influenced their worldview and approach to various dimensions of life.

Thanks to their being tech-savvy, they are good at navigating digital platforms and leveraging technology for learning. Their fluency in technology places them as natural problem solvers, capable of tackling the power of innovation to address global challenges. At school, Gen Z has been found to challenge the conventional classroom model and is a supporter of personalised learning experiences. They take advantage of

technology to tailor their education, individual needs, and interests. This preference for flexibility and freedom has extended to their career aspirations with many opting for untraditional career paths that allow more creativity and work-life balance. Most of them are naturally inclined to ICT-related jobs.

Faced with uncertain economic prospects and a rapidly changing job market, however, they are now increasingly turning to entrepreneurship as a means of creating their opportunities. Many Gen Z are starting their online businesses and monetising their creative pursuits on platforms like *TikTok* and *YouTube* hence redefining traditional concepts of work and success. Generation Z is a very socially conscious generation. They are more concerned about issues such as social justice, and climate change. Unlike the previous generations, who have been less assertive in their advocacy. Gen Z are not afraid to voice their opinions and take concrete actions to effect change. They are actively engaged in shaping a better future for themselves.

As with every age, this brilliant generation is not without challenges. Many were born to busy parents who had little time for them and ended up being raised with the help of nannies and unending screen time. Consequently, they might have missed out on parental nurture. They strive to live on the fast lane and will do anything to get what they want. In the dating arena, both young men and women are now opting to date very old people rather than their peers for finances. We are continually witnessing the deaths of young people and more, so girls are killed in pursuit of quick money. Deceit in social media has not made things any better. Word of caution to older men, don’t try this generation. Stick to your own lest you burn your finger.

Mental health has taken a tall order on them and since they are fast movers, anything slowing them down becomes a huge setback. Cases of depression and suicide among this group are on the rise. They turn to alcohol and substance abuse for a temporary cure. Reckless sexual behavior is common

among this generation and most LGBTQ members are in this generation. Some will sacrifice their souls to get the fine things of life. They have taken the world by storm.

With all this in mind, the question is, how do we salvage this generation? How do we parent them? Who is bold enough to mentor them? The parenting of this generation requires a well-thought-out approach that takes into consideration their unique characteristics, upbringing, and the rapidly changing world they live in.

First and foremost, you must stay connected to them. Despite their digital fluency, Generation Z craves genuine human connections and values real interaction. It is important to make time for meaningful conversations with them. Listen to their thoughts, concerns, and aspirations without judgment and always agree to their emotions. Be a positive model for them as they learn by example. Practice the values and behaviour you want to instil in them. Always demonstrate kindness and respect in their interactions with others. Show the importance of integrity, honesty, and responsibility in all they do. Train them that it is not okay to use their bodies to fulfil worldly desires.

Embrace technology. Always encourage responsible use of digital tools and teach them about online privacy, safety, and etiquette. Be involved in their online activities but also give them space to explore and learn independently.

Be a parent who encourages analytical thinking. For this generation, information is available at their fingertips. It is important to teach them how to critically evaluate sources and think for themselves.

Always engage them in discussions about social issues, current events, and moral dilemmas.

Surrounded by competition, Generation Z faces a world full of uncertainty, complexity, and rapid changes. Help your children cultivate the act of flexibility. It is important to help



Finally, to employers, as Generation Z begins to enter the workforce in larger numbers, organisations need to adapt and accommodate their unique capabilities and preferences.

them traverse challenges, hitches, and failures. Encourage them to have a growth mindset emphasizing the importance of persistence, adaptability, and learning from mistakes.

In the same way, it is important to nurture their creativity. Always encourage pursuits whether in music, writing, or arts. Do not force them to do what you desire for them.

Be the guide, let them make the decision. Provide them opportunities to express themselves creatively and let them pursue their passions. This will reduce conflicts.

All notwithstanding, it is important to help them promote a healthy balance between screen time and other activities. Encourage face-to-face interaction, outdoor play, and downtime away from the screens.

Real-world connection is an important aspect of normal development.

Generation Z is passionate about making a difference in the world. Support their efforts to get involved in causes they care about, be it volunteering, charity, advocating for social change, or even humanitarian work.

It is important to keep communication lines open and be a helpful presence in their lives. Be willing to listen to them, and offer guidance and endless support, love, and acceptance. Always ensure they can access mental health facilities and support help where necessary. Normalize discussions about mental health with this generation and communicate openly about feelings, emotions, relationships as well and their challenges.

By practicing these strategies, parents, teachers, and even mentors, can play a useful role in supporting and allowing Generation Z to get through challenges, be resilient, build compassion, and fulfill their potential hence becoming socially reliable people.

Finally, to employers, as Generation Z begins to enter the workforce in larger numbers, organisations need to adapt and accommodate their unique capabilities and preferences. By adopting technology and cultivating a culture of inclusivity, organisations and businesses can position themselves to benefit by incorporating the talent and creativity of Generation Z in an increasingly digital-conscious world.

Kenya's Geothermal Treasure: Our Real-Life Vibranium

By Zumeza Omari

In the mood for a sci-fi fantasy film with a great soundtrack, amazing cast, compelling story, and stunning visuals? I give you *Black Panther*. The 2018 film is set in the fictional country of Wakanda, the most technologically advanced nation in the world. Wakanda is a utopia with the best education, health, and even gender parity, embodied by the Dora Milaje, an elite all-female group of warriors who serve the *Black Panther*—the king—as his personal bodyguards. All this progress is powered by vibranium, the strongest metal in the Marvel Cinematic Universe, which provides energy for Wakanda's advancement.

How can Kenya aspire to create such a utopia? How can we seamlessly blend our rich cultures with technology, create a flawless healthcare system, and achieve true equity across all classes? We may not fully achieve it, but we can certainly try. If there's one lesson to take from this fictional film, it's that we need energy—lots of it, and clean energy at that. Fortunately, Kenya has geothermal energy, and we're not far behind in recognising its importance in building a better future.

Kenya is the seventh-largest producer of geothermal energy in the world and the leading producer in Africa, with an installed geothermal capacity of 988.7 MW as of 2024. This energy is used for both electricity generation and direct applications. One of the most well-known examples of direct use is the Olkaria Geothermal Spa, a natural hot water pool offering luxurious relaxation that nourishes physical, mental, and spiritual well-being. Other uses include milk pasteurisation, horticulture, aquaculture, grain drying, and laundry

services.

KenGen is at the heart of this geothermal development, producing most of the power in Kenya. The company owns five major geothermal power stations: Olkaria I (268.3 MW), Olkaria II (105 MW), Olkaria III (139 MW), Olkaria IV (140 MW), and Olkaria V (158 MW). Additionally, KenGen operates 15 wellhead generation plants—14 at Olkaria (75 MW) and one 2.5 MW plant being commissioned at Eburru. Oserian Development Company has also built two small-scale plants with a total capacity of 4 MW to power its rose farm facilities.

The Geothermal Development Company (GDC) complements these efforts by developing steam fields and supplying geothermal steam to KenGen for electricity generation. Geothermal energy is derived from heat within the Earth and harnessed through geothermal resources in the form of hot water or steam. Unlike solar, wind, or hydro, geothermal energy is not dependent on weather or climate. It relies on the Earth's internal heat, a resource that will not run out any time soon.

Geothermal energy accounts for about 47% of Kenya's total energy production. The resource is primarily found along the East African Rift System, which stretches from Lake Turkana in northern Kenya to Lake Natron on the border with Tanzania. Globally, geothermal resources are concentrated along tectonic boundaries, such as the Pacific Ring of Fire and the sub-plates of Africa, where the Nubian and Somali plates are splitting. This rift system creates magmatic hotspots, which are ideal for

tapping geothermal resources. Kenya's geothermal potential is estimated at 10,000 MW.

Ethiopia is the only other African country currently generating geothermal energy, with an installed capacity of 7.5 MW and a similar potential of 10,000 MW. Through collaboration with Iceland's GRO Geothermal Training Programme and Kenya's Geothermal Development Company, KenGen has been training university students, energy professionals, and government officials across East Africa on geothermal exploration and development—sharing Kenya's expertise, much like Wakanda does in *Black Panther*.

Africa as a continent has significant geothermal potential, with about 14 high-potential areas beyond East Africa. These include northernmost Africa, the Gulf of Suez and Gulf of Aqaba in Egypt, the Red Sea, Liberia, Ivory Coast, Djibouti, the Lake Albert Rift in DRC and Uganda, Lake Kivu, the Tanzanian Rift, Zambia, Botswana, South Africa, and Namibia. In most of these regions, geothermal energy could be applied for industrial heating rather than electricity generation.

Energy is a major driver of social structure, industrialization, and economic growth. Massive investment is needed in clean, renewable sources such as geothermal. Kenya is not only a leader in geothermal energy in Africa but also a frontrunner on the global stage. With continued support from the government and aid from international partnerships, Kenya is one step closer to creating its own version of Wakanda.

Saving the Thermals: Make Use of Gas to Power Retired Thermal Plants

By Anthony Kahindi Kenga, Oil & Gas, Standards & QMS Expert



I am in support of the Government of Kenya's target to achieve 100% of its electrical energy generation from renewable sources by 2030.

It is not yet time. In pursuit of this goal, Kenya launched the Kenya Energy Transition Investment Plan (ETIP) at the United Nations Climate Change Conference (COP 28). This plan is designed to replace fossil fuel electrification with low-carbon alternatives, primarily sourced from renewable energy. The chickens have come home to roost, because as of December 2023, the installed capacity of renewable energy sources reached 2,776.3 MW, constituting only 79.56% of Kenya's total installed capacity. The transition and investment path guiding principles are environmental sustainability, energy system costs, economic impact, social implications, and security of supply. To embrace these principles, we need an orderly transition for the energy sector. One that is efficient, flexible and reliable

to realize the zero-emission future. We can't wish away thermal plants without an alternative solution. We need them. We must modify them for economic growth.

According to the EPRA Bi-Annual Energy and Petroleum Statistics Report 2023/2024, Kenya's installed electricity demand stood at 3,200 MW as the nation experienced a decrease of 73.5 MW. This was primarily attributed to the expiration of the power purchase agreement for the Kipevu 1 power plant. Notably, no new grid-interconnected power generation plants were commissioned during this review period. And to make matters worse, more thermal power plants have been decommissioned.

Conversely, the International Energy Agency (IEA) projects that the electricity demand rate will be on an upward trajectory to an average of 5.7 per cent between 2024 and



The future of electrical energy generation looks bleak, full of stress, lowered buffer capacities and likely numerous load shedding and rationing.

2026. This translates into the nation consuming more than 13,000 GWh by the year 2027. This can be confirmed by the aforementioned EPRA report – between July and December 2023, a total of 253,480 new customers were connected, contributing to a cumulative grid-connected customer base of

9,456,158. In that fiscal year alone, more than 400,000 new customers were connected. In FY 2021/2022 alone, more than 700,00 people were connected to the national grid. Imagine if this is to triple, add to it electric mobility and Kenya's vision to boost trade and spur economic growth via Special Economic Zones, e.g., the Dongo Kundu SEZ planned to be developed on a 3000-acre land and will comprise a free port, industrial parks, free trade zones, logistics and warehousing, energy project areas, tourism, and MICE among other developments.

The future of electrical energy generation looks bleak, full of stress, lowered buffer capacities and likely numerous load shedding and rationing. This may not grow as fast to match the steady increase in demand. We are likely to import more electricity than the envisioned 400 MW. No, this is too low for the demand! To make matters worse, there is a change in the policy for buying electricity from independent power producers. To avert the crisis, demand exceeding the electrical energy generation, we need an alternative, which is the use of natural gas in the thermal plants.

The advantages to this option are that the gas-powered plants will provide system redundancy since they are flexible and efficient. Also, LNG has a high calorific value after hydrogen, a green fuel. Kenya will also enjoy the advantage of low emissions to the environment. Given the strategic location of some of the retired plants, there's another edge as LNG is now being used in the transportation industry. In August, Mombasa port received the first-ever tanker powered by liquefied natural gas (LNG) boosting the gateway's go-green emissions strategy in line with the International Convention for the Prevention of Pollution from Ships (Marpol Convention). With proper and planning, the LNG infrastructure from Tanzania can be harnessed to serve both sectors, electricity generation and transportation. Last but not least, because of their wobble indexes, LNG can be replaced with LPG; the biggest LPG bulk handling plants are located around the Mombasa Port.



Lithium-ion Battery Supply Chain Wars Where is Africa in all These?

Bob Osoro, Business Process Reengineering

Lithium battery production relies on a global supply chain composed of mineral extraction and production, mineral refinement and processing, and battery cell production and battery pack assembly. This supply chain is a complex network of organisations, people, activities, information and resources.

Historically, Australia and the Lithium Triangle of South America, particularly Chile and Argentina, alongside China, have been the epicentre of global lithium production. Australia and China complement each other in this Supply Chain. Australia supplies 46% of lithium chemicals and a large proportion goes to Chinese processing facilities and then to Chinese battery and EV

makers. China produces 60% of the world's lithium products and 75% of all lithium-ion batteries, primarily powering its rapidly growing EV market, which accounts for 60% of the world's total. This geographical concentration of lithium sources presents a complex set of geopolitical, economic, social, and supply chain challenges.

The race to dominate the lithium-ion battery industry is part of the broader US-China geopolitical rivalry. On one side of the ring, the United States, under the Biden administration, has focused on reshoring critical supply chains, with an emphasis on securing domestic or allied sources of lithium, cobalt, and rare earth materials to reduce dependency on China. Some of the policies the administration put in place

to achieve this include the \$7B funding for battery supply chain development through the Infrastructure Investment and Jobs Acts passed in 2021, which supports domestic extraction of critical minerals like lithium, cobalt and nickel as well as the entire supply chain. The law also includes incentives to build Gigafactories in the US for Li-ion production which has been widely received by companies such as Tesla, GM and Ford, that are ramping up production, of EV batteries. This will cement US presence throughout the Li-ion supply chain.

On top of several other domestic policies such as the Defense Production Act (DPA) and Inflation Reduction Act (IRA) both passed in 2022 to accelerate domestic production, the US is also keen on forming strategic Alliances and partnerships with allied countries such as Canada, Australia and Chile to secure the critical raw materials needed for Li-ion batteries.

On the other side of the ring, China's Belt and Road Initiative (BRI) launched in 2013 by President Xi Jinping has significantly sparked geopolitical debate due to concerns about debt, transparency, and China's strategic objectives. BRI spans over 140 countries, covering more than 60% of the world's population and 30% of the global GDP. Back here at home in Africa, BRI projects such as railways, roads and ports in Kenya, Ethiopia and Djibouti, for example, have secured China's efforts to facilitate trade and access to natural resources. Many of these BRI projects are strategically located in resource rich regions in Africa and Asia allowing China to secure access to natural resources such as minerals. The dependencies created by the infrastructure investments, and Debt diplomacy concerns that China may use debt as leverage to gain control over strategic assets, play a significant role in China's dominance in Li-ion supply chain battles.

Warming up outside the ring is European Union (EU), which is working to reduce reliance on external powers for energy materials. Through the Green Deal, the continent is investing in creating its own battery supply chain, including

mining projects in Portugal and Finland, as well as significant investment in Gigafactories to produce batteries domestically. Watch out for them.

However, this begs the question; What becomes of the other players in this ecosystem? What is the take home for Australia, Chile and Africa as the key sources for Raw materials? Well, they've all benefited from these partnerships through economic growth, foreign investment, access to new export markets, and technology transfer. This however is not evenly felt across the three continents. Of notable concern, for example, US and Australia are working on developing lithium processing facilities in Australia, and Chile has discussed similar ambitions to increase domestic refining capacity. Africa is visibly absent in such discussions due to reduced bargaining power when entering into these partnerships. Debt dependence on these global powers leads to many African countries being more willing to agree to less favorable terms.

For instance, Chinese companies might secure long-term concessions for mining rights in exchange for debt relief or new loans. China's model often involves building infrastructure in exchange for long term access to resources, which ties African countries to Chinese interests.

The US, through international institutions like the IMF and World Bank, can also influence African countries

by offering debt restructuring or relief programs in exchange for loyalty and alignment of policies to US'. DRC for instance has found itself in a "Debt for resource" trap where it is pressured into deals that grant foreign companies extensive control over extraction with limited local benefit because of her high debt levels.

Another undoing for Africa is short term liquidity, rather than long term development. This is pretty obvious for debt ridden African countries that may feel compelled to prioritise short term revenue generation through mineral extraction rather than negotiating for greater value addition.

They prioritise exporting raw materials, e.g., lithium over investing in the infrastructure needed for downstream processing such as battery manufacturing.

While countries rich in critical resources like cobalt (DRC) and lithium hold Valuable assets in the global transition to renewable energy, their debt obligations often force them into less favourable deals with global powers. Both China and the US use debt as a lever to secure access to Africa's resources, often limiting the continent's ability to fully benefit from its mineral wealth. Diversifying partnerships, strengthening debt management, and investing in value-added industries are crucial for Africa to regain leverage in this strategic supply chain.



From Waste to Warmth: Creating Cost-Effective Charcoal Alternatives

By Yvonne Gichuru

In Africa, 80% of households depend on traditional fuels like charcoal and firewood, a practice that drives extensive deforestation. As a result, Africa loses about 3.9 million hectares of forest annually. To secure a sustainable future, we need to do better. But before asking people to stop cutting down trees for firewood and charcoal, we must first offer them affordable, viable alternatives. After all, how else will they cook their meals?

The solution lies in implementing sustainable practices such as making charcoal production more eco-friendly, for example, by growing dedicated woodfuel plantations, and using alternative feedstock for charcoal. This approach can significantly reduce deforestation and provide new opportunities for innovation in the energy sector.

Alternatives to traditional charcoal include materials like charcoal dust, sawdust, and agricultural residues such as cotton stalks, coconut shells, coffee husks, rice husks, sugarcane trash, maize cobs, and macadamia husks. These materials can be turned into briquettes, providing a cleaner, greener alternative while addressing waste management challenges. The diverse range of feedstock also means communities can produce briquettes using locally available resources.

However, creating these alternatives must be simple and cost-effective. The key is to ensure that the finished product is as readily available and affordable as traditional charcoal. For instance, a 2 kg container of charcoal can cost as little as Kshs 50 in some areas. Why would anyone switch to a more expensive alternative when the current option is cheaper? Cost is crucial.

Affordable alternatives require a production process that anyone can manage. Waste materials are often

abundant and inexpensive, making them an ideal raw material. Carbonization can be done using affordable kilns, while natural binders such as cassava flour, clay, or molasses hold the briquettes together. Shaping and drying them can be done with basic equipment, and packaging can use recycled materials, keeping costs low.

The sector is also seeing remarkable innovations, such as the Alternative Charcoal Tool (ACT). Developed by Biomass Technology Group BV on behalf of NL Agency, this interactive tool provides valuable insights into alternative charcoal production. Available for free, the tool helps users assess feedstock, market potential, production costs, and suitable technology. It offers a step-by-step process, making it easier for individuals and organisations to venture into alternative charcoal production.

In Lang'ata, a youth group is turning waste into wealth through briquette production. Silas, a 23-year-old operator at Karibu Briquettes, explains how they use charcoal dust from local vendors and wastepaper from nearby schools to make affordable briquettes. They sort the charcoal dust, soak the paper for use as a binder, and mix it with the dust before compressing it with a machine built by a local jua kali artisan. The briquettes are then sun-dried and sold at Kshs. 50 per kilo—much cheaper than traditional charcoal at Kshs. 80. Smokeless and long-burning, these briquettes are not only economical but also healthier for users.

In Kikambala, Mombasa, Kencoco Ltd is making waves with its Ecomakaa briquettes, which are produced from coconut shells and charcoal dust. According to founder Said Twahir, Kencoco produces up to two tonnes of briquettes daily. The process involves roasting and grinding coconut shells into powder, mixing it with charcoal

dust and cornstarch, and pressing it into shape. These briquettes are healthier, cheaper, and more sustainable, providing a practical alternative while contributing to waste management and reducing deforestation.

In Gituamba, Eastleigh, Jackson Njeru's journey into briquette production began in 2016 when locals destroyed trees on his farm for firewood. Determined to find a solution, he learned about briquette-making from YouTube. Although the initial batches failed, he eventually perfected his recipe using charcoal dust, rice husks, and cassava flour as a binder. His makaa digital business now provides affordable fuel to mama mbogas while generating a steady income. A kilo of briquettes costs just Kshs. 30 and burns for eight hours—far cheaper and more efficient than traditional charcoal.

In Kamulu, a group of persons with disabilities has found dignity and income through briquette production. Using charcoal dust, sawdust, and red soil as a binder, the group produces briquettes that help them support their families. Jeremiah Wachira, their chairman, speaks passionately about how this venture has transformed their lives and allowed them to contribute to environmental conservation.

These changemakers are proof of what is possible with innovation and determination in the charcoal production value chain. By using the Alternative Charcoal Tool, local communities can make data-informed decisions and create affordable alternatives with readily available materials. This approach not only provides clean cooking fuel but also offers a steady income, making it a win for both individuals and the environment. A shift to these alternatives means reduced deforestation, cleaner energy, and healthier communities—a true transformation from waste to warmth.



Guinea Bissau President Falls for Allure of Africa's Home of Steam

By Evelyn Mwaura, Marketing Communication Officer

As the January sun beat down on Kenya's vast Rift Valley, President Umaro Sissoco Embaló of Guinea-Bissau stepped off his delegation's convoy and into Africa's Home of Geothermal, our Olkaria Geothermal Fields. This was no

ordinary tour; it was a moment where two African nations united to discuss Africa's role in the just energy transition and a shared vision of sustainable development. For KenGen, it was a moment of validation, an opportunity to showcase our unwavering leadership in renewable energy and to demonstrate

the very heart of Kenya's future of clean and sustainable energy. We were not just hosting a foreign dignitary; we were proudly presenting to the world what we've achieved over the last few decades.

As the delegation arrived, I couldn't help but feel a sense of pride. There we stood in the middle of Olkaria, Kenya's very own "Home of Geothermal", with its beautiful landscape dotted by power plants, an embodiment of our nation's visionary investment in geothermal energy.

"We stand here today as the pioneers of geothermal energy on the African continent. Our success story is not just ours, it's a story we want to share with the world," said General Manager, Geothermal Development, Peketsa Mangi, during his presentation to the delegation. "Kenya has become a symbol of what can be achieved when we take bold steps toward harnessing our natural resources. We are here to share this knowledge, this success, with our African brothers and sisters," the General Manager added.

The story of geothermal energy in Kenya is one of ambition, resilience, and sustainability. From the first geothermal plant that came online in 1981, KenGen has grown to become a global leader in the renewable energy sector. Today, we are generating 754 MW of geothermal power, making Kenya the world's seventh-largest producer of geothermal energy. This is no small feat, this achievement has been made possible by the dedication and passion of every one of us at KenGen. From #TeamJenGa engineers and technicians to administrative staff, every person has played a part in our remarkable journey.

"Our Olkaria Geothermal Fields are not only vital to Kenya's energy security but also serve as a beacon of hope for the wider African continent. Should Guinea-Bissau, with its capacity of 30MW, want to explore similar pathways to boost its energy infrastructure, we are ready to partner with them," Peketsa Mangi mentioned during his presentation, stating that KenGen believes in the power of collaboration and knowledge sharing to build a greener, sustainable Africa.

Kenya being a member of the Eastern Africa Power Pool (EAPP), KenGen's role extends beyond Kenya's borders. The EAPP aims to create a fully integrated power market in the Eastern African region, allowing nations to share energy resources, improve connectivity, and achieve energy security. Through this, KenGen is contributing to the regional effort of ensuring that energy becomes a driver of economic growth across the continent.

Guinea-Bissau's visit reflects the growing recognition of geothermal energy as a clean, sustainable, and reliable source of power.

Our expertise, developed through years of rigorous research, development, and collaboration with global partners, is at the forefront of Africa's energy future. Our work in Olkaria has helped place Kenya on the map as a leader in geothermal energy, and we are now extending that leadership by supporting our fellow African nations.

The presidential visit to our operations

is just one example of how we are positioning ourselves as not only a power producer but also a centre of excellence in geothermal energy. From capacity building and training to offering consultancy services in geothermal exploration and drilling, Geothermal Training Centre. The visit also allowed us to reflect on the progress Kenya has made in the energy sector, particularly in terms of geothermal energy development.

As we move forward, our focus remains on expanding Kenya's energy infrastructure and promoting regional cooperation. The Government of Kenya has set a target for universal electricity access by 2030, and we at KenGen should always remember that we are playing a central role in achieving this goal. President Embaló's visit was a symbol of African unity between Kenya and Guinea-Bissau, and an opportunity to highlight the power of renewable energy as a force for change, which we did in the grand #JenGaKenGen style! For KenGen's success, is Kenya's success.



"We stand here today as the pioneers of geothermal energy on the African continent. Our success story is not just ours, it's a story we want to share with the world," said General Manager, Geothermal Development, Peketsa Mangi, during his presentation to the delegation.





Change of Fuel: A Global Practice-based Solution to Climate Change

By Kisao Fidel

The natural environment plays a fundamental role in promoting human civilisation. It is from the natural environment that we find the opportunity to build an accommodative human environment. Therefore, to ensure a rich, long-lasting, and sustainable civilisation we must take great care in ensuring environmental sustainability within our localities.

Amongst many critical issues that warrant urgency in promoting environmental health and ensuring sustainable development is the headache of global climate change. Global warming is real and poses the greatest threats to the survival of mankind and the preservation of biodiversity.

Fortunately, one pragmatic solution to this unprecedented global concern is the change of fuel initiative. Change of fuel is simply the adoption, utilisation, and transition to clean energy resources, many of which are collectively referred to as renewable energy such as solar energy, biofuels, etc. Such energy sources do not emit greenhouse gases (GHG) into the atmosphere and thus do good by the earth's ozone layer. Change of fuel also entails the use of energy-efficient cooking solutions.

Furthermore, changes of fuel initiatives that embrace the use of renewable energy resources are not only environmentally friendly but also good for human health. Clean energy as opposed to charcoal or coal does not produce carbon monoxide (soot) or other effluent gases that cause

various respiratory illnesses, prolonged headaches, unconsciousness, or sometimes death. Far from being safe, clean energy sources such as Liquefied Natural Gas (LNG) are efficient and convenient. Transition to clean energy cooking technologies and solutions reduce the cooking time while utilizing fewer amounts of fuel. This is stupendously beneficial, especially to low-income communities. This transition provides an opportunity for saving extra income that could otherwise be used in procuring non-renewable and unclean energy resources such as charcoal, kerosene, or other fossil fuels.

Consequently, this transition spans long-term socioeconomic benefits such as the creation of employment, proper utilization of waste resources, and promotion of environmental sustainability. Change of fuel is a tested major solution to the current global environmental crisis. It ensures clean and efficient energy is provided to all while taking into consideration both the human and natural environment's well-being.

Additionally, the change of fuel and transition to clean energy solutions also work to fulfill the United Nation's Sustainable Development Goal (SDG) number seven (7) of affordable and clean energy. In a nutshell, SDG 7 is all about providing communities with access to reliable, affordable, and sustainable energy solutions that match modern trends and avail other economic benefits.

On a global scale, Africa rests itself with one of the largest renewable energy potentials. The continent has the

capacity to solve these crises in less time and the process promotes extra socioeconomic opportunities. Change of fuel and transition to clean energy for African communities will tag along with other benefits such as the creation of employment, rural electrification, community empowerment, resource utilization, waste management, and environmental protection and conservation. So far so good. African states like Kenya have taken bold steps to ensure environmental sustainability by tapping into their renewable energy potential and spearheading technological research in these fields.

In May 2023, the first Kenya Airways passenger plane utilising sustainable aviation fuel (SAF) produced from biomass resources departed from Nairobi to Amsterdam. This is both a pragmatic solution to global warming and reputable feat that can be emulated by other African states to spearhead long-lasting changes in the field of environmental conservation.

In conclusion, the change of fuel is a transition to a clean energy initiative that ensures that the public adopts and uses more clean energy sources for their daily energy needs.

This initiative ensures more clean and affordable energy is utilised thereby spanning greater socio-economic transformation. In addition, this initiative helps realise SDG 13, i.e., Climate Action by spearheading decarbonisation through the promotion of clean energy for transportation and cooking solutions.



KenGen and NFDK's Journey Toward Disability Inclusion

By Judith Mbogo, Senior Marketing Communication Officer, KenGen

Self- Introduction

My name is Judith Mbogo and I serve as the Senior Marketing and Communication Officer at Kenya Electricity Generating Company PLC (KenGen). It is a role that aligns with my passion for driving impactful community projects while enhancing KenGen's brand visibility and stakeholder relationships.

Background information on your organisation

KenGen is East Africa's leading power producer, established in 1954, with a mandate to deliver affordable and reliable electricity that powers the region's socio-economic development.

The Company boasts an impressive installed capacity of 1,785 MW, with over 90% derived from green energy sources, including hydro, geothermal, and wind power. This is in line with the global Climate Action goals.

Our vision is to be the market leader in renewable energy solutions, and we achieve this by leveraging skilled talent, innovative technologies, engaging closely with stakeholders

and employing efficient processes. Beyond power generation, KenGen actively participates in community empowerment initiatives that resonate with our values and mission.

Association of KenGen with NFDK

At KenGen, we believe in creating opportunities that uplift and empower communities, aligning with our dedication to national development.

It is in this spirit that KenGen established a partnership with National Fund for the Disabled in Kenya (NFDK) in 2022, further strengthening our collaboration in 2024 as part of our Corporate Social Investment (CSI) program to support Persons with Disabilities (PWDs).

Together, we've made significant strides in transforming the learning environment for students with disabilities. Through the renovation and furnishing of dormitories at Kipsania Integrated Primary School in Elgeyo Marakwet County, Kaloleni Primary School in Machakos County, and Kibos School for the Blind in Kisumu County, we have directly impacted over 500 students. These projects have provided



dignified, accessible, and inclusive spaces where students can learn, live, and thrive, a critical step in fostering equity and social inclusion.

Personal Reflection on the Impact

Walking into these schools and seeing the transformation was incredibly moving. I remember the joy on the students' faces as they explored their

newly renovated dormitories, the spaces designed to meet their unique needs. Their gratitude was palpable, their excitement contagious and their smiles unforgettable. Watching their gratefulness was deeply moving as it re-affirmed the transformative power of partnerships like this. It was a humbling reminder that while electricity lights up homes, acts of kindness and inclusion light up lives.

Milestones and Proud Achievements in the partnership

Since its inception, the partnership with NFDK has achieved remarkable milestones, particularly in expanding educational access for children with disabilities. Notably, we have successfully furnished dormitories, directly impacting the lives of hundreds of students by providing them with safer and more supportive learning environments. In 2024 alone, we invested over KSh. 1.6 million, building on the KSh. 900,000 contribution in 2022.

Beyond infrastructure, these initiatives have heightened awareness of the importance of inclusion and disability-friendly spaces, reinforcing KenGen's belief that corporate success is measured not only in numbers but in the lives, we touch.

Overcoming Challenges in the partnership

Like any meaningful initiative, this journey has not been without its hurdles. Securing sustainable funding for long-term impact, addressing logistical difficulties in remote areas and navigating through the diverse needs of different disabilities require strategic planning and adaptability. Additionally, combating stigma and changing societal perceptions around disability inclusion in communities can sometimes impact the effectiveness of these projects.

However, these challenges have only fueled and strengthened our resolve to do more. Through in-depth needs assessments, relentless advocacy, and targeted capacity building efforts, we continue to develop innovative solutions that drive meaningful and

lasting change.

Future Opportunities for Growth

The impact of this initiative has been profound as it has opened several avenues while paving the way for KenGen's continued growth in championing disability inclusion. There are immense opportunities for further collaborations including supporting PWDs in vocational training and skill development to foster their self-reliance. Another key focus is initiating public awareness campaigns to challenge stereotypes and advocate for disability inclusion. Additionally, strengthening partnerships with key stakeholders like NFDK will continue to amplify our collective impact. These efforts would not only deepen KenGen's social impact but also solidify our role as a champion of sustainable development in Kenya.

Driving Inclusion Forward

KenGen's partnership with NFDK exemplifies our commitment

to empowering marginalised communities. By addressing the unique challenges faced by PWDs, we're creating pathways to greater educational access and inclusion. Moving forward, our partnership with NFDK has the potential to reach greater heights, amplifying our shared goals of championing diversity, equity and inclusivity across Kenya.

Concluding remarks

This partnership has been a testament to the incredible power of collaboration. Through collective effort, we have changed lives, restored hope and reaffirmed that true progress is measured by the impact we have on others.

KenGen is not just in the business of generating electricity; we are in the business of lighting up futures and nurturing communities. And with every life we touch, we reaffirm our commitment to making a difference.



POEM

What We Are

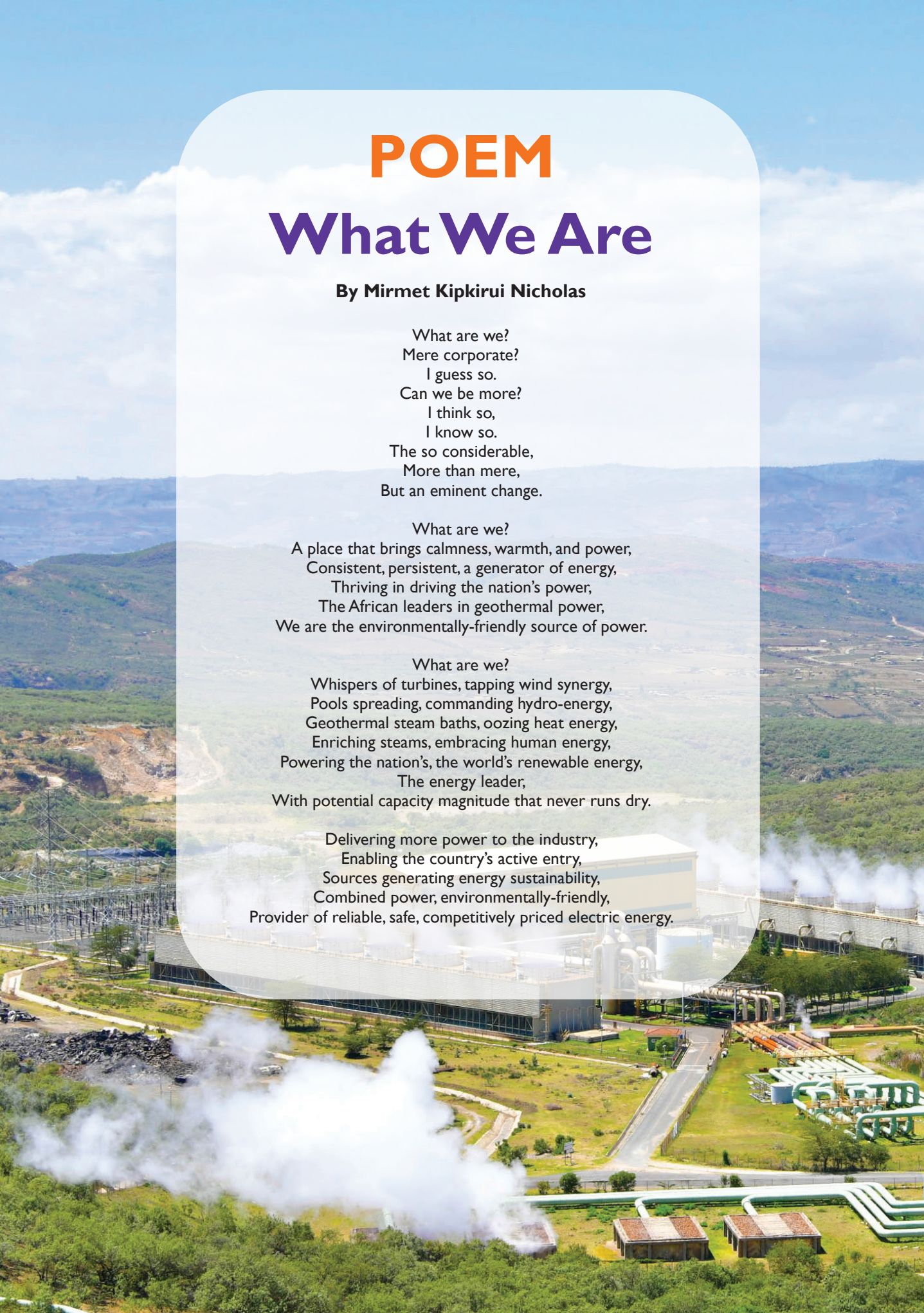
By Mirmet Kipkirui Nicholas

What are we?
Mere corporate?
I guess so.
Can we be more?
I think so,
I know so.
The so considerable,
More than mere,
But an eminent change.

What are we?
A place that brings calmness, warmth, and power,
Consistent, persistent, a generator of energy,
Thriving in driving the nation's power,
The African leaders in geothermal power,
We are the environmentally-friendly source of power.

What are we?
Whispers of turbines, tapping wind synergy,
Pools spreading, commanding hydro-energy,
Geothermal steam baths, oozing heat energy,
Enriching steams, embracing human energy,
Powering the nation's, the world's renewable energy,
The energy leader,
With potential capacity magnitude that never runs dry.

Delivering more power to the industry,
Enabling the country's active entry,
Sources generating energy sustainability,
Combined power, environmentally-friendly,
Provider of reliable, safe, competitively priced electric energy.





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