AUGUST 2022 WRAPPER

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We need $4 billion to achieve universal electrification - Batebe

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Deep earth

EXECUTIVE SUMMARY

Dear reader

We are back. After more than two years away, the Deep Earth International wrapper returns to these streets, bigger and better. The break has given us time to refocus the direction of the company and offer you a better product.

To our new readers, the wrapper is the only special magazine that offers unrivalled coverage of the oil and gas, electricity and mining industries in East Africa.

For this August edition, we return with a richer product – bringing you two special interviews. In the first interview, we talk to Irene Batebe, the permanent secretary in Uganda's ministry of Energy and Mineral Development, as she marked one year in that position. Find out what she says about Uganda's journey to achieving financial close for its oil project.

In the second interview, Tim Harrison, the managing director of Ionic Rare Earths Limited, tells us about the prospects of the rare earths at Makuutu, and plans of getting what could arguably be Uganda's biggest mining project to production.

In Uganda's oil industry, we explore the latest developments about the oil refinery, and when the project's final investment decision is expected.

Our main story in the electricity industry in Uganda is about the generation and distribution concessions, which are drawing closer to the end. What is the future of Umeme in Uganda?

Don't miss our special coverage of the final shortlist of companies bidding for the Kilembe copper mines.

OUR MAIN story in the electricity industry in Uganda is about the generation and distribution concessions, which are drawing closer to the end. What is the future of Umeme in Uganda?

Kenya's oil industry is taking a different turn as the old players increasingly look to sell their stake in a couple of oil blocks. Find out who is looking to sell and buy.

In Tanzania, one of the country's biggest gold projects – Geita – has been receiving different guests over the last couple of months. Find out what AngloGold Ashanti is trying to do to fix the issues at Geita.

Fidele Abimana was recently appointed the permanent secretary in Rwanda's ministry of Infrastructure. We take a look at some of his assignments in the electricity industry.

Uganda approves oil refinery engineering design

Government has approved the front-end engineering design by the Albertine Graben Energy Consortium for the oil refinery, to be built at Kabaale in Hoima district, while the environmental studies for the same project are also close to completion.

The approval of the front-end engineering design (FEED) – one of the most important documents for the project - means that the technical features of the oil refinery are now cleared, all of which will guide the construction of what should be East Africa's biggest oil refinery.

The Petroleum Authority of Uganda, which approved the FEED, in a statement, noted: "Government has reviewed the FEED and the refinery project has been confirmed to be safe, technically sound, and environmentally compliant. As required by law, the developer has also carried out an Environmental and Social Impact Assessment (ESIA), which is being used to validate the design by ensuring that the necessary measures to protect the people and the environment have been carefully and adequately considered during the design process."

The FEED includes the lump-sum turnkey price of the project, which had earlier been estimated to cost about $4 billion.

The environmental studies for the project are said to be 98 per cent complete.

The completion and approval of the oil refinery's front-end engineering design has been a long and tedious process, with a Ugandan delegation making the trip to Milan, Italy in February to meet the investor and reiterate the urgency to get things moving.

At the completion of the different preparation studies, the consortium - which consists of Saipem SPA, Nuovo Pignone International SRL (both from Italy), Yaatra Africa, and Lionworks Group Limited (both domiciled in Mauritius) – is expected to sign a final investment decision for the 60,000-barrels-per-day refinery by June 2023.

However, it is nearly impossible to beat the June 2023 deadline.

At the moment, government is negotiating with the oil upstream companies on the crude supply agreement. This agreement is what gives the debt market the confidence that the refinery will have feedstock.

There are other agreements being negotiated, such as the Implementation agreement, and the Shareholders agreement.

Also, compensation of project-affected persons for their land has been halted due to financial constraints on government, although the exercise is expected to resume in October 2022.

The refinery also comprises a 213km multi-product pipeline, and a terminal at Buloba. The refinery will also generate Liquefied Petroleum Gas (LPG) that will help offset the use of biomass for domestic cooking.

60,000-BARRELS

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DGR to drill two wells at Kanywataba by March 2023

DGR Energy Limited, the operator of the Kanywataba oil block in Ntoroko district, plans to drill two wells in March 2023, the first such activity since receiving its license nearly four years ago.

The Australian company, which also operates the Turaco oil block, has been locked in disagreements with the Uganda government over the conditions of its work programme at Kanywataba – putting its field activities on hold, first due to heavy rains in Ntoroko, and later Covid-19. The disagreements, which stem from a proposal by DGR to stop any further work in the field if results from its unfinished 2D seismic survey are unfavourable, appeared to have tested government's patience. The company feels it would be a waste of money to drill the well if the results are not good enough. Government, on the other hand, prefers that companies stick to the conditions of the license in order to de-risk the block as drilling the wells offers a clearer picture of how prospective the area is.

DGR says it is currently interpreting additional 2D seismic data, which will inform its plans of drilling the two wells. The company estimates the Kanywataba block to have 1.2 billion barrels of oil in place.

DRG also says that it has identified two prospects at the Turaco oil block for drilling in 2024. Turaco, one of the oldest blocks in Uganda, which was operated by Heritage Oil more than 20 years ago, is also found in the Semiliki basin close to the Kanywataba block.

TotalEnergies, Cnooc say oil rigs pass environment test

TotalEnergies and Cnooc Limited are preparing to receive two separate rigs at their oil projects in western Uganda, a milestone that is set to kick off a busy drilling campaign.

Both oil rigs were shipped off from China, a country that is set to take centre stage in Uganda's oil industry, especially after criticism from environmental activists made it difficult for a number of European companies to participate in the project.

Sinopec Zhongyuan Oil Engineering Limited is confident that the rig it shipped in August for TotalEnergies' Tilenga oil project passes many environmental tests. Tilenga is located in an environmentally-sensitive area, which has the Murchison Falls national park.

"Following the completion of the building works, a rig endurance test was conducted to certify the operability of the rig," TotalEnergies noted in a statement. It added: "The ZPEB Rig 1501 is a highly innovative 1,500 Horsepower walking land rig with full integration, automation, low emission and fully soundproof." The rig was assembled in Sichuan Province, China.

China Oil Services Limited had earlier in late July also flagged off its drilling rig for the Kingfisher oilfield, which is operated by Cnooc.

Describing it as the first 8km fully-automated silent rig in Africa, Cnooc said the "LR8001 is a deluxe land rig customized for the Kingfisher project in Uganda with reduced noise and discharge." The deepest well in the Kingfisher, which straddles Lake Albert, is about 8,000 metres.

Sinopec, which assembled the rig, said "the silent machine also demonstrates green, efficient, intelligent and environmentally friendly features."

Jinja fuel storage has 8 million litres

In a rare revelation of Uganda's fuel reserves, Finance Minister Matia Kasaija says the country has eight million litres at the Jinja storage reserves.

The revelation is a departure from the old policy of keeping the figure secret due to "security reasons."

The amount at Jinja points to how much fuel the country has in case of a drastic shortage. The eight million litres are just enough to take the country for a day, and it points to an urgent need to restock the fuel reserves.

Quoting Kasaija, the ministry of Finance, Planning and Economic Development, said that "the financing requirement for national fuel reserves is estimated at $30 million for acquisition of 22 million litres worth of fuel stock. The Uganda National Oil Company was authorised to purchase trading stocks as part of national fuel reserve." The Jinja reserves have a capacity to hold 30 million litres of fuel.

In March 2020, the Uganda National Oil Company (UNOC) made its first supply of petroleum products – in partnership with retail dealer Stabex – to the market. However, UNOC has faced financing challenges to be able to stamp its footprint in the market.

In May 2017, the ministry of Energy handed over the Jinja storage reserves to UNOC. UNOC entered into a joint venture with M/s One Petroleum Ltd to revamp the storage reserves to international standards.

$30 MILLION

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Islamic bank lends Uganda $100 million for oil pipeline

The Islamic Development Bank has agreed to finance the East African Crude Oil Pipeline with $100 million, a signal that the final close for the project is close.

The bank, on its website, announced, that "the discovery of oil in Uganda gives the country a unique chance to transform its economy by improving infrastructure and reducing poverty. We are proud to support the government with $100 million in financing the East Africa Crude Oil Pipeline project to help export its oil."

The oil companies are expected to announce the financial close for its oil project before the end of this year, opening up its oil industry to a flurry of activities as Uganda races to produce its first barrel of oil by the first quarter of 2025. The project has faced widespread criticism from environmentalists, which has scared away some financial institutions from Europe.

Uganda plans to build a 1,445km underground heated crude oil pipeline from Hoima to the Tanzanian port of Tanga, through which 212,000 barrels of crude oil will be moved.

Govt to take over Eskom concession as market awaits Umeme decision

Uganda will need to pay Eskom Uganda Limited $85 million as part of the conditions for winding up the 20-year concession of managing the Kiira and Nalubaale power projects.

The concession is set to end in March 2023, and our sources in the ministry of Finance, Planning and Economic Development say the Uganda government has already prepared the Uganda Electricity Generation Company Limited to take over the plants.

The ministry of Finance is already making arrangements to make the money available, our source said. Failure to avail the money will see Eskom, a South African company, carry on with the projects on a caretaker basis. Both the Nalubaale and Kiira power projects have a combined generation capacity of 380MW, which accounts for nearly a third of Uganda's overall capacity.

The end of Eskom's concession for the generation plants also raises attention to another arrangement that Uganda's government has with Umeme for the distribution network. The 20-year Umeme concession is scheduled to end in March 2025.

The Uganda government is currently locked in negotiations with Umeme Limited to conclude the matter. Umeme manages more than 90 per cent of the electricity distribution network in Uganda, with customers of more than 1.5 million.

Our source in the ministry of Finance says the pay-out amount for Umeme is higher, nearly $200 million – a factor that might play a part in keeping Umeme around for a while.

However, government is likely to change the set-up of managing the distribution network by also being a participant. The Uganda Electricity Distribution Company Limited has not built enough capacity as its counterpart on the generation side though, and handing it the responsibility of the distribution segment might be seen as handing a young boy a man's job.

It is not clear whether the shape of the set-up will be a public private partnership, therefore, as that would require government to meet its share of the financing requirements. At the moment, the distribution network is thought to require at least $120 million in investments to match the growing generation of electricity.

Uganda is currently facing critical financing needs as its debt moves to worrying levels, more than 50 per cent of its gross domestic product.

Still, the government is expected to make a decision on the Umeme concession before the end of this year.

Further delay in making the decision is holding back investment capital in the distribution network, which is hurting the quality of service on the network.

380MW

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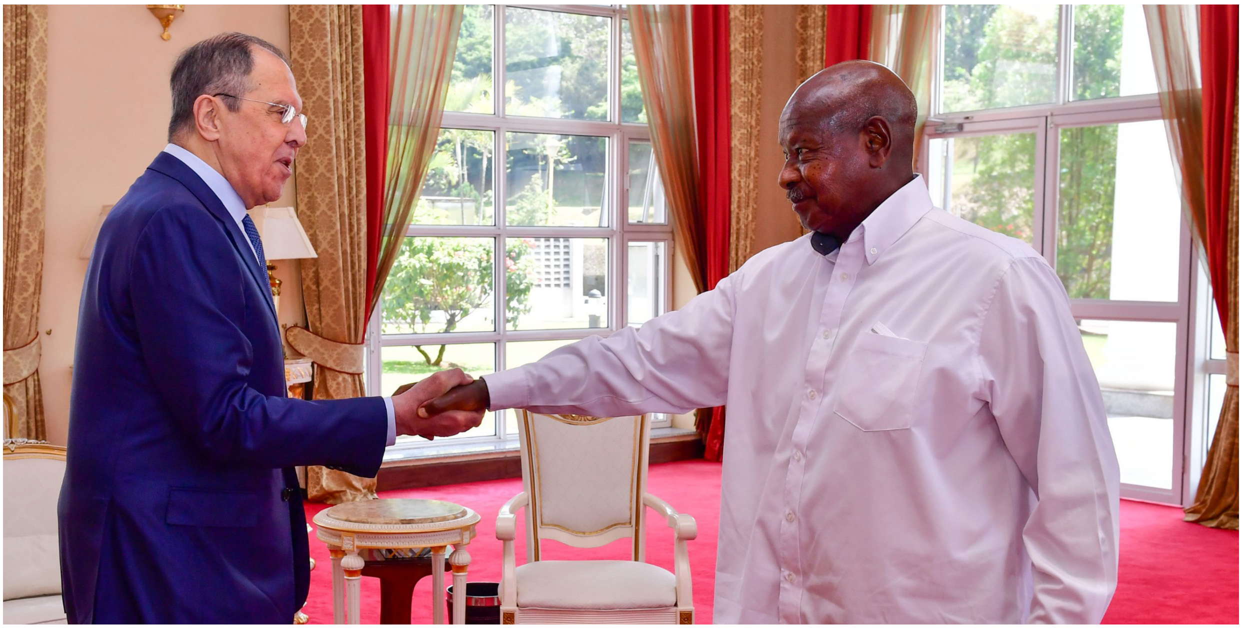
ELECTRICITY

Sergey Lavrov's visit still leaves Uganda's nuclear plans hanging



In what was the highest profile visit from a top Russian official to Uganda, Sergey Lavrov, the foreign affairs minister, did not offer a clear plan on how his government would support Uganda's nuclear plans.

It had been anticipated that Lavrov, in a late July visit, would offer a concrete work plan on how Russia would progress the memorandum of understanding it has with Uganda over developing nuclear energy capacity, but there was no clear conclusion on that.

Uganda is looking to develop 2,000MW of nuclear power, with Russia and China being the only two countries that have shown some slight interest in the project.

Russia, facing a number of sanctions due to its military campaign in Ukraine, is trying to forge stronger ties with new frontiers such as Africa, and Lavrov's visit was seen as such and one that could bear fruits.

In a meeting with President Yoweri Museveni, Lavrov is said to have proposed Russian financing of Uganda's oil refinery project. Russia is not new to Uganda's oil refinery plans.

Russia's RT Global was the first company to be awarded the tender to build the oil refinery. However, RT Global pulled out nearly two years later after disagreements over the conditions the Ugandan government had set for it. The refinery project is already progressing with a consortium of companies undertaking studies.

The nuclear power project now remains Russia's safest bet.

Government is currently trying to acquire land after identifying the site in Buyende district in Eastern Uganda.

Uganda has agreed to build the nuclear power plant under a sovereign-based model, starting with the first 1,000MW.

"Despite the high capital cost of about $4.8bn for the 1000 MW, there is need for Government ownership of the nuclear power plant so as to influence the electricity tariff. The sovereign-based model is the most common ownership approach especially for the first nuclear power plant," the ministry of Energy and Mineral Development says in a statement.

The statement added: "Under a sovereign-based model, investment in the nuclear power plant will be financed through contributions from the national (sovereign) budget for acquisition of land and preparing the support infrastructure and concession government-to-government loans for construction of the nuclear power plant."

ELECTRICITY

EAIF receives positive rating from Moody's

Emerging Africa Infrastructure Fund, one of the most active funds in Uganda's electricity industry, has been assigned a rating of Aa by international credit rating agency Moody's, affirming the fund's strong quality of assets and the low risk attached to them.

Emerging Africa Infrastructure Fund has so far supported 10 electricity projects in Uganda, the latest being a 17-year loan of $10.6 million to Serengeti Energy, the developer of the 7.8MW Nyamwamba ll hydropower project in Kasese district. The loan was given to Serengeti in May this year.

The positive rating from Moody's is an indication that EAIF's funds are judged to be of high quality and are subject to very low credit risk.

Such a rating also points to strong regulation within Uganda's electricity industry, which allows independent power developers to recoup their investments.

For EAIF, the rating raises its profile as an efficient vehicle for investors who want exposure in a diversified portfolio of assets such as Uganda's electricity industry.

EAIF has received funds from the European governments of the United Kingdom, Switzerland, the Netherlands, and Sweden.

10 ELECTRICITY
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Energy company set to launch World Bank-funded scheme

The Uganda Energy Credit Capitalisation Company has started drawing up a renewable energy financing programme that will guide how small businesses access capital for off-grid electricity solutions.

The Uganda Energy Credit Capitalisation Company (UECCC) will launch the Electricity Access Scale Up Project (EASP) in the first quarter of the year 2023 with the aim of financing renewable energy projects. The programme is funded by the World Bank.

The financing from UECCC will be channelled through participating financing institutions. The financial institutions range from regulated commercial banks and microfinance deposit-taking institutions. Currently these are: Post Bank Uganda Ltd, Opportunity Bank, Centenary Bank, BRAC Bank and UGAFODE Microfinance Ltd). Also, some tier IV financial institutions such as savings and credit cooperative organizations and microfinance institutions participate.

Uganda ready to play in rare earths market

IonicRE Managing Director, Tim Harrison

Ionic Rare Earths Limited (IonicRE), a majority shareholder in Ugandan company Rwenzori Rare Metals (RRM) Limited, is focused on developing a new supply chain of magnet and heavy rare earths, including the life cycle ownership of rare earths through magnet recycling.

IonicRE is developing its flagship Makuutu Rare Earths Project in Busoga region, Eastern Uganda into a significant long-life, low-cost, supplier of high-value magnet and heavy rare earths.

Makuutu, which is 100 per cent owned by RRM (of which IonicRE is the 51 per cent owner), is an advanced-stage, ionic adsorption clay (IAC) hosted project highlighted by near-surface rare earth element (REE) bearing clay mineralisation. Makuutu also possesses significant exploration upside, excellent metallurgical characteristics and access to tier-one infrastructure.

We spoke to **IonicRE Managing Director, Tim Harrison** on the progress of the project and what all that means for Uganda.

What makes Makuutu a world-class mining destination?

The ionic adsorption clay (IAC) hosted geology at Makuutu is similar to major rare earths projects in Southern China, which are responsible for the majority of global supply of low-cost heavy and magnet rare earths, specifically the high value magnet heavy REEs (Dysprosium and Terbium), of which approximately 98 per cent originate from ionic clays in China.

Metallurgical testing at Makuutu has returned excellent recovery rates, which provide multiple avenues for a simple process route.

IonicRE has built a very capable team, including a very strong team in Uganda, to deliver Makuutu REES project from an exciting opportunity to an operating mine.

Why should Ugandans be excited about Makuutu?

Makuutu is a very large ionic adsorption clay (IAC) project. These types of deposits are very rare – the primary rare earth minerals have weathered over millions of years, and the REEs exist within the clay bonded to the alunino-silicate structure of the clay.

Given this preferential weathering process, IACs can be processed via much lower capital process plants, such as heap leaching, to chemically extract the REEs from clay, and produce a value-added mixed rare earth carbonate (MREC) product with a rare earth oxide content above 90 per cent. As such, it is not a beneficiated mineral concentrate, but a value added product.

Makuutu, as a source of new supplies of magnet rare and heavy rare earths, will help facilitate the move towards renewable sources of energy, and also the development of electric vehicles (EVs).

It is expected rare earth magnets will maintain dominant market share as key inputs powering EVs and wind turbines this decade. Significant demand growth is, therefore, expected, but supply availability is less certain, especially new supplies of Dysprosium and Trebium.

> (IAC) PROJECT
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China dominates the supply chain with 100 per cent of the world's refined supply of DyTb coming from China. Makuutu is a very unique type of rare earth project, an ionic adsorption clay (IAC) deposit, which is very rare outside of southern China and Myanmar. It is these IAC deposits which are amongst the most strategically important mines globally, accounting for between 95 per cent and 98 per cent of the world's production of DyTb, and only two development-ready deposits identified and available for near-term development in the next two to five years not controlled by China.

IAC deposits are very highly sought-after for their low-capital development costs, simple mining and processing requirements, favourable metallurgy and high value, high-margin product free of radionuclides. Makuutu is aiming to produce a mixed rare earth carbonate (MREC) product, and has interest from global strategic partners looking to get access to this unique, magnet and heavy rare earth product.

At the Makuutu Rare Earth Project, the content of magnet rare earths – Nd, Pr, Dy and Tb – in the product basket of 15 rare earths represents approximately 33 per cent of the product content. However, this 33 per cent of content volume represents 85 per cent of the rare earth basket value.

It is expected that Makuutu can produce enough magnet rare earths to develop up to two million EVs annually once in production, hence the global importance to EV manufactures now.

As a result, it is expected that the already tight market and elevated price levels for the key magnet rare earths will continue this decade. Lastly, it should also be noted that these magnet rare earths also have competing demands in high-end defence applications, further elevating the geopolitical importance of this supply chain of magnet rare earths.

At what exploration stage is Makuutu?

The updated Mineral Resource Estimate (MRE) reported at Makuutu in May 2022 provides the project with an indicated resource that is over 500 per cent larger than that used on the 2021 scoping study, providing a very strong platform for a very robust project and mining license application due to be completed later in 2022.

The large, near-surface resource, which is typically under shallow cover of approximately three metres, and has clay zone of thickness between five and 30 metres thick, is expected to provide a very long-life project with near-term potential for more to come.

The updated Exploration Target announced in June 2022 highlights the potential of the overall Makuutu Project to increase further, with the potential to provide on overall mineralised system stretching over 37 kilometres long end-to-end, and a total size potentially in excess of one billion tonnes.

The scale over the overall system and development approach provide the capability for Makuutu to rapidly ramp up, in the longer term, produce much more magnet and heavy rare earth product than is forecast today.

To further add to the already large MRE of 532 million tonnes at 640 parts per million (ppm) Total Rare Earth Oxide (TREO) grade, IonicRE will look at a longer phase five drill program to better define the full potential of the Makuutu deposit. This could start as early as later in 2022 but we have already defined a very large resource.

Makuutu already has a substantial resource base to define a very robust project, and additional resource is likely to provide an organic growth pipeline to ramp up production in the longer term.

The Mining Licence application in October 2022 is shaping up as a defining landmark for IonicRE and a signal to the market of the longer-term strategic value of Makuutu in a global manufacturing context where its product will have an increased value beyond the next few years, as demand far exceeds the ability to supply in a global context.

Makuutu is expected to be in construction mid-2023, and operation in 2024.

TWO MILLION EVS

It is expected that Makuutu can produce enough magnet rare earths to develop up to 2 million EVs annually once in production, hence the global importance to EV manufactures now.

What's your outlook for Makuutu in terms of generating value for the company and the country?

Makuutu has a lot of potential and will see the mined ore converted via processing into a value-added mixed rare earth carbonate product. The basket of rare earth elements in the Makuutu product will likely increase in value over time, and through this, significant expansion of the Makuutu Project is possible.

One of the biggest challenges will be to develop Makuutu with new supply chains into the downstream components that will be produced using the rare earth oxides. Significant investment for this is required, along with substantial technical investment.

The opportunity for Makuutu to be a long

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term source of magnet and heavy rare earths will likely result in significant strategic partnerships developed with key Western countries, which could result in further investment in Uganda long term.

Makuutu also represents the first potential investment in Uganda's mining industry by western investors for nearly 50 years. So, it does have significance on a global stage. The world is watching how Uganda supports international investment in exploration and mining project development, and a positive result for Makuutu will likely see substantial new exploration investment and a vote of confidence in Uganda's new mining industry.

The flipside, however, is also true; a failure to support international investment will likely drive it away for another 50 years as global mining investors will be attracted to more favourable exploration and mine development jurisdictions. It's a very competitive climate for exploration investment.

What is IonicRE's market capitalization and what strategies do you have in place to meet your financing needs?

IonicRE has a market capitalisation of approximately $150 million.

We intend to increase our 51 per cent stake in Makuutu to a 60 per cent ownership in October 2022. We also expect a formal mining license application to be submitted in late October 2022 in order to obtain a mining licence in early 2023 such that the mine can start operations in 2024.

So far, the development to date of Makuutu has seen investment of over $12 million to complete exploration and evaluation studies. The increased demand for the product from Makuutu is likely to see the initial capital for the project increase with double the potential production likely to be targeted from the commencement of operation in 2024. This is likely to require a capital investment of between $130 and $150 million.

How would you describe the significance of REEs today, especially with clean energy dominating debate globally?

REEs are a selection of 17 elements on the periodic table. Elements in the lanthanide series, elements 57 (Lanthanum) to 71 (Lutetium), plus element 21 (Scandium) and 39 (Yttrium).

They have numerous applications and a number of roles in technology today – from renewable energy, EVs, military and defence, communication, medical and optics. Of these, the most highly sought-after are the magnet and heavy rare earths.

With regards to the move to clean energy, magnet rare earths and the permanent magnet products they go into are critical to power the energy transition. Permanent magnets (PMs) internally create persistent magnetic fields in normal conditions. In the context of the energy transition, PMs are crucial inputs of offshore wind turbines. They are the most dependable/durable and are thus dominant in offshore wind turbines, and their overall performance. They convert wind energy to electrical energy. Rare earth magnets (NdFeB PMs) deliver undisputedly best-in-class EV performance and thus dominate market share. In this application, the PMs convert electrical energy to mechanical energy proving the torque that moves the EVs.

Uganda is keen on value addition of its raw minerals. IonicRE has stated before that a refinery would be a consideration. Please elaborate on that.

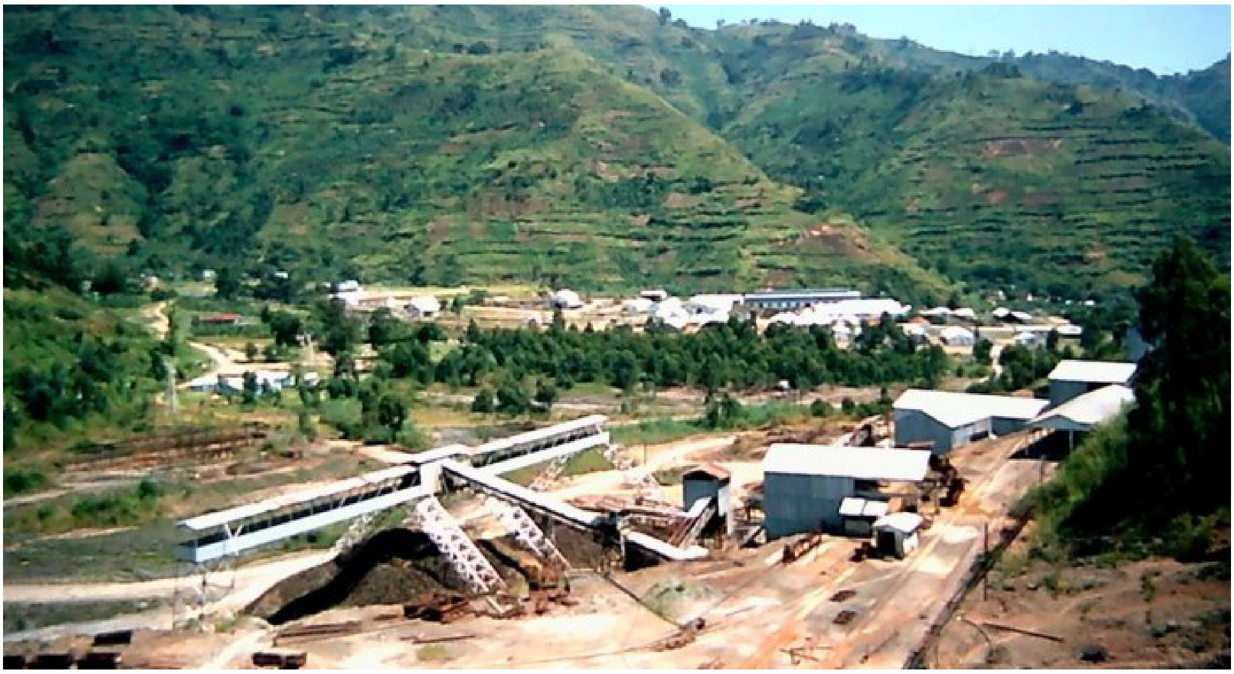
At Makuutu, we are value adding. We propose to process the ore to make a mixed rare earth carbonate, which is a chemical intermediate precipitate. The value addition sees the ore upgraded from a head grade of around 800 parts per million to over 900,000 parts per million in the final product on an equivalent basis. This value-added product sees the payability of the product increase to approximately 65 per cent, which is more than double that of a mineral concentrate.

Refining rare earths is a very complex process, much more difficult than gold refining. The requirement to separate all 16 rare earths produced by Makuutu into 16 different high purity oxides requires very complex process control and analytical support.

Additionally, to build a refinery, however, requires huge investment in additional infrastructure, including high purity reagents, establishing high purity product capability and substantial investment and development time for human capital. Given the complexity of processing for rare earth separation and refining, and the processes involved, a significant investment and time is required, which would see a requirement for several government-funded research and development programs and capacity building.

Several Western countries are evaluating the development of such a facility providing substantial funding incentives, coupled with existing infrastructure to quickly develop downstream processing.

Given the lack of expertise in Uganda for solvent extraction, this would need to be developed over a decade or more, at a very high cost to the Ugandan government.



Four Chinese firms shortlisted for Kilembe Copper mines

Four out of the seven companies that have emerged as the best evaluated bidders for the redevelopment of Kilembe copper mines come from China.

These are China Railway No. 10, Gingko Energy, Liaoning Hongda (trading as Wagagai Mining) and Sinomine Power China.

Another company that made the shortlist is Mota-Engil Uganda, a subsidiary of Mota-Engil, an originally Portuguese construction firm, now with strong Chinese linkages. China Communications Construction Company (CCCC) holds a 32.4 per cent stake in Mota-Engil.

The list that was initially scheduled to be released at the end of June but was published in late August.

Kilembe Mines is not new to Chinese investors. In 2013, Uganda's government awarded Tibet-Hima, a Chinese consortium, a 25-year concession to revamp the mines. However, in 2017, government terminated the concession, saying the firm had failed to fulfill most of its contractual obligations.

Over the last 15 years, China has sought to secure, across the globe, the natural resources and raw materials needed to sustain its rapid economic growth in its manufacturing and industrial sectors. In Uganda, Chinese companies already have a sizeable footprint in gold, iron ore, phosphates, marble and oil and gas.

Jervois Global from Australia and Sarrai Group, an East African conglomerate headquartered in Uganda, though originally from Kenya, are the other two that made the final shortlist for Kilembe.

GREEN REVOLUTION

Uganda is seeking to revamp the production of copper and cobalt at Kilembe to take advantage of the growing global demand for electric vehicles (EVs), which depend on battery minerals – including cobalt, lithium, graphite and nickel – used in the production of lithium-ion batteries to power the EVs.

Clean energy minerals are key in the 'Green Revolution' as well. This includes all metals that go into making wind turbines or solar panels such as aluminum, copper, graphite and rare earth elements (REEs).

Incorporated in 1950, Kilembe Mines Limited (KML) is jointly owned by the Government of Uganda (over 99 per cent) and the Estate of the late Rukiidi III, the Omukama of Tooro Kingdom (0.005 per cent).

In the 1960s, the minerals' industry, led by KML, accounted for about 30 per cent of Uganda's gross domestic product (GDP).

Between 1956 and 1982, two Canadian companies Frobisher and Falconbridge and later the government of Uganda oversaw

32.4 PER CENT STAKE

...an originally Portuguese construction firm, now with strong Chinese linkages. China Communications Construction Company (CCCC) holds a 32.4 per cent stake in Mota-Engil.

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MINING

the mining of copper at the Kilembe mines on the foothills of Mount Rwenzori in Kasese. KML also ran a copper smelting plant in Jinja. The mining was later stopped due to depressed world copper prices and civil unrest.

Since then, KML has operated on a care and maintenance basis.

Its assets include minerals and mining rights, land and buildings, plant and machinery, timber treatment plant, foundry and electrical workshops, a 5MW hydroelectric power plant, lime works and several tailings dams with cobalt content. It also holds a 25 per cent share in Kasese Cobalt Company Ltd (KCCL).

In a 2007 speech, Fred Kyakonye, the then acting general manager at KML, noted that an ore reserve in the "proven" and "probable" categories of 4.1 million tonnes grading 1.77 per cent copper remained unexploited when mining ceased in 1982. This was in addition to the unexplored ore on the rest of the 2,000 acres of the mining lease.

The quantity of the associated minerals including cobalt, nickel, zinc, silver and gold at the mines have also never been fully ascertained.

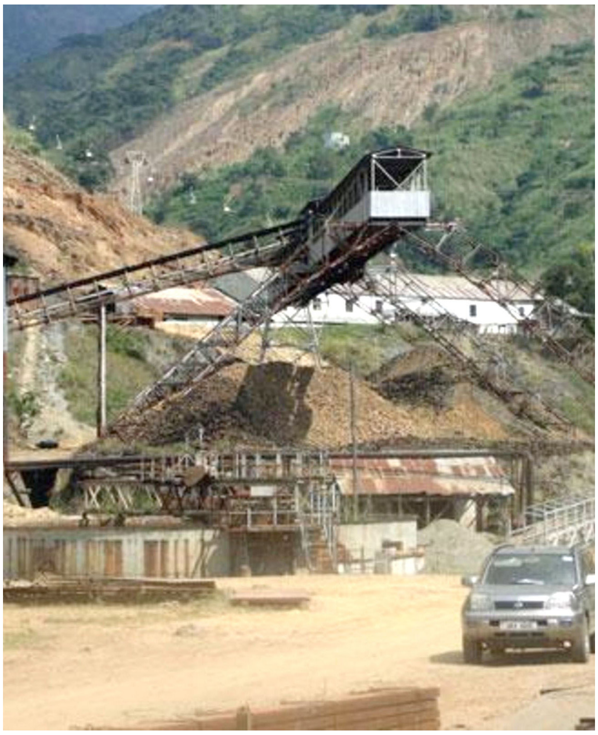
Whoever wins the bid to redevelop Kilembe is expected to verify this data and carry out more exploration on the license area.

The new investor will also be expected to set up refining plants that will produce pure metals (cathodes), which can be used to manufacture finished products like copper wires.

POTENTIAL DELAYS

We understand that the Request for Proposal (RFP) process will go ahead as scheduled despite plans by some of the unsuccessful companies who did not make the best evaluated bidders shortlist to petition the government of Uganda through the office of the Inspector General of Government (IGG) for a reconsideration.

The companies whose bids were rejected for failure "to meet the minimum requirements of the Expression of Interest" are Ad-Meriola, Blencowe Resources, Falconbridge Resources, Green Road ARC Resources, Puma Resources, Three Tier Construction, and Victory Advisory and Horizon Corp.



Blencowe drops bid for Akelikongo, to focus on Orom-Cross graphite project

UK firm Blencowe Resources Limited has dropped its bid to take over Sipa Resources Limited's nickel-copper project in Kitgum district.

Blencowe, which had started the process of buying into Sipa's Akelikongo nickel-copper project in February 2022, explained that its decision was informed by the massive potential of the nearby Orom-Cross graphite project.

"The decision to relinquish exposure to the Akelikongo project has been driven primarily by the truly exceptional results from the Pre-Feasibility Study (PFS) on the Company's flagship Orom-Cross graphite project. Accordingly, the company believes it is in the best interests of its shareholders to focus all of its attention and resources on unlocking the inherent value at Orom-Cross," the company announced in a statement.

In dropping its bid for the Akelikongo project, Blencowe has written off $250,000, part of which was used to complete a detailed airborne electro-magnetic survey.

Sipa Resources Limited, an Australian company, says it "intends to review this new data and recommence discussions with other parties who had previously expressed interest in moving the project forward."

Cameron Pearce, the executive chairman of Blencowe, said the market shifts in the demand for graphite, forced them to focus on the Orom-Cross project. He said: "We have considered the merits of running two projects in parallel and at this particular point we believe that concentrating solely on our priority graphite project makes most sense. The excellent results for Orom-Cross reaffirmed its value." He further explained that "whilst this has yet to be reflected in our public markets valuation, we are now seeing heightened interest from industry and private equity. Accordingly, we believe now is the appropriate time to focus solely on Orom-Cross, whilst removing any unnecessary dilution at this depressed level."

He concluded by saying, "We do still see the synergistic benefits of another battery metal project near to Orom-Cross and we may revisit a nickel strategy in the future. However, we are seeing a fundamental shift in the graphite market right now with the price ... rising substantially over recent months as projected demand-supply issues finally begin to impact."

We need $4 billion to achieve universal electrification - Batebe

In August, Irene Batebe made one year as the permanent secretary in the ministry of Energy and Mineral Development. At the time, the sector was undergoing a number of reforms in the electricity and mining sector. In an interview with *Deep Earth International,* Batebe told us her experience over the year, and what the ministry will focus on in the years ahead.

We need $4 billion to achieve universal electrification - Batebe

You made one year in office as the permanent secretary in the ministry of Energy. What has been your experience so far?

This has been a very riveting year of learning and unlearning. Coming into office, we set a number of targets, some of which have been achieved and we continue to work on the rest.

The ministry [of Energy and Mineral Development] has made great strides in the last one year, building on the achievements that had been made. A number of laws have been enacted including the East African Crude Oil Pipeline (EACOP) special provisions Act, the Electricity Amendment Act and the Mining and Minerals Act. These laws will go a long way to ensuring the re-organisation of the sector to continue achieving the set goals and targets.

We have continued to work on running projects to ensure grid expansion, power reliability, last mile connection and efforts to continue reducing the tariffs. At the time we came in, we were reporting access to electricity of about 57 per cent, with 24 per cent on grid and the difference was off grid. But with the impact of Covid-19 and of course the population demographics, those figures have changed. So, you have 57 per cent, but with 19 per cent on grid and 38 per cent on off-grid.

So, what does that mean? That means we came in at a time when the economy was recovering from Covid-19. That also had an impact on the energy and mineral sub sector in many ways. However, as the economy recovers, we continue to see improvement in the sector. So, for the last one year, our focus has been on how to keep this sector afloat to support the recovery of the economy. In light of that, we have continued to ensure that projects such as the Karuma hydropower dam are concluded and plans are underway to commence the commissioning of the plant in October this year. We continue to attract investment in the sector and we continue to witness increased investor interest.

What special reforms have you overseen during this time?

We came in at a time when a number of reforms had been triggered. And we needed to ensure that those continue. I will start with the major one: the mainstreaming of the Rural Electrification Agency

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into the ministry of Energy and Mineral Development. At the time when we came in, the Rural Electrification Fund was in the process of being moved into the ministry. There was a debate in Parliament on how to manage the Rural Electrification Fund.

However, for the last one year, we have been transiting in line with the Statutory Instrument that provided for the transition of the Rural Electrification Program. We had to finalize the structure for the new department. We worked with the ministry of Public Service, and finally cabinet approved that structure. What does that mean? That means that for the next one month, we shall be working on finally absorbing this group into the ministry, in the department of rural electrification under the Directorate of Energy Resources. This is important because the rural electrification is our vehicle for grid expansion in terms of distribution and last mile connections.

We are not saying that this transition will not have any hiccups; they will be there. But we want them to be as manageable as possible, and not destabilize electrification. Working with the ministry of Public Service, we have put in place a change management strategy to handle this change.

The other issue that has kept us engaged is managing the power generation and distribution concessions. You will recall 20 years ago when we put in place the Electricity Act of 1999, that came with a number of reforms, especially when we unbundled and created the generation, distribution and transmission segments. At the same time, we leased out two concessions, namely, for the Kira/Nalubaale power generation plant to Eskom Limited and distribution on the national grid to Umeme Limited.

The generation concession will end in March next year whereas the Umeme concession is coming to its natural end in 2025. So, during this one year, we have been preparing for how to manage the natural end of these two concessions and that has really kept us equally busy.

For the Umeme concession, this is still under discussion in government. And we should be able to indicate the next steps on the management of the concession soon. We continue to grapple with challenges arising from vandalism of our infrastructure and we are working with different stakeholders to ensure this is addressed. The new Electricity Amendment Act has provided for punitive measures for vandals and this should contribute to addressing this vice.

We have seen a company called Gridworks

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participate in the transmission segment of the electricity, the first private sector player to do so. How should the market interpret Gridwork's entry and are there opportunities for other companies?

Under the new Electricity Amendment Act, we opened up the transmission to private investments and we are finalizing the framework to ensure prudent investment in the sector by ensuring the tariffs are well managed. Gridworks will implement a pilot project focused on substation development. We shall be studying a number of things like the project delivery time, how the private sector handles community issues and impact on power tariffs.

There have been discussions around the mergers of the transmission and generation companies, and reintegrating them back into the ministry of Energy. There is a fear that this will create a conflict of interest especially between the generator and the off-taker of the electricity, in this particular case the transmission segment. Now, there is a suggestion of putting in place an independent system operator. How far are you with those plans?

First of all, I need to clarify that we plan to create a limited liability company incorporated under the Companies Act.

Regarding the conflict of interest, we have studied a number of utility models in other countries where the system operator is independent of the national utility company. We are assessing the different options and we will make a well-informed decision on the best structure. It is also important to note that we have a robust regulator that ensures compliance with the set law and regulations.

With all these reforms, what are your targets, especially with access to electricity?

We do have targets enshrined in the national development plan III. We targeted by 2030 to have achieved universal access; universal access is that we should have achieved 100 per cent electrification for the existing population. And in terms of the intermediate milestones, we targeted that by 2025 we should have clocked 60 per cent electrification in line with the National Development Plan. So, we have even revised our targets to reset this 60 per cent to 80 per cent, given the current electrification rate of 57 per cent.

We are structuring new funding of $630 million, which will contribute to meeting the set electrification target. This is going to help us accelerate grid expansion and last mile connection. So, the target is to achieve universal access by 2030. We have just completed our National Electrification Strategy that indicates that for the country to achieve universal access to electricity, we need to invest about $4 billion in not just in the distribution network, but also in transmission, which is quite significant. That is why we opened it up [to private players] to be able to attract private financing to supplement the public funding.

100 PER CENT

We targeted by 2030 we should have achieved universal access; universal access is that we should have achieved 100 per cent electrification.

Turning to the oil industry, when should we expect the financial close for Uganda's oil project, especially the crude oil pipeline, and why has it taken so long?

When the final investment decision was taken in February this year, the different entities in the upstream and the EACOP committed that they will do whatever it takes to make sure that funding is available for the project.

Typically, from the Final Investment Decision, within six months, one should be able to achieve financial close. Discussions on financing of the project are progressing well and the target of first oil in 2025 should be met.

We continue to address the negative publicity on the oil and gas projects. The project has ensured compliance in terms of environment, human rights and social protection. We continuously clarify that comprehensive ESIAs have been undertaken and where there is a risk, the mitigations as approved by NEMA will be implemented. We continue to clarify on the role of the oil and gas project in achieving our energy transition/integration goals including production of LPG, to substitute usage of biomass.

There are some local service providers who are worried of missing out on some jobs in the oil industry. Is this something that has come

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to your attention and are you worried about it?

We have put in place a clear policy and laws to promote national content. We have gone ahead to ringfence a number of services for local companies. Efforts have also been made to ensure the local companies strengthen their competences to meet the requirements of the sub-sector through skilling and stakeholder engagement. We encourage companies to participate where they are most competent both technically and financially. The oil companies are required to advertise for all the opportunities to ensure transparency in the selection process.

Where companies are aggrieved in the different procurements, we do have a redress mechanism working with the Petroleum Authority of Uganda.

How far are you in creating a local content fund, where local companies can access cheaper capital to be able to participate in Uganda's oil and gas industry?

The local content fund emanated from the national content policy. The way this local content fund is designed is for a portion of the fund to be drawn from contractors, and where possible government of Uganda to provide some seed capital.

There has been internal discussion and the ministry of Finance has guided us on how we should proceed on the fund. We are preparing to submit the Local Content Fund Bill to Cabinet for consideration.

The developments in the Kilembe bidding process, the Wagagai gold project and the rare earths elements projects in Makuutu point to a recovering mining industry. However, grumblings over the unprocessed minerals exports ban continue. How would you assess the minerals and mining industry so far?

The new Mining and Mineral Act will go a long way to support the development of the projects. The three mining projects are changing the mining landscape of Uganda.

We want to ensure the projects progress smoothly to the next stages.

Just recently, we attended public hearings in Bugweri, where the Makuutu rare earths project is situated to support Rwenzori Rare Metals (RMM) and Ionic RE address issues related to obtaining land rights from the affected persons.

It is important that all the mining investors get a social license with the locals so that their projects can coexist with the host communities.

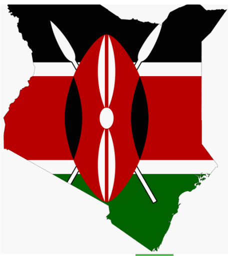
Wagagai is also doing tremendous work on the gold front. Their mine needs a dedicated electricity line so that the operations go on unhindered; and we are in the process of ensuring this is addressed.

The development of Kilembe Mines is equally key given the appreciating global prices of copper and cobalt. Working with the ministry of Finance, Planning and Economic Development, we are undertaking a selection process for a developer for the mine. We expect to select a robust, financially capable and reputable company that will progress the project. We are also hoping that a solution will be found for the phosphates project in Sukulu, Tororo.

We have been engaging at the highest level with China (where the investor comes from) to have all the issues resolved.

As regards the embargo on the export of raw minerals, this policy direction is meant to ensure value addition in order to retain value in country. We are working with the different licenses for them to appreciate this policy direction.

There is an ongoing review of the different licenses to understand the implications of the ban. The affected companies will subsequently be engaged to address their concerns.



KENYA

Investors seek new partners as Kenya's oil prospects drop

A couple of Kenya's oil assets are up for sale after some companies lost money in exploration expeditions that turned up poor results. However, while the results might not have matched the companies' expectations, East Africa's biggest economy will take pride in knowing that a large part of its oil basin has been de-risked, and that interested companies will have new data to work with.

Tullow Oil, the British company that came closest to getting Kenya's oil industry to commercial production, is already scouting for new partners for its blocks in the Lokichar region.

"We also continue to make progress on securing a strategic partner for Project Oil Kenya, which has the potential to be a key driver of growth, value and diversification for Tullow," Rahul Dhir, the CEO of Tullow Oil Plc, said recently.

In early June, Tullow Oil announced that it had reached an agreement with Capricorn Energy to enter into a partnership to be able to pursue its African interests. But there are reports that some shareholders of Capricorn are resisting that deal. Some of Capricorn's shareholders include Goldman Sachs and BlackRock.

Africa Oil, Tullow's partner in the Lokichar basin, has been on a hunt for a new investor for more than a year now. The company recently announced that "advanced discussions are ongoing with the interested parties. A successful farm-out is viewed by the company as a critical step towards the FID for Project Oil Kenya being achieved over the course of the next year."

And as a measure to prepare its shareholders for some depressing news, Africa Oil warned that "there is no guarantee that the Company can successfully conclude a farm-out to new strategic partner(s) on favourable terms."

Kenya was once touted as the new kid on the block that would transform East Africa's oil play as Uganda dillydallied over moving its oil industry to the development stage.

In early 2012, Kenya saw the opening of the Ngamia oil basin in the northern part of the country. For the next couple of months until August 2014, Kenya witnessed a number of oil discoveries, with Tullow Oil at the forefront and living to its billing as one of Africa's most successful exploration firms.

Fortunes would grow in 2015

TULLOW OIL

Tullow Oil, the British company that came closest to getting Kenya's oil industry to commercial production, is already scouting for new partners for its blocks in the Lokichar region.

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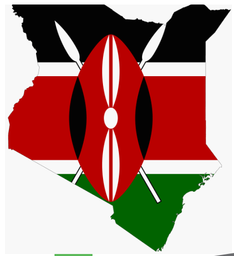


Investors seek new partners as Kenya's oil prospects drop

when President Uhuru Kenyatta and President Museveni had a gentleman's agreement to pipe Uganda's crude through Kenya right up to the port of Lamu. It meant that Tullow Oil would link its Uganda oil assets with those in Kenya, which would ultimately make their project cheaper and attractive to any prospective future partner.

However, those fortunes would drop after TotalEnergies' successful aggressive lobbying of Tanzania to allow a crude oil pipeline from Uganda.

In 2016, Uganda and Kenya announced that they would have separate pipelines for their crude oil.

Since then, Kenya's oil project, with just over 700 million barrels of oil in place, has struggled to make a major breakthrough. Even after the end of the country's two-year Early Oil Pilot Scheme in 2020, where a couple of a thousand barrels of oil were exported, the country's failure to hit another bigger discovery has narrowed its fortunes.

Kenya is expected to license out new oil blocks to exploration firms, possibly next year. However, credit-rating agency, Fitch, warned in April that investors need not have very high expectations over their prospects.

"A recent failure by Eni to find commercially viable oil deposits in Kenya's Lamu Basin marks a blow to kickstarting the country's nascent oil and gas sector and adds to the string of exploration setbacks in the country over the last decade. We expect investor sentiment in the frontier market will remain muted..." the rating agency pointed out.

Kenya considers tariff hike for moving and storing petroleum

In what is likely to further push fuel prices across large parts of East Africa, especially in countries such as Uganda, Kenya Pipeline Company has applied to the Energy and Petroleum Regulatory Authority for a 36 per cent increase in tariffs charged on transporting and storing fuel.

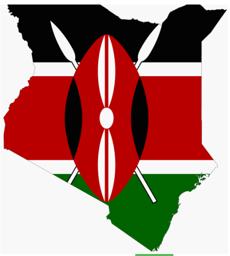
The application for a new tariff comes after there were expectations that fuel prices would drop after months of volatility.

Kenya's government has overseen the operation of an artificial price at the pump station as the country sought to cushion consumers from high fuel prices with subsidies. The fuel subsidies, however, have come under heavy criticism, even from places such as the World Bank, for creating losses for businesses.

Now, the new tariffs, which are still up for discussion, are expected to start in November this year. The new tariff will run for three years, from 2022 to 2025.

The Petroleum Outlets Association of Kenya, a lobby group for retailers, says "Kenya spends $195 million importing petroleum products every month. Companies operating here have to access the dollars to transact." Any fluctuation in the foreign exchange market has significant impacts on respective businesses.

The association further noted that "Kenya has up to the end of September to drop all subsidies, including of petroleum products. The compensation model introduced last year to cushion consumers has produced an incredible imbalance in the petroleum business, with some winning and many losing."



KENYA

Base Resources eyes more land for mining rights

Base Resources is holding discussions with communities in the eastern part of Kwale to secure land and widen its mining tenement in the area. The Australian company, which owns the Kwale Sands project, is confident the expansion of the mining area plays perfectly into its plan of prolonging its presence in Kenya.

Base Resources' Kwale Sands project, located in the southern part of the country, was expected to be decommissioned towards the end of this year. However, the company took the decision to prolong it by a further two years to December 2024 through the acquisition of more mining rights.

"The extension of the mine life at Kwale operations remains an intense area of focus and meaningful results were achieved in FY22, with the successful expansion of our special mining lease to incorporate the remainder of the South Dune orebody, and commencement of development of the Bumamani project," the company announced during the release of its financial results recently.

There was a worry that the Kenyan elections, held in August, would greatly disrupt mining activities in the country. That was not the case after a fairly peaceful election.

The company noted, "we continue to pursue additional mine life extension opportunities in the Kwale East sector and regionally, with exploration to intensify in northern Tanzania in the coming year. Now that the Kenyan general election has concluded, we are hopeful that various prospecting licence applications lodged in prior years will progress toward issuance."

The Kwale project processes at least three ores - ilmenite, rutile and zircon. The three metals are used in the manufacturing of plastics and chemical products.

Base Resources Limited says there is more global demand than supply for these ores.

Kenya to buy electricity from Ethiopia

Kenya has agreed to import up to 200MW of electricity from Ethiopia starting November 2022. The two countries recently signed a 25-year power purchase agreement that would see Kenya import 65MW of electricity from Ethiopia during off-peak hours and up to 200MW during peak hours.

The power purchase agreement comes at a time when Kenya's economy shows strong signs of recovery after the lull that the Covid-19 pandemic had created, and tensions over the presidential election season.

In May, KenGen, the main electricity generation company in Kenya, said the national demand for electricity had hit a new peak of 2,051MW, up from 2,036MW recorded in November 2021.

It is partly due to this demand that Kenya appears to have decided to import more electricity from Ethiopia.

Kenya will buy the electricity from Ethiopia at 6.5 US cents per kilo watt for the first five years. Inspection of the transmission lines is said to have been completed and cleared to be fine.

Top officials rush to Ashanti's Geita gold mine seeking quick fixes

AngloGold Ashanti's Geita Mine has increasingly become a major asset for the global giant mining firm, with top officials from the company's headquarters and Tanzania government officials visiting the mine over the last six months to ensure that the challenges faced at the site are swiftly dealt with. AngloGold Ashanti, whose headquarters are in Johannesburg, South Africa, is one of the largest mining companies in the world.

Adolph Ndunguru, the permanent secretary in the ministry of Minerals, was the first top official to visit the mine in March this year, where he was taken through a number of challenges at the mine.

In May, AngloGold Ashanti Chief Executive Officer Alberto Calderon flew into Tanzania to reinforce Geita gold mine's importance on the company's balance sheet, meeting Tanzania's President Samia Suluhu Hassan and also visiting the mine.

In July, January Makamba, the minister of Energy, also went on an official visit, to understand the critical need of electricity at the project.

And in August, Ludwig Eybers, the Chief Operations Officer of AngloGold Ashanti, led a team of top officials to also tie up any loose ends of the issues faced at the mine.

Of all the critical issues at the project, getting reliable electricity at the site appears to be of urgent need.

Construction and installation of a 33/11 kV substation is already underway, with completion expected in February 2023. The substation should have been completed earlier, however government officials blame the emergence of Covid-19 that created supply chain disruptions, which saw the delay of delivery of certain electrical equipment.

The Geita gold mine, which is located in the Lake Victoria goldfields of the Mwanza region, has seen its ore depleted. The visits by the top company officials were seen as a move to seek government support in the new areas of exploration.

AngloGold Ashanti Chief Executive Officer Alberto Calderon is thought to have reiterated the company's commitment to invest $169 million in exploration expenditure to increase the production and mine life of the Geita gold mine.

Ashanti says that operation at the Geita gold mine now boasts of a large mineral resource of 8.3Moz of gold and an ore reserve of 2.65Moz.

Alberto Calderon

Masdar, Tanesco in major deal to develop 2,000MW

Masdar, a company from the United Arab Emirates, has signed an agreement with Tanzania Electric Supply Company Ltd (Tanesco) for the development of renewable energy projects with a total capacity of up to two gigawatts (2,000MW).

The two companies signed a joint venture agreement to develop the projects, beginning with the first 600MW.

A statement notes that Abdulla Zayed, the head of Business Development and Investment at Masdar, and Maharage Chande, the managing director of Tanesco, signed the joint development agreement on the sidelines of the Tanzania Energy Congress in the presence of January Makamba, the minister of Energy for Tanzania.

It is not clear what energy sources the two parties will explore.

Maharage, in a statement, said: "The agreement we are signing today will bring about a big revolution in the development of renewable energy in the country. Through the first phase of the collaboration, we expect to generate approximately 600 megawatts, and we will continue with other projects until we reach 2,000 megawatts."

Zayed said "the signing of this agreement demonstrates Masdar's commitment to the Tanzanian market and to the nation's energy transition, supporting the target to reach 5,000MW capacity by 2025."

Tanzanian has set a target of achieving an electrification rate of 75 per cent of the country by 2030.

Scirocco to sell Ntorya stake to Omani partner for $16 million

UK firm Scirocco Energy, formerly known as Solo Oil, is moving closer to selling its 25 per cent stake in the Ruvuma basin, where the Ntorya gas field is located, to its partner ARA Petroleum, which holds 50 per cent of the block.

Scirocco Energy, which says it now wants to target Europe's attractive energy markets, says it has received communication from Tanzania Petroleum Development Corporation, the holder of the remaining 25 per cent, that it will not exercise its pre-emptive right to participate in the transaction.

Now ARA Petroleum from Oman has agreed to pursue the transaction which would cement its position as the largest shareholder in the block, located in Southern Tanzania.

The Ntorya gas field is thought to be lucrative for investors who wish to take up such assets. A study conducted by the partners estimates the Ntorya block to hold up to 763 billion cubic feet of gas – not anywhere close to the large gas fields in Tanzania, but still one of the most noticeable in the country. So far, seismic data for over half of the Ntorya block is said to have been acquired.

In June, Wentworth Resources Plc from the UK promised to buy Scirocco's stake if the other two shareholders in the basin had declined to take it up. However, Wentworth's hopes died down when ARA Petroleum agreed to buy the stake.

According to the terms of the agreement that Scirocco has entered into with ARA Petroleum, the Omani company will make a total cash consideration of $16 million.

Scirocco says it will work with ARA Petroleum through the regulatory approvals needed in order to complete the transaction of its non-operating interest before the end of this year.

Scirocco is quitting the Ntorya block partly because of global events today. The company says there is a large exodus of capital from the oil and gas sector as environmentalists mount pressure to decarbonise the global energy industry.

Also, the company says the oil market has been erratic in recent times, with price drops that wiped out large portions of profit, although there has lately been a recovery.

Kibo seeking consultants on how to turn waste to energy

Kibo Energy Plc says it has kicked off the process for Request for Proposal to companies that can investigate the feasibility of replacing fossil-fuel (coal) with renewable biofuel.

The company, which once promoted its Mbeya coal to power project as a blueprint that would change Tanzania's energy outlook, agreed to dump all its coal assets for cleaner sources of electricity. It, however, kept the associated power projects.

Instead, it is Kibo, itself, which has had to undergo a facelift – in both its operation and management - with its chairman and founder, Christian Schaffalitzky, set to retire from the board in the middle of September 2022.

Now, Kibo says that "through the RFP process, Kibo intends to appoint an experienced international biomass and biofuel consultant to determine the economic and technical viability of utilising the specific biomass (or bio-coal) technology as a feasible fuel source at industrial scale, to fuel the company's existing and already developed utility scale power projects."

Louis Coetzee, CEO of Kibo Energy, says: "By undertaking this evidence-based process, we believe we should be able to replace the traditional coal-mining activity with a 100 per cent renewable energy source. Work completed to date indicates that our existing coal-fired power plants can be easily adapted to accept the new renewable fuel solution with only minor design changes on the energy-generation side."

According to the company's financial estimates, the Mbeya coal-to-power project needs $17 million to support its power plant life. The company says waste- to-energy technology is seen as the future of technology because it is cleaner and sustainable.

Fidele Abimana, the man asked to deliver Rwanda's energy dream

The government of Rwanda has handed Fidele Abimana - the new permanent secretary in the ministry of Infrastructure – the duty of, among other things, ensuring the country meets its ambitious target of the entire population having access to electricity by 2024. Abimana's appointment was confirmed in a cabinet resolution at the end of July.

As the accounting officer, Abimana will play a critical role in attracting the right financing to support the electricity sector in the country. He is expected to be among the top government officials to attract investors and negotiate for cheaper financing terms where credit for the electricity industry is needed.

Some of the major power projects that Abimana is likely to eye is Gisagara Substation, an interconnection project between Rwanda and Burundi, and ramping up the 80MW Hakan peat-to-power project.

Abimana has served in the Rwanda government for a while, and coming from the ministry of Public Service, where he was the head of the public service management and modernisation department, he knows the significance of hiring the right staff to get the job done.

Abimana has his work cut out. Rwanda's electricity generation capacity currently stands at about 276MW, one of the lowest in East Africa. The country is looking to increase that amount to 556MW by 2024.

Rwanda is also looking to reduce its dependence on biomass, which currently accounts for 79 per cent of the total energy output. The country is looking to reducing that percentage to 42 per cent by 2024.

Abimana is one of the government officials who will be at the centre of that drive.

Afreximbank to lead syndicated loan for Rwanda gas project

Afreximbank has been appointed the mandated lead arranger for Gasmeth Energy Limited's compressed national gas project in Lake Kivu.

Afreximbank, which is headquartered in Cairo and aims to be the trade finance bank for Africa, will lead the sourcing and structuring of a syndicated loan of more than $300 million for the project. The entire project is estimated to cost about $530 million.

Gasmeth Energy Limited – a special purpose vehicle of different companies - signed a 25-year agreement with the government of Rwanda to extract up to 40 million cubic feet of natural gas per day from Lake Kivu for generation of electricity. The project is touted as one that has the capacity to secure Rwanda's energy future.

Rwanda's Lake Kivu remains an attractive, yet highly-risky, venture for international companies. Sometimes known as a killer lake due to its deadly gases, Lake Kivu still retains an attractive outlook for being a source of urgently-needed energy in the region. Lake Kivu is one of three lakes in the world with high quantities of gas.

UK firm ContourGlobal operates a methane gas project in Lake Kivu, which it defines as "the only gas/water extraction project currently operating in the world." The company then transports the gas to a power plant where it is used to generate electricity that is sold on the national grid.

Rwanda is targeting to increase its electricity generation capacity to 556MW from 276MW by the year 2024.

RWANDA

Geoscientists elect Evode Imena as new leader

Geoscientists took another big stride towards the policy-making space in Rwanda's mining industry by holding their first general assembly and electing new leaders.

The scientists, who include geologists, engineers, metallurgists, academia, among others, made huge progress when they elected the national executive bureau.

The bureau, which elected Evode Imena as its chairman, is expected to focus on the creation of the Rwanda Geoscientists Society. The society could be instrumental in guiding debate on policy decisions that seek to improving the mining sector in Rwanda.

In Evode Imena, a former state minister of mining in Rwanda, the geologists have a man who knows the sector quite well.

The geologists first came together in 2019 with the aim of bringing the scientists together under one umbrella body. Through such bodies, investors will have a more credible pool of skill force to draw from.

Already, Rwanda is undertaking a skills assessment in the mining sector to identify gaps.

Rwanda makes progress in mining transparency

RCS Global Group recently released its Better Mining Impact report for 2022 that pointed to Rwanda's improvement in deepening the level of transparency within its mining industry, and the country's desire to adhere to international standards.

The group, which, among other things, assesses the environment, social and governance risks in the extractive industries, lauded Rwanda for the steps it had taken in ensuring that its mining industry operated to international standards.

Five years ago, RCS Global traced the first 3T shipment from Rwanda, followed by the first shipment in DRC three years later. Since then, 275 digitally traced and Better Mining validated exports from Rwanda and DRC have successfully entered the international market."

While RCS Global partly attributes this growth to its intervention in undertaking trainings of the players, it says all that would not have happened without the support and buy-in of the governments.

RCS, through one of its key programmes called Better Mining, says its digital traceability system is transforming the face of mining in Rwanda according to its report, which looks at the period of April 1, 2021 to March 31, 2022.

"Instead of relying on paper logbooks, which can easily be lost or adjusted, Better Mining's digital system builds trust in the data and is readily available to be shared with the supply chain participants and government where regulation requires it," the report pointed out.

Government officials have also been trained to understand the system and how to use it in fostering deeper regulation of the sector.

"Better Mining also built the capacity of 42 Rwanda Mining Board field agents in the implementation of due diligence and traceability. Once trained, field agents were deployed across Artisanal mining sites in Rwanda," the organisation said.

Today, RCS Global is witnessing an improvement in the adherence of environmental, social and government policies, especially when it comes to issues of child labour and women rights.

Still, there are some risks lurking in the sector.

The report noticed that there were few incentives in Rwanda's mining sector to encourage better practices.

"Market incentives are critical for the adoption of better practices. In order for adoption to gain momentum, investment in better practices must not be seen as a cost, but as an investment and should be borne by the entire value chain. Market incentives remain weak."

WILLIAM RUTO

William Ruto will, on September 13, be sworn in as the next head of state for Kenya, ushering in a new government that could likely influence East African policy within the energy industry industry.

A businessman who owns different pieces of property, Ruto understands quite well what accounts for the highest cost of production in Kenya – electricity.

Ruto will become the president of East Africa's biggest economy at a time when the cost of electricity and price of petroleum products are at the centre of debate in Kenya.

The new president is likely to look at neighbouring countries in search for a solution. One of these solutions could be channelling more financing towards the construction of transmission lines to be able to evacuate electricity from different sources.

Also, Ruto was critical of the way the Uhuru Kenyatta government handled the fuel crisis in the second quarter of this calendar year. If that criticism was meant to score political points, the new president will find out how delicate an issue it is – and how countries such as Uganda depend heavily on Kenya getting its petroleum policy right.

RUTH NANKABIRWA

Ruth Nankabirwa faces a busy season as two critical decisions are to be made before the end of the year. The minister of Energy has to oversee the last minute discussions as the government prepares to make a decision over the Umeme Limited concession. The decision is expected to define the shape of Uganda's electricity distribution network over the next couple of years.

The delay to make a decision is holding back investment decisions, especially for a company such as Umeme that has to borrow money for its projects. Some lenders are not ready to lend the company money if they are uncertain of the future.

In the oil industry, Nankabirwa will ensure that the financial close for the East African Crude Oil Pipeline, and its other attendant facilities, is achieved before the end of the year.

Nankabirwa has been globetrotting all over the world, most recently in the United Kingdom, selling Uganda's oil project to potential investors amidst pressure from environmental activists.

One of her first results for this effort will be the announcement of the financial close.

Michael Taremwa Kananura

Not so many people consider the transmission segment as perhaps the most critical within Uganda's electricity industry. And yet, without a fully-fledged transmission set-up, power cannot be generated or distributed.

Michael Taremwa Kananura is the new managing director of Uganda Electricity Transmission Company, who has the duty of ensuring that the transmission segment receives enough government funding to evacuate power from the different generation plants sprouting up in the country.

Taremwa, a certified accountant who had been the chief financial officer of the company before being promoted to the top management position, comes in at a time when the transmission segment is being opened up to private investors for the first time.

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