

CREAMER MEDIA'S

ENGINEERING NEWS & MINING WEEKLY

REAL ECONOMY NEWS WEEKLY

Volume 45 no 34 September 5-11, 2025

RSA R35,00 (Incl.VAT)

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PUSH PAUSE ||

Man has responsibility, not power.



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Typesetting & Make-up: Creamer Media

Printed by: House of Print, JHB

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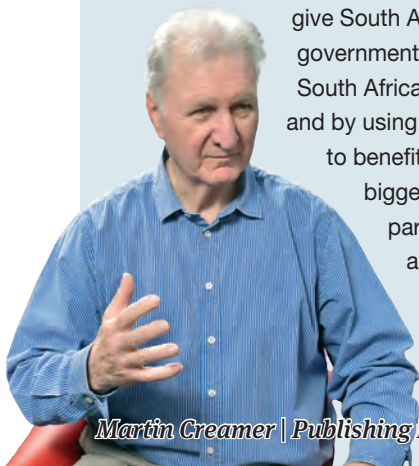
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FIRST WORD

South Africans must be laser focused on replacing markets we've lost

“ Catalyse investment in South Africa’s industrial competitiveness, diversify South Africa’s export markets and build a South Africa that’s strong are three musts that South Africa must grasp with both hands to uplift its economy in the face of geopolitical disruption. South Africans must be laser focused on what we can control to ensure that we can replace markets that we’ve lost. South Africans can give South Africa more than any foreign government can ever take away – by building South Africa with South African workers and by using all of South Africa’s resources to benefit all South Africans. As we build bigger and faster, public-private partnership must be deployed and advanced with fortitude. ”



Martin Creamer | Publishing Editor

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PUSH PAUSE ||

He who is being carried does not realise how far the town is.



ON TRACK: Significant progress has been made in opening the Transnet rail network to private train operating companies (TOCs). Transport Minister **Barbara Creecy** has announced that 11 TOCs that applied earlier in the year to operate routes on Transnet’s rail network have met the requirements to do so and will now enter into contract negotiations to enable them to begin operating multiple routes (see also page 32).

PERSPECTIVES



Picture by Creamer Media Chief Photographer, Donnie Sienk

“Let us build a world where every drop counts and every community thrives. Let us build a world where water is recognised as a human right and not weaponised against women, children and communities.”

SOUTH AFRICAN PRESIDENT CYRIL RAMAPHOSA SPEAKING AT THE AFRICA WATER INVESTMENT SUMMIT

INDUSTRIAL POLICY

Decision time

DEVELOPMENTS IN THE South African steel industry offer a glimpse into the pressures being faced by the manufacturing sector as a whole, and the likely industrial and trade policy responses to those pressures.

The first thing to recognise is that there is no such thing as a homogenous 'steel industry'. Yes, the macro themes of oversupply, import competition, and deteriorating power and rail utility services and costs are common across the sector. However, a company's assessment of what policy response is appropriate depends entirely on that firm's positioning within the sector.

Large upstream producers believe the answer lies in tariff protection and import substitution. Downstream fabricators want their steel inputs to be as cheap as possible and, thus, prefer protection to be applied on intermediary or final products rather than on inputs. Smaller firms want cheap inputs and are desperate for consistent market demand, which is highly growth dependent, and are thus highly sceptical of tariffs and duties that could dampen growth.

Therefore, it is impossible for the policymaker to satisfy the 'steel industry' as a whole. What it has to do is weigh up the trade-offs and intervene in a way that ensures the net growth, employment and industrialisation outcomes are positive.

In the South African context, those trade-offs are now front and centre for the Department of Trade, Industry and Competition (dtic) and the International Trade Administration Commission of South Africa (Itac) as they prepare to make industrial and trade policy decisions that will have far-reaching consequences.

On the industrial policy front, the dtic will need to make a call within weeks about the future of ArcelorMittal South Africa's (AMSA's) Newcastle mill, in KwaZulu-Natal. Should it be saved? Should the financial exposure of the Industrial Development Corporation to the mill be increased? Should the price preference system for scrap and the associated export restrictions, which AMSA blames for Newcastle's lack of competitiveness relative to scrap-based producers, be overhauled or abandoned?

Then there is the issue of import substitution. What should the regulations look like now that the Public Procurement Act is in place? Which products should be stipulated for local supply? Are the local-content designations that were agreed for the steel sector specifically still relevant? What price premium should government accept to drive industrial development?

On the trade policy front, meanwhile, Itac has some big decisions ahead. Should it proceed in recommending the implementation of the sweeping tariff hikes outlined in a preliminary determination following a review of the steel tariff structure? Should the rebate system be expanded to provide something of a relief valve in cases where domestic industry cannot supply? Does Itac have capacity to administer more permits? Should the protection emphasis be weighted towards the upstream or the downstream? Should the issuance of import permits be contingent on firms meeting other social objectives of government? Should more consultations be held?

South Africa's future industrial landscape truly now rests on the answers to these pressing questions.

Terence Creamer | Editor



GOLDEN CATALYST: DRDGOLD CEO Niël Pretorius says the self-generation of solar electricity at Ergo (pictured here with the solar farm in the background) has served as a key life-extension catalyst for the East Rand operation. The 60 MW solar farm and associated battery storage system has reduced the risk previously posed by electricity. Together with the higher gold price, this lowering of risk has unlocked a plan to extend Ergo's life to beyond 2040 and process a resource previously thought non-viable.

FACTS IN FIGURES

33.2

The percentage to which South Africa's unemployment rate rose in the second quarter of this year, compared with 32.9% in the first quarter. The expanded unemployment rate, meanwhile, decreased by 0.2 of a percentage point, to 42.9%.

1

The amount in billion dollars that the US Department of Energy intends to offer in funding to advance and scale up mining, processing and manufacturing technologies in the critical minerals and materials supply chains – sectors that have been dominated by China and other countries.

SHEILA BARRADAS | CREAMER MEDIA RESEARCH COORDINATOR & SENIOR DEPUTY EDITOR

ELECTRICITY

The Big Switch

EXSA views Seriti Green deal as key milestone as it scales up for pure-play trading role

TERENCE CREAMER | CREAMER MEDIA EDITOR

Licensed The Big Switch trader Energy Exchange of Southern Africa (EXSA) describes its recently concluded 15-year power purchase agreement (PPA) with Seriti Green as a major milestone in positioning the company as a sizeable “pure-play” trader ahead of South Africa’s transition towards a more competitive market.

The R5-billion Mpumalanga project reached financial close in August on the back of the PPA, through which EXSA will buy all of the 525 GWh of electricity that the wind farm is expected to produce yearly once in full production. The 155 MW project, which will incorporate 25 wind turbines, is expected to begin generating electricity in October 2027.

The PPA is underpinned by the conclusion of firm offtake agreements between EXSA and several large corporate and industrial customers, whose signatures have been crucial

for advancing the project to “bankability”.

The local funders of the project received further comfort from the fact that the project is a second phase of the first wind farm developed by Seriti Green in Mpumalanga. Both projects form part of the larger 900 MW Ummibila Emoyeni complex, which will be built in phases and will also include solar PV and battery storage components.

EXSA CEO **Wayne Cowie** confirms to *Engineering News & Mining Weekly* that some of the initial offtakers are blue-chip entities owned by Remgro. Remgro holds 75% of EXSA, which was founded in 2017 and licensed by the National Energy Regulator of South Africa (Nersa) in 2022, while RMB owns the 25% balance.

Cowie says that, while a critical mass of offtakers have been secured for bankability, EXSA is now pursuing additional customers to ensure that the electricity is fully subscribed by the time the wind project enters into commercial operation.

“Reaching financial close on this project is a big step in our scaling up of EXSA,” Cowie says, indicating that it has raised from 39 MW to 194 MW the capacity of renewable generation it has contracted to buy to date.

The initial projects include various solar PV projects in the Western Cape, as well as 4 MW of generation capacity from bagasse, a form of renewable energy produced as a sugarcane byproduct. Prior to the Seriti Green contract EXSA had offtake contracts with Woolworths, Wispeco, Siqalo Foods, Delaire Graaf, and Old Mutual amongst others.

“We will now take a little pause to digest this large Seriti Green project and focus on customers before returning to our pipeline of solar PV and wind opportunities,” he reports. EXSA currently has eight employees but expects to expand the team significantly in the coming year.

As a pure-play trader, EXSA does not invest directly in the projects, which Cowie argues offers it the flexibility to partner with multiple generators while focusing on its core trading function. It also allows it to target partnerships with both wind and solar PV generators, which have complementary supply profiles in the South African context.

Chief technology officer **Shailin Moodley** says EXSA’s trading focus also means that it



WAYNE COWIE

We will now take a little pause to digest this large Seriti Green project and focus on customers before returning to our pipeline of solar PV and wind opportunities

can dedicate time and resources to understanding how the market is likely to change once the South African Wholesale Electricity Market, or SAWEM, is launched next year.

EXSA has participated in consultations on the Market Code and has also sent staff members to the pilot SAWEM School run by the National Transmission Company South Africa and has employees registered for the upcoming three-day school to be hosted at the University of Cape Town.

Moodley believes there will be an important role for traders, especially those with operational experience, once the SAWEM platform is launched and as the South African electricity market becomes increasingly competitive.

EXSA is monitoring developments around the SAWEM closely, including its stipulations around so-called balancing responsibilities to ensure equilibrium between supply and demand and may even consider investing directly in battery energy storage in future should it make sense to do so.

EXSA, meanwhile, is not overly concerned about the current resistance to the licensing of traders in the absence of trading rules, arguing that all will benefit from greater clarification of the rules.

However, Moodley would like EXSA’s voice to be heard in the finalisation of those rules so that the benefits of trading are made clear and so that a fair and balanced model emerges.

Cowie is hopeful that Nersa will be able to meet the new November deadline set by Electricity and Energy Minister **R Kgosisentsho Ramokgopa** for the finalisation of the rules, but notes that the regulator also has a number of other important issues to finalise if the goal of launching SAWEM in April next year is to be met. ■



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Green Applause

Electricity Minister lauds Seriti Green's Umbila Emoyeni renewable-energy project

TASNEEM BULBULIA | CREAMER MEDIA SENIOR DEPUTY EDITOR ONLINE

Electricity and Energy Minister Dr **Kgosientsho Ramokgopa** on August 14 visited Seriti Green's flagship Umbila Emoyeni renewable-energy project in Mpumalanga, highlighting it as an exemplar for the country's just energy transition (JET).

The project was "major", as it was located in the coal heartlands, where much of the country's energy came from, and also represented the coexistence of renewable-energy technology with coal, the Minister told media on the sidelines of the visit.

"What's more significant is that Seriti Green has been able to invest in the people, and ensure the coexistence of primary agriculture and the interventions that they are making. The Seriti Green project is a perfect illustration of what can be achieved – a genuine JET," he acclaimed.

He also welcomed the investment from Chinese company Goldwind, which was supplying the wind turbines to Seriti Green, as it represented foreign direct investment into the country.

Seriti Green project manager **Rudolph Botha** pointed out that an associated benefit of the project was the company's R50-million co-investment with Goldwind in upgrading the facilities at the Port of Richards Bay, where the turbines for the project were being delivered.

Ramokgopa emphasised that energy development was a lynchpin for economic development in the country.

"Energy leads and the rest follows. It must

be affordable and the mix must be right. Umbila Emoyeni is a perfect illustration of the best of the renewable-energy sector and it is significant that it is happening in Mpumalanga."

Seriti Green, a wholly South African and majority black-owned independent power producer, is pursuing the advancement of the country's JET, through the Umbila Emoyeni project, as well as the adjacently-located Phefumula Emoyeni wind farm project.

The company is a subsidiary of Seriti Resources, which has a 54.18% stake, while other shareholders include Venn Energy with a 15% stake, Rand Merchant Bank with a 15.41% stake and Standard Bank with a 15.41% stake.

Seriti Resources CEO **Mike Teke** explained that coal still had a role to play in the country's energy mix as part of the JET, noting that the group was cognisant of this, with no plans to sell any of its coal mine assets, and continuing to develop them.

The project is a manifestation of Seriti Resources' hybrid strategy of having both coal and renewable-energy assets in its portfolio.

"What has been unfortunate in the country is what I call the binarisation of the conversation – it's coal or renewables – and I'm saying it's all of the above, but also accepting that there's going to be an exponential increase of the share of renewables in the mix, and then reduce the emissions of the coal power stations that continue to run," Ramokgopa commented.

However, Teke did draw attention to an issue being faced as that of the onerous red tape companies contend with, with long lead times and challenges in the approvals process.

Seriti Green CEO **Peter Venn** reiterated this point, noting that it took several years to secure the paperwork to build the project, incongruously longer than the time it takes to actually build it.

Ramokgopa acknowledged that private investment in renewable energy

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Picture by Creamer Media's Tasneem Bulbulia

CURRENT CAPTURE

Work is progressing on the Umbila Emoyeni renewable-energy project

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RARE EARTHS

Production Dawning

Malawi project FID sets Lindian on course to rare earths producer status

MARIAAN WEBB | CREAMER MEDIA DEPUTY EDITOR ONLINE

Perth-based explorer Lindian Resources has locked in A\$91.5-million from institutional investors and approved a final investment decision (FID) to build the first stage of its flagship Kangankunde rare earths mine, in Malawi.

The two-tranche equity raising, priced at 21c a share, was strongly supported by new domestic and international investors. The issue price represented a 6.7% discount to Lindian's closing price of 22.5c on August 15, but a premium to the company's recent volume-weighted averages.

With the placement completed, Lindian now has full funding in place to bring Kangankunde into production by late 2026. The company is targeting about 15 300 t/y of monazite concentrate in its first stage, with a feasibility study projecting a pre-tax net present value of A\$1.18-billion and an internal rate

of return of 99%.

Executive chairperson **Robert Martin** said the raising showed global recognition of the project's scale. "We are delighted with the support we have received from new domestic and international institutional investors for this placement, with demand significantly in excess of funds sought. The demand at a large premium to our VWAP's and the quality of the investor base attracted, confirms to the market, the support and understanding that our Tier 1 Kangankunde rare earths project now has in the global investment community," he said.

Remarkable Position

"To be able to declare the FID sets Lindian on the pathway to being the world's next rare earths producer, a truly remarkable position for your company to be in. We now have a very

clear, fully funded and unencumbered pathway to first production," Martin said.

The placement follows Lindian's strategic partnership with Iluka Resources, which is developing Australia's first fully integrated rare earths refinery at Eneabba, north of Perth. Under the deal, Iluka will provide a A\$20-million construction loan and has secured 90 000 t of Kangankunde concentrate under a 15-year offtake agreement.

Stage 2 expansion plans are also under way, with Lindian holding approvals to lift output to as much as 50 000 t/y. Proceeds from the placement will partly fund engineering work and infrastructure for the expansion, alongside increasing Lindian's ownership of Kangankunde to 100%.

According to the feasibility study, Kangankunde will require preproduction capital of \$40-million, which includes 12.5% contingency, making it one of the lowest capital cost rare earths projects under development. Average yearly free-on-board operating cost of \$2.92/kg total rare earth oxides positions Kangankunde in the lowest-cost quartile of the global rare earths industry. The project is expected to have a payback period of less than two years.

Martin said the new funding would allow the company to move quickly on procurement and contracting. ■



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• From page 9

was necessary to meet the country's goals of an additional 15 GW of energy by 2030, and that this would not be realised without resolving regulatory challenges.

He added that issues being faced in the space were gleaned from discussions with Seriti on the day, underscoring the importance of learning from live projects.

Ramokgopa mentioned that it was significant that all three spheres of government were present at the site visit, showcasing the importance of the project to the country, as well as enabling work to be streamlined.

Located between Bethal and Morgenon in Mpumalanga, Ummbila Emoyeni is South Africa's first wind farm in the province.

A provincial representative highlighted that the project "brings a lot of excitement for the people of Mpumalanga", notwithstanding many communities previously being sceptical about the concept of the JET, owing to the province's reliance on the coal mining industry.

However, positive impact is now materialising, including the creation of 2 000 jobs to date, and support for small-, medium-sized and microenterprises (SMMEs) and skilled and unskilled workers, she said.

Ummbila Emoyeni was a 900 MW hybrid energy facility in the Highveld area of Mpumalanga. The development would

ultimately consist of 750 MW wind energy, 150 MW solar PV and 800 MWh battery storage, Venn said.

The first three phases of the seven-stage Ummbila Emoyeni project, each comprising a 155 MW wind energy facility, are scheduled to begin commercial operation in the first half of 2027.

Once completed, it would be the largest renewable hybrid energy facility in South Africa, and the country's largest wind farm, Venn said.

Botha purported that these were also the biggest turbines on the continent at present.

The wind farm will supply Seriti Resources' coal mines with up to 500 GWh/y of electricity, representing 75% of the group's energy needs, and aligned to its decarbonisation strategy.

The project's anticipated total capital investment spend will be R70-billion. Venn said that there was currently financial close of R10-billion for the first set of turbines, and the company would be closing out on the remainder over the next 12 months, with these to be built over the next 30 to 36 months. ■

To watch a video in which Minister of Electricity and Energy Dr Kgosientsho Ramokgopa highlights the positives of Seriti Green's flagship Ummbila Emoyeni renewable energy project in Mpumalanga, scan the barcode or visit www.engineeringnews.co.za



GOLD

Golden Leap

DRDGOLD investing R7.8bn in Big Five growth projects as part of Vision 2028

MARTIN CREAMER | CREAMER MEDIA PUBLISHING EDITOR

Johannesburg- and New York-listed DRDGOLD has outlined its plans to invest around R7.8-billion in its Big Five capital growth projects, two on the well-established East Rand and three on the fast-developing Far West Rand.

The R7.8-billion capital investment is described as being a medium-term forecast for the key projects within the Vision 2028 strategy, extending life-of-mine by at least 20 years for both East Rand and West Rand operations.

Vision 2028 is working towards increasing throughput to three-million tons a month, boosting gold production to more than 200 000 oz/y, reducing the company's environmental footprint and maximising social impact.

The plan now for Ergo on the East Rand is to expand the operation's lifespan to beyond 2040 to process a resource base previously thought non-viable. Increasing deposition capacity, however, would be vital until this could be achieved, by resuming deposition on to the Daggafontein tailings storage facility (TSF) by the first quarter of the 2027 financial year.

Ergo's throughput is being throttled at 1.65-million tons a month to ease deposition on the current Brakpan TSF. Longer term, the planned new Withok TSF would take over from the Brakpan TSF.

At the Far West Gold Recoveries operation, near Carletonville, the story is similar – for now – to that of Ergo.

The throughput rate at Far West Gold Recoveries Phase 1 has, from inception, been determined by the capacity of its TSF, Driefontein 4 Dam.

Phase 2 construction is now well under way, with the expansion of the current DP2 plant to double its current throughput capacity to 1.2-million tons, enabled by constructing the large new Regional TSF.

The Regional TSF, with a 30-year life, is designed for 800-million tons at an eventual deposition rate of 2.4-million tons a month for the life-of-mine (LoM). It will still be in construction when its lower section begins to be used from the southern side.

"I think I'll venture to say that this is possibly the largest tailings dam constructed on a liner, definitely in South Africa, maybe even in the southern hemisphere. I don't

know of another tailings dam that's this big," DRDGOLD COO **Jaco Schoeman** commented during the results presentation covered by *Engineering News & Mining Weekly*.

In the case of Ergo, some of the existing infrastructure has to be upgraded for gold to be recovered from the Marievale and Crown major clusters with treated material making use of Daggafontein and Withok deposition capacity plus a dual 11 km pipeline, one for slurry and the other for return water.


Commencement of deposition on to Daggafontein is envisaged in the first quarter of DRDGOLD's 2027 financial year.

Withok, which is directly south of the Brakpan tailings dam that is scheduled for closure, is designed to hold 310-million tons of material with a deposition rate of 1.3-million tons a month.

"Once this and Daggafontein are an operation, Ergo's deposition capacity will return to 1.8-million tons a month deposition capacity, providing a LoM of more than 20 years. We anticipate that it's going to take us approximately three years before we start commissioning," Schoeman reported.

The 600 000 t capacity of Far West's DP2 plant will be doubled to 1.2-million tons, which will be pumped to the Regional TSF, close to the town of Fochville. Shown during the presentation was the proposed carbon-in-leach (CIL) circuit. The 1.2-million tons of tailings will come from the Driefontein 3 and Lebanon tailings dams. The envisaged completion date for this is the first quarter of DRDGOLD's 2027 financial year.

"From an engineering and design perspective, we're 99% complete. Our procurement packages are 94% complete. Fabrication and supplies are 65% complete and construction is about 30% complete. Again, the timeline for commissioning is the first quarter of 2027," Schoeman emphasised.

Shown was the second stream of the proposed CIL circuit, with tanks and infrastructure visible and a gold room in the background. 

To watch a video of DRDGOLD's presentation, covered by *Engineering News & Mining Weekly's* Martin Creamer, scan the barcode or visit www.miningweekly.com




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COAL, RENEWABLES & MANGANESE

Power Pair

Exxaro spending R5.2bn on coal mine expansion, R4.7bn on wind farm project

MARTIN CREAMER | CREAMER MEDIA PUBLISHING EDITOR

Johannesburg Stock Exchange-listed Exxaro Resources will be spending R5.2-billion on a life-of-mine expansion project at its Matla colliery and R4.7-billion on the development of the 140 MW Karreebosch wind energy project.

Matla will basically provide a new mine and the wind farm's supply of clean energy to platinum group metals mining company Northam Platinum will come with Scope 3 emission credits as Exxaro executes on its decarbonisation roadmap.

Being an Exxaro coal customer, Northam will support the reduction of Exxaro's Scope 3 emissions obligations through the Karreebosch wind energy project arrangement.

Despite persistent global and domestic headwinds, new Exxaro CEO **Ben Magara** reported a good set of dividend-yielding interim results that saw net cash rise 27% to R12.4-billion.

Magara made the point that this level of cash buffer would not be retained once the purchase of Ntsimbintle Holdings and OMH manganese assets was brought to completion, which was expected to take place in the first quarter of next year.

Of the R3-billion dividend funding, R1.7-billion was a pass-through from the Sishen Iron Ore Company dividend and R1.3-billion from Exxaro's own-managed operations.

Half-year domestic and export coal sales were 1% higher on production of 19.4-million tonnes.

The operating wind assets of Exxaro's energy solutions company, Cennergi,



BEN MAGARA

We aim to transform Exxaro into a diversified natural resources champion in Africa and beyond

generated 337 GWh of electricity in the six months to June 30, amid the signing of a power purchase agreement for Northam Platinum to receive clean power from the Karreebosch Wind Farm, a project that will uplift the gross clean power capacity of Cennergi to 437 MW.

Combined with Exxaro's Lephalale solar project, the two projects will more than double Cennergi's capacity by the first half of 2027.

The half-year revenue of Cennergi rose 3.5% to R675-million on stable generation and

increased annual tariff escalations, which uplifted the operational earnings of the wind energy business to R537-million – “and this drive is not just about money, but it's also about reducing emissions”, said Magara.

Expansion capital of R1.1-billion was spent on the Lephalale solar project and the Karreebosch Wind Farm in the half-year, FD **Riaan Koppeschaar** reported.

Exxaro is configuring its assets to support its decarbonisation journey, with a particular focus on technologies such as fleet optimisation to reduce Scope 1 emissions.

A key milestone in this commitment is the commissioning of the self-generation Lephalale solar project initiative at the Grooteeluk coal mine, which will deliver a 25% reduction in Scope 2 emissions and a 17% reduction in total Scope 1 and Scope 2 emissions.

Addressing Scope 3 value-chain emissions remains a priority, and through strategic partnerships and meaningful stakeholder engagement such as the signing of a memorandum of understanding with Eskom in April, Exxaro expressed confidence that it would make progress in reducing these emissions.

More Domestic Coal Offtake Expected

Exxaro is expecting more of its coal to be bought by Eskom, especially in view of the fourth unit of the Medupi power station that it supplies, having been returned to service.

“We were very pleased when they announced a few weeks ago that unit four is back,” said Magara during the presentation of half-year results covered by *Engineering News & Mining Weekly*.

Each unit consumes around 2.2-million to 2.3-million tons of coal.

“When a unit's down for a year, that's 2.2-million to 2.3-million tons out of your production and that impacts unit costs,” said Magara, adding that all six Medupi units now seemed to be running.

ARTIFICIAL INTELLIGENCE

AI changing jobs, not replacing them

ARTIFICIAL intelligence (AI) is reshaping the world of work, not replacing jobs, according to a new report. The Collective X report, ‘Decoding Information and Communication Technology (ICT) Demand 2025: Understanding the ICT market in South Africa’, shows that while AI and automation are changing the nature of many roles, they are also creating demand for new digital skills.

“The ICT sector is growing at nearly three times the pace of the global economy, making it one of the most dynamic and impactful spaces to work in today,” says Collective X evaluation, impact and learning executive **Rob Urquhart**. “It is exciting, not only because of the rapid advancements in technologies like AI, the Internet of Things, cloud computing and advanced connectivity, but also because of the immense opportunity to disrupt and transform how we learn, live, work and solve the world's most pressing challenges.”

The transformation, however, brings uncertainty around the future of skills and

livelihoods, particularly in South Africa, where the youth unemployment rate is high.

Most ICT jobs will be affected by AI, with jobs involving standardised processes, such as support technicians and testers, more vulnerable to displacement, as workflows may be easier to code into AI systems.

From a transformation perspective, job requirements are shifting from ‘doing’ tasks to activities such as orchestration, curation, innovation and alignment.

According to the report – compiled with research partners PNET and Career Junction, OfferZen and Predictive Insights – employers are increasingly seeking staff

As a result, Exxaro is guiding total 2025 production of around 38.9-million tons to 42.8-million tons, and total coal sales of between 38.3-million tons and 42.4-million tons, with export sales ranging possibly between 6.5-million tons and 7.2-million tons. Exports will depend on continued improvement by Transnet and favourable prices that justify multi-modal logistics.

On the clean energy side, generation of 677 GWh to 718 GWh would come from wind energy alone, owing to the delays of the Lephalale solar project.

“We aim to transform Exxaro into a diversified natural resources champion in Africa and beyond. As indicated in our various announcements in the last six months, we’ve taken decisive action to deliver on our strategy.

“We have a strong coal base, and that will continue. We have quality investments in iron-ore and base metals, and we’ll be prudently scaling up our energy business, adding energy transition metals to our portfolio as well, to create the sustainability we need for our country, for our continent, and for our shareholders and all stakeholders,” said Magara.

“The life-of-mine expansion project at Matla colliery will basically provide a new mine with office infrastructure, change-house facilities and a ventilation shaft. This project is on schedule, within budget and on target.”

In manganese, Exxaro’s transaction in May gains stakes in Ntsimbintle (74%) giving Exxaro 60.1% effective ownership in Tshipi Borwa mine, including 50.1% marketing rights, Jupiter Mines (19.99%), Ntsimbintle Marketing and Trading (100%), Mokala Manganese (51%), and Hotazel Manganese Mines (9%), for a purchase consideration of R11.67-billion, rising to R14.68-billion with tag-along rights and escalations.

Post the announcement, Ntsimbintle shareholders have approved the transaction. The escrow, warranty and indemnity insurance agreements have been entered and a submis-

sion filed to the South African Competition Authority for Tshipi Borwa mine. Submission for Ministerial approval under Section 11 of the Mineral and Petroleum Resources Development Act has also been completed.

“We have strengthened our ability to deliver clean, reliable energy solutions to our customers, contributing meaningfully to South Africa’s just energy transition.

“We expect the first electrons from the Lephalale solar project in the first half of 2026. The completion of the Lephalale solar project will see Grootegeluk coal mine benefiting from both electricity cost savings and reducing our Scope 2 emissions.

“We remain focused on the operational delivery, which is really the bedrock that allows us to get the cash generation we need for our growth,” said Magara, who reported that the team conducting the Leeuwpan Colliery turnaround plan had concluded consultations within the legislated 60-day timeframe, reflecting strong collaboration between Exxaro management teams, organised labour stakeholders, employee representatives and all Leeuwpan employees.

Discussions with Transnet are also under way to look at alternative export channels to minimise job loss.

“Upon the close of our manganese deal, we have no intention to rebuild our cash buffer to current levels. In that regard, we’re reviewing our capital allocation framework to enhance returns to our shareholders within our company’s risks.

“We’re committed to sustained strategic value unlock and we’ve unveiled a group management structure that is fit for the future within a functional operating model,” Magara said. ■

To watch a video of Exxaro’s results presentation, covered by *Engineering News & Mining Weekly*’s Martin Creamer, scan the barcode or visit www.miningweekly.com.



who can work alongside AI tools, interpret data and adapt quickly in technology-enabled environments, making foundational digital fluency, problem-solving and applied learning more important than ever for early-career talent.

“Contrary to the perception that entry-level roles are vanishing owing to automation, the data shows strong and growing demand for junior talent in roles like software development, business analysis, information technology support, cybersecurity and systems administration.

“Digital jobs in South Africa hold significant potential, not only to create

employment opportunities for young people but to provide opportunities that can be truly economically transformative for them.”

It is estimated that the number of ICT jobs in South Africa in 2024 stood at 318 000, with a vacancy rate of 27.2%.

Research from Collective X, which highlights both the potential and challenges for absorbing young people into South Africa’s digital jobs, reveals that, of the 118 000 digital roles that remain unfilled across the country, more than 41 000, or 36%, are suitable for junior professionals. ■

NATASHA ODENDAAL
SENIOR DEPUTY EDITOR

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WATER

Capital Tides

New council launched to scale global water investments

NATASHA ODENDAAL | CREAMER MEDIA SENIOR DEPUTY EDITOR

As part of the G20 Presidential Legacy Initiative, a new water investment council has been launched to drive water investments at the highest levels of global diplomacy.

The Global Outlook Council on Water Investments, launched at the inaugural Africa Water Investment Summit, held in Cape Town in August, will see the Africa Water Investment Programme scaled up into a Global Water Investment Platform.

In 2016, the High-Level Panel on Water was launched by the then United Nations (UN) secretary-general **Ban Ki-moon** and World Bank president **Jim Yong Kim**, with 11 heads of State gathering to “rethink how the world approaches water”, President **Cyril Ramaphosa** said during the launch.

Following their recommendations, the African Union established the Africa Water Investment Programme and the International High-Level Panel on Water Investments for Africa.

The panel was tasked with mobilising at least \$30-billion a year by 2030 to close Africa’s water investment gap.

The council is convening African and international partners together and calling on investors to heed the call to invest in water.

“The Global Outlook Council and the Global Water Investment Platform will serve as the world’s premier high-level political and



CYRIL RAMAPHOSA

Water investment must no longer be an afterthought at climate and finance discussions

investment platform on water,” Ramaphosa explained.

“It will track progress, unlock finance, report annually and align efforts across the G20, the UN, multilateral development banks and the private sector.”

Further, it will mobilise the leadership, capital and innovation required to transform water from a crisis sector into an opportunity sector.

While the world faces a deepening water crisis, this is also a moment of immense opportunity, he assured.

“We are looking forward to the alignment of the Global Outlook Council initiative with the investment theme of the 2026 UN Water Conference: Ensure availability and sustainable management of water and sanitation for all.”

The invited leaders that will work with the South African G20 Presidency as co-chairpersons in the leadership of the council include United Arab Emirates President **Sheikh Mohamed bin Zayed Al Nahyan**; Barbados Prime Minister **Mia Mottley**; and Bill and Melinda Gates Foundation co-chairperson **Bill Gates**.

Alternate co-chairpersons, as facilitators for effective broad engagement of the council members, include Tanzania’s former President **Jakaya Kikwete** and UN deputy secretary-general **Amina Mohammed**.

Council members inaugurated include Brazil President **Luiz Inácio Lula da Silva**; Mexico President **Claudia Sheinbaum**; Saudi Arabia Crown Prince **Mohammed bin Salman**; India Prime Minister **Narendra Modi**; Australia Prime Minister **Anthony Albanese**; UK Prime Minister **Keir Starmer**; German Chancellor **Friedrich Merz**; Italy Prime Minister **Giorgia Meloni**; European Commission president **Ursula von der Leyen**; Angola

President and African Union chairperson **João Lourenço**; and Senegal President and UN 2026 Water Conference co-host **Bassirou Diomaye Faye**.

“The council will be supported by a group of global leaders who will serve as council champions. I wish to applaud these leaders, who have stepped forward to confront and overcome a challenge faced by billions of people across the world,” Ramaphosa continued.

The council will guide the transition from fragmented water investments to a coherent, coordinated and capitalised global effort through the Global Water Investment Platform.

“Water investment must no longer be an afterthought at climate and finance discussions. It must be at the centre of discussions. It must be financed, tracked and championed.”



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PROPERTY

Renewables Ledger

Growthpoint, Fuel Switch launch blockchain-enabled Renewable Energy Certificate exchange

SABRINA JARDIM | CREAMER MEDIA SENIOR ONLINE WRITER

JSE-listed real estate investment trust (Reit) Growthpoint Properties said it is giving a massive boost to Africa's first open blockchain-enabled REC exchange, Fuel Switch, while unlocking certified clean energy trading for tenants when its e-co2green energy initiative goes live in October.

The Reit pointed out that wheeled green energy would be made available for daily business in South Africa from October.

"What we have seen in the industry currently is that sustainability reporting is becoming a very onerous task, [especially on the] listed companies . . . almost to the extent that it is becoming equal to financial reporting," said Growthpoint corporate advisory head **Werner van Antwerpen** during a media presentation.

"That's why we actually developed this e-co2 initiative . . . to, first of all, . . . wheel green power to those tenants, but also then

to certify those . . . so that they can use that to reduce their emissions in their reporting structures," he explained.

Growthpoint's e-co2 will deliver its first green electrons to ten Sandton office buildings in October, with hydropower wheeled over the national grid from the Boston hydro-electric plant, newly developed as part of the Lesotho Highlands Water Scheme in partnership with Serengeti Energy.

The company said in a media release that the e-co2 roll-out puts Growthpoint well ahead in bringing certified renewable energy into daily business.

The company explained that the use of e-co2 wheeled green electricity is cost competitive for Growthpoint tenants and has a zero-carbon footprint, allowing them to save money and advance their sustainability goals.

For e-co2, the company signed a 195 GWh



JAN-PAUL SPANGENBERG

Tenants can face issues such as limited choice regarding electricity, tedious onboarding processes and high fees

power purchase agreement with Etana Energy in 2023, securing a mix of hydro, wind and solar power.

The company said this energy underpins its pioneering e-co2 solution, which delivers wheeled renewable electricity directly to commercial buildings and their tenants.

"But the real breakthrough lies in how this energy is certified, tracked and monetised for Growthpoint's tenants," the company said in the release.

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TELECOMMUNICATIONS

Vodacom makes native voice call on 5G

Vodacom South Africa has successfully made a native voice call on 5G, also known as Voice-over-New-Radio (VoNR), marking a major milestone in the evolution of mobile communication in the country.

Said to be South Africa's first, the call was made on Vodacom's test network as the company prepares to launch the service on the live network.


"This achievement is testament to our commitment to the continuous evolution of our technology capabilities and pioneering next-generation connectivity solutions to ensure the delivery of fast, reliable and secure connectivity for our customers," says Vodacom South Africa technology director **Beverly Ngwenya**.

"This is especially important in the era of artificial intelligence and the widespread use of modern digital applications. It is a proud moment that highlights the strength of our network and the dedication of our teams in shaping the future of mobile communication."

In 2014, Vodacom South Africa was the first operator in the country to launch native Voice-over-Long-term-evolution (VoLTE) capability.

Prior to the launch of VoLTE, voice services were delivered only through 2G or 3G.

5G native VoNR builds on VoLTE, with faster call setup times and superior voice quality and ultra-high-definition audio and reduced background noise.

Vodacom used its single packet core for the VoNR call. This typically requires cloud orchestration, cloud native applications and network upgrades. 

NATASHA ODENDAAL
SENIOR DEPUTY EDITOR

During the presentation, Fuel Switch CEO **Jan-Paul Spangenberg** explained that tenants can face issues such as having limited choice regarding electricity, as well as tedious onboarding processes and high fees.

Fuel Switch's platform certifies the electricity as green using the Internet of Things (IoT), blockchain and AI, providing independent third-party verification in an innovative manner.

Once certified, the green energy benefit is recorded on a digital certificate.

Each REC confirms that 1 MWh of renewable energy has been generated and supplied to the national grid.

The RECs are stored on the blockchain as a digital asset. Each is time-stamped and linked to a renewable-energy source.

"Think of it like this: when a solar panel generates electricity, it creates two things – actual power, and a certificate that says, 'This power came from a clean, renewable source,'" Growthpoint explained.

The Reit noted that corporates had come under increasing pressure to meet net-zero and environmental, social and governance (ESG) commitments, adding that sustainability reporting is increasingly carrying the same weight and scrutiny as financial reporting.

RECs can be redeemed for certified reduction of Scope 2 carbon emissions. Fuel

Switch integrates directly with South Africa's national REC registry, zaRECs, as well as the global I-REC standard governed by the I-TRACK Foundation.

Growthpoint said that its blockchain platform provided an "immutable record" for each REC from issuance to retirement, which ensured auditability aligned with global ESG standards.

Large companies, such as Google, Amazon, Microsoft, Apple and Meta, are driving a surging demand for RECs as they seek to reach 100% renewable electricity for their operations, said Growthpoint.

The company explained that, until now, Africa's participation in the voluntary RECs market had been limited, where high costs, slow manual processes and opaque trading made it accessible to only the largest-scale projects.

However, when e-co2 goes live, Fuel Switch will enable Growthpoint tenants of all sizes to access this new market.

The company noted that the innovation lay in blockchain smart contracts, the use of IoT devices and business logic to bring all stakeholders together with a digital handshake.

As e-co2 rolls out from October, participating tenants in select Growthpoint buildings will have their smart electricity meter consumption data automatically sent for ver-


ification, and the corresponding RECs will be issued directly into secure digital wallets.

These wallets are free for Growthpoint tenants and accessed through the Fuel Switch Exchange platform, allowing tenants to access, manage and deploy their RECs based on business needs.

They can redeem them to lower emissions or sell them for additional revenue.

Growthpoint said this makes it the first to offer a commercial-scale, wheeled renewable electricity solution where renewable energy use is certified at the building level and the benefits are made available to tenants in a verified, auditable format.

Fuel Switch explained that an elegant system of automated actions executes predetermined smart contract rules embedded in a secure blockchain database.

This ensures green energy that is independently certified with the highest level of trust and transparency and direct access to an evolving trading market that is usually inaccessible to all but the biggest players owing to high participation costs. 

To watch a video in which Fuel Switch CEO Jan-Paul Spangenberg and Growthpoint corporate advisory head Werner van Antwerpen discuss the e-co2 green energy initiative, scan the barcode or visit www.engineeringnews.co.za.



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ACTION REQUIRED

Naacam CEO on key priorities for preserving 'critical source of industrial capacity'

IRMA VENTER | CREAMER MEDIA SENIOR DEPUTY EDITOR

AT RISK

The component sectors most at risk are those producing commodity-type components with high price competition and limited ability to differentiate, such as rubber and plastic parts

The global automotive market is facing a shift as profound as the day the first mass-produced vehicle drove off the assembly line. From horse-and-carriage versus car, the conflict has now, more than 100 years later, moved to internal-combustion-engine versus electric.

On top of this, the very companies that invented and refined the automobile as we know it, are being forced to go toe to toe in their own backyard against the ambitious new kid on the block – China.

These same forces are at play in South Africa, but more so with the arrival of a raft of new-market entrants, including those from India, which are taking market share from the more traditional brands – the same brands that have invested heavily in local vehicle manufacturing.

What is also true is that no vehicle plant exists in a vacuum; for every car plant, there are numerous parts suppliers. It's an intricate and interdependent manufacturing chain, and there is little doubt that margins are under pressure.

Engineering News & Mining Weekly (EN&MW) spoke to National Association of Automotive Component and Allied Manufacturers (Naacam) CEO **Renai Moothilal (RM)** to get a status update on South Africa's parts sector.

EN&MW: Similar to other countries around the world, South Africa has seen a rapid

influx of Chinese cars on the road. These new arrivals have been eating into the local market share of the country's seven vehicle assemblers – Mercedes-Benz, Ford, Isuzu, Toyota, Nissan, BMW and Volkswagen. What is lesser known, however, is what effect the newcomers have had on local component manufacturers that supply their products to these assemblers' plants. **RM:** So, first up, it's not about vehicles from any single country – China or otherwise.

But yes, South Africa's domestic vehicle market has indeed shifted and is now dominated by imported vehicles, a trend that has been growing at a rapid pace.

With the country's new-vehicle market at a roughly 50:50 split back in 2010 in terms of imported vehicles versus locally produced vehicles, the situation has now changed to a market where roughly 65% of the new vehicles sold in South Africa are not assembled locally. That is more prevalent in the non-premium, high-volume segments.

Vehicles from India, China and the EU are the best-selling models in South Africa. However, the EU's OEMs (original-equipment manufacturers, or vehicle manufacturers, such as Volkswagen or BMW) have invested in local assembly plants in South Africa, and in building up significant export markets for these plants.

The issue about China is the commonly reported internal market price wars currently being waged in that country.

This is artificially decreasing these vehicles' prices – a phenomenon being aided by the high levels of State funding available to these manufacturers. These vehicles then find their way into global markets, including our own.

When it comes to India, no Indian brand has a full-scale completely knockdown plant in South Africa. Also, brands which are not Indian, but which manufacture a percentage of their vehicles in India, are largely active in South Africa as vehicle importers.

India specialises in small, entry-level vehicles, which have grown in popularity in the local market.

Among the local assemblers, only one brand produces an entry-level vehicle at scale.

The influx of these imported, lower-price point vehicles into the South African market has had a dual effect.

They all arrive fully built, which means, firstly, that there are limited immediate opportunities for local component suppliers, and, secondly, that their presence places continued downward pressure on local assembly volumes.

This can indirectly impact Tier 1 and Tier 2 component suppliers, as their volumes are heavily dependent on domestic OEM output.

In the aftermarket, Chinese brands are also bringing in lower-cost components, which again heightens competition for local part manufacturers.

Should these emerging OEMs opt for local assembly, however, or even component export

contracts out of South Africa – perhaps driven to do so by market access regulations or cost considerations – there is scope to integrate South African suppliers into their value chains.

EN&MW: You mention ‘market access regulations’. Are we talking duties? It seems South Africa’s carmakers will ask government to hike the import duties on new cars from 25% to 30% in an effort to level the playing field between vehicle manufacturers and importers. Is this one such access regulation? If so, can it work? Also, what other market access regulations can potentially aid the automotive manufacturing industry?

RM: Yes, additional duties is one of these access regulations, and should be looked at not just for vehicles, but even components being imported into the country.

There are others regulations that can help, such as stricter homologation requirements; greater stock and aftermarket presence requirements; limiting the period for semi-knockdown assembly (*see later question) where key input components are at duty advantages; and requiring independent importers that make use of duty credits to have a minimum level of component exports into their global plants.

Ultimately, my point is that, if South Africa is going to champion domestic manufacturing, it needs a strong, holistic industrial policy.

It cannot only look towards government’s Automotive Production and Development Programme (APDP) to deliver growth, as the APDP has its limitations.

EN&MW: Some pundits argue that it is too expensive to support South Africa’s automotive manufacturing industry, firstly in terms of the cost to government, as well as the cost to consumers in terms of the duties imposed on imported cars. What is your response?

RM: Can South Africa afford the employment losses associated with closing this sector? The automotive manufacturing sector directly employs more than 110 000 people.

And then there is also the significant level of skills and technology transfer we see within the industry, the cross-sectoral links created within economic clusters, as well as all of the services related to manufacturing that have come into existence.

The critique you note is common across the world, yet we are seeing more and more countries looking to implement policies that work to retain, rather than let go of, manufacturing.

The Australian government took a decision about 15 years ago to stop its support to the automotive manufacturing sector and it was lost in no time.

The same can be expected within South Africa, with the main difference being we have a lot more unemployed people than our coffee shops can absorb.

EN&MW: There have been a number of well publicised plant closures in South Africa on the back of what the affected companies describe as increasing competition from Asia, particularly China. The most notable has been the proposed closure of the Goodyear plant in Nelson Mandela Bay, which will cost the region 900 jobs. Can you tell us more about any plant closures in the local automotive value chain? Some have perhaps been less visible than others.

RM: The Goodyear plant closure is one of the more visible examples of the current pressures.

Naacam has recorded at least 12 plant closures and over 4 000 job losses over the past two years nationally, due to a range of factors. This is a trend that will worsen over the medium term as the US market becomes less accessible owing to the ongoing tariff increase strategy pursued by the Trump administration.

Many of the businesses that could potentially close are suppliers of niche or commodity components where imported alternatives, often from Asia, could undercut their pricing.

Compounding this are rising input costs, particularly in terms of steel and energy, with logistical disruptions at our ports and rail network further squeezing already thin margins.

The net effect is a gradual hollowing out of the domestic supply base, which reduces resilience across the automotive sector.

EN&MW: What is the outlook for survival of the existing bloc of component manufacturers in South Africa? Which sectors have the best chance, and why? Which sectors are currently staring down the barrel of the gun? Should we perhaps also keep in mind that the parent companies of South Africa’s seven local vehicle assembly plants are facing increasing competition from especially China in markets everywhere, with this pressure flowing downstream to their operations in South Africa?

RM: The outlook is mixed. Firms with strong and diverse export channels, differentiated technology or products that are less price-sensitive, such as safety-critical systems, specialised electronics, or precision-engineered components, are better positioned for survival.

Similarly, suppliers that can diversify into adjacent industries such as rail, maritime, or mining can spread their risk.

The sectors most at risk are those producing commodity-type components with high price competition and limited ability to differentiate, especially if they rely solely on local OEM volumes.

These would include goods such as fasteners and fixings, rubber and plastic parts, basic stampings, auto-glass, wiring harnesses, battery cables, basic lighting and high-volume replacement parts like tyres and lead-acid batteries.

And yes, in markets where the local assemblers’ parent companies are themselves under competitive strain, there is less room for OEM-led rescue measures.

EN&MW: How can the viability of the component sector in South Africa be improved? Or, perhaps tell us first whether it should be preserved? And, if the answer is yes, what can be done to keep it alive?

RM: It should absolutely be preserved. The component manufacturing sector is a critical source of industrial capacity, skilled employment and export revenue.

Preserving it requires a multi-pronged approach.

South Africa has to restore its competitiveness by lowering the cost of key inputs like raw materials, energy and logistics.

We can drive technology upgrades through targeted incentives and blended finance support, particularly for small and medium businesses (SMEs).

We must expand market access via export promotion into global markets, and we must support African regional value chains.

It is also vital to strengthen localisation policies to ensure higher local content in both existing and new vehicle platforms.

Local content has been stagnant under the South African Automotive Masterplan 2035 (SAAM 35) at less than 40% of the average vehicle produced in the country, resulting in no real growth in employment, or other positive economic outcomes.

The goal is not indefinite protection, but building a sustainable, globally competitive component sector, which is exactly what other competing automotive destinations like Thailand, Turkey, India, and so forth, are all doing.

If the component sector is lost, there is no real economic reason for a country to continue having any level of automotive policy or incentive programme.

EN&MW: If China is the world’s current manufacturing powerhouse, must the local automotive industry and government not court Chinese component and vehicle manufacturers more actively to set up shop in South Africa?

RM: Attracting investment from new global OEMs, including the Chinese car brands and component makers, can unlock jobs, technology transfer and export potential – if structured correctly.

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TRUCKS

Test Drive

DHL, Unilever and Volvo in pilot study to test superlink electric truck

IRMA VENTER | CREAMER MEDIA SENIOR DEPUTY EDITOR

DHL Supply Chain has launched an electric vehicle (EV) pilot project in collaboration with Unilever and Volvo Trucks South Africa.

The initiative involves deploying a fully electric Volvo FMX 6 × 4 tractor with a curtain-sided 18 m superlink double trailer to support consumer goods company Unilever's supply-chain operations.

The project's main goal is to evaluate the performance, sustainability benefits and economic viability of EVs compared with traditional diesel-powered vehicles, particularly within Africa's developing EV infrastructure environment.

The electric tractor used with

the superlink will operate along standard logistics routes, and will be charged using infrastructure supplied by Aeversa at existing Unilever facilities for the duration of the pilot project.

DHL says its long-term objective is to transition to renewable energy for charging, further improving the electric truck's carbon footprint in future deployments.

Data from the trial will be benchmarked against DHL's existing Euro 5 diesel fleet and could potentially accelerate the broader adoption of electric trucks within DHL's operations across Africa.

"While limitations remain in scaling EV solutions, strategic



ELECTRIC HAULAGE

The fully electric Volvo truck will operate along standard logistics routes

partnerships like this enable us to test and capitalise on the technologies available today, proving that low-carbon logistics can be possible, even in emerging markets," says DHL Supply Chain Africa MD **Bremer Pauw**.

"As part of our sustainability commitment, we have proactively introduced cleaner transport solutions, including assembling Euro 5 trucks locally ahead of regulation," notes Volvo Trucks South Africa sustainable solutions senior manager **Eric Parry**.

"This pilot reflects our belief

that collaboration is key to accelerating Africa's transition to sustainable freight transport."

"Unilever is committed to achieving net-zero emissions across our operations by 2039," adds Unilever South Africa national transport manager **Simphiwe Dlamini**.

"Collaborations such as this pilot . . . are crucial steps toward reaching our sustainability objectives, enabling us to test and implement innovative transportation solutions that foster a greener supply chain." ■

• From page 19

Naacam is advocating for investment agreements that require meaningful localisation, skills development, SME supplier development, and integration into domestic value chains. Without these safeguards, there is a risk of 'screwdriver' SKD-assembly operations that bring minimal benefit to local manufacturing – in other words, simply bolting together large, imported subassemblies with very little local content.

There is also a significant opportunity to increase export contracts for South African-made components into some of these Chinese OEMs' global plants, in exchange for easier access into South Africa's domestic market.

EN&MW: Under the African Continental Free Trade Agreement (AfCFTA) and SAAM 35, there is a demand for 40% local content on made-in-South Africa vehicles to benefit under the agreement, and to be globally competitive, respectively. Is this a viable number? Can we produce vehicles with 40% local content?

RM: Here we are talking about a 40% Rule of Origin, meaning total value-add across all products from any African country involved in the full manufacturing process, including materials beneficiation.

That is not difficult to achieve, and has to be held at that number if any meaningful assembly plants are to happen on the continent.

If not, low-level SKD assembly plants become commonplace, as we are even starting to see in South Africa now.

Naacam is clear that this is not the path to true competitiveness and sustainable economic development for the automotive sector.

But it does mean that smart, coherent and coordinated industrial policies are needed across AfCFTA countries, and, to that extent, a pan-African industrialisation pact would serve a purpose. This ties in with the work being led by the African Association for Automotive Manufacturers.

Compliance to the Rules of Origin will require targeted industrial interventions, improved cost competitiveness, and strategic investment in capability gaps.

Transparent measurement and incentives tied to high-impact localisation opportunities are essential.

EN&MW: Last question – what do you think the next 12 to 24 months have in store for South Africa's automotive manufacturing industry?

RM: The coming two years will be neutral, if not challenging. Competition from low-cost imports will intensify.

Energy and logistics costs are set to remain major constraints, and the possibility of further assembly and component plant rationalisation cannot be ignored.

However, there are also opportunities.

The shift towards new-energy vehicles offers space for the creation of new local value chains. A fully developed critical minerals beneficiation strategy and the more active roll-out of the AfCFTA can open up regional export markets.

New, strategic foreign investment, tied to localisation, can also strengthen the local automotive manufacturing industry.

Instances of production volumes lost at specific OEMs can be expected, but there are others that are on an upward curve.

The key will be urgent, coordinated action among government, OEMs, component suppliers, labour and supporting agencies such as the South African Revenue Service, the Industrial Development Corporation, the International Trade Administration Commission of South Africa and other implementation bodies to maintain industrial capacity and prepare for the future mobility landscape. ■

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WATER

Pressing Concern

Business-as-usual won't solve water challenges – Mahlobo

NATASHA ODENDAAL | CREAMER MEDIA SENIOR DEPUTY EDITOR

South Africa's water scarcity demands urgent action and cannot be treated as 'business as usual', says Water and Sanitation Deputy Minister **David Mahlobo**, calling for bold innovation, cross-border collaboration and sustainable practices to tackle the escalating global water crisis.

"There is ample evidence showing how semi-arid our country is, and that it cannot be business as usual. That is why the Department of Water and Sanitation and government published the [third iteration of the] National Water Resource Strategy," he told delegates at the third International Conference on Earth and Environmental Sciences (ICEES), held in KwaZulu-Natal last month.

The strategy aims to reassess the water deficit, investigate new technologies, such as water desalination, and pursue partnerships with higher education institutions for research to improve existing water sources – including groundwater and effluent reuse – and assess the cost-effectiveness and feasibility of these options.

He highlighted the importance of integrating indigenous research and practices into solutions, presenting indigenous knowledge systems as a form of science that modern technology can build upon.

"Communities are not passive beneficiaries; they are stakeholders. Their lived experiences of droughts and floods, and their land management practices, hold vital lessons for

building lasting resilience," he added.

Mahlobo also challenged the scientific community to ensure that its research informs governance and decision-making instead of remaining in academic silos.

"Being a scientist or engineer does not mean stepping away from governance. Choose to be part of the main table where critical decisions are made, or risk being sidelined while the future of shared prosperity is shaped without your input," he said.

The three-day ICEES, organised by the University of Zululand in partnership with China's Chang'an University, convened leading researchers and experts to confront pressing challenges, such as climate change adaptation, groundwater management, pollution control and sustainable development.

His comments came as more than \$10-billion was committed to priority water projects across dozens of countries during the three-day inaugural African Union-Africa Water Investment Programme-hosted Water Investment Summit, held in Cape Town, also last month.

Water and Sanitation Minister **Pemmy Majodina** is confident that more investments will follow, highlighting 80 priority water investment projects from 38 countries which have already attracted between \$10-billion and \$12-billion in yearly investments.

The inadequate investments in water have undermined progress across all the Sustainable Development Goals on water and




DAVID MAHLOBO

South Africa's water scarcity demands urgent action

sanitation, and the critical role that water plays in climate change adaptation and mitigation, as well as the goals of Agenda 2063.

Committed focus was promised for the governance, finance, capacity and data gaps that were in the water sector during the summit, Majodina continued, adding that a pipeline of bankable water and sanitation projects was showcased to prospective funders and investors.

"We are making a call to governments to help level the playing fields in order to attract investment. Let us eliminate long and unnecessary red tape which undermines and discourages investment," she said. 



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AUTO INDUSTRY

Shopfloor Pact

Automotive component, fuel, retail sectors sign three-year wage deal

IRMA VENTER | CREAMER MEDIA SENIOR DEPUTY EDITOR

The component manufacturing, fuel and automotive retail sectors have signed a three-year wage agreement.

Wage talks within the Motor Industry Bargaining Council (MIBCO) started on April 10 and concluded at the end of August.

Negotiations in the vehicle assembly sector are still ongoing.

The Retail Motor Industry Organisation (RMI) and the Fuel Retailers Association represented employers within MIBCO, while employees were represented by the Motor

Industry Staff Association (MISA) and the National Union of Metalworkers of South Africa (Numsa).

RMI labour director **Jeffrey Molefe** describes the more than four-month-long engagement between labour and employers as “extensive and constructive”.

“The RMI is satisfied with the outcome of the MIBCO 2025 collective bargaining process, as it reflects the mandate of our members, while balancing the realities and sustainability of businesses across the motor industry.”

The three-year wage deal gives employees within the component manufacturing sector a 6% salary and wage hike in year one, and 5% in years two and three on the actual rate of pay.

The retail sector will see a 5% increase in years one, two and three on minimum wages, with pay hikes in the fuel retail sector at 6% in year one, 5% in year two and 4% in year three for forecourt attendants, with a 1% medical insurance allowance included each year.

Cashiers in the fuel retail sector will get a 6% pay hike in year one, and 4% in years two and three, again with a 1% medical insurance allowance each year.

MISA says this 1% will be afforded to employees in the form of an allowance towards primary health insurance over the duration of the agreement.

Employees will have a choice to opt in or out of the primary healthcare scheme set to be implemented on January 1 next year.

MISA signed the settlement agreement for the first time as the majority trade union in the retail motor industry.

Numsa says it is pleased with the above-inflation increases, as well as the primary healthcare benefit extended to service station workers.

“This is the very first time that such a benefit has been negotiated and we are pleased that this round of negotiations has ensured that the foundation has been laid for the lowest-paid workers to receive access to quality private healthcare.”

The three-year agreement is valid from September 1 and expires on the August 31, 2028.

The signed agreement will be submitted to the Minister of Employment and Labour for publication in the Government Gazette, with extension to non-parties.


Upon publication in the gazette, the wage increases will become compulsory for all employers and employees within the registered scope of MIBCO.

The effective implementation date will be determined by the Minister at the time of publication. ■

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- What strategies help businesses stay compliant with shifting ESG regulations?

Confirmed panel members:



Mark Robertson
Genesis Analytics
(facilitator)



Sandhisha Jay Narain
Pele Green Energy



Julie Wells
National Cleaner
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DIAMONDS

Milestones Spotlight

De Beers highlights environment, social, traceability milestones in latest sustainability report

MARLENY ARNOLDI | CREAMER MEDIA SENIOR DEPUTY EDITOR ONLINE

Diamond mining major De Beers says it has made meaningful progress in areas such as emission reduction, safety and conservation, while advancing work on diamond provenance and traceability.

In its sustainability report for 2024, the group confirms a Scope 1 and 2 emission reduction of 7% since 2021.

The group is working with Envusa Energy to complete the financing of wind and solar plants in South Africa, which will start catering for 100% of the Venetia mine's electricity needs next year.

The group had 248 MW of renewable energy in planning stage in 2024, including the Mmadinare solar PV project, in Botswana.

On the fuels front, De Beers is advancing alternative fuel studies in Botswana and Namibia for its Debswana and Namdeb operations.

“Our frontrunning alternative to diesel is a fuel made from recycled end-of-life tyres. In 2024, we launched a prefeasibility study

for a pyrolysis plant in South Africa to support both our decarbonisation and circular economy objectives.

“We also have oil seed trials under way to explore biodiesel production in partnership with Sasol and Anglo American,” the company confirms.

Moreover, the company has worked with its top 100 strategic partners to develop roadmaps for reducing Scope 3 emissions.

The group ultimately aims to reduce Scope 1 and 2 emissions by 42% and Scope 3 emissions by 25% by 2030 – from a 2021 baseline.

Additionally, the company managed about 375 000 acres of land for conservation purposes in 2024, ensuring habitats for a range of endangered fauna and flora. For example, the group relocated ten white rhinos from Botswana to South Africa as part of a rewilding project.

The company also has a seabird rescue initiative in place through the Namdeb-Debswana Foundation, which is working

with conservation stakeholders to prevent the extinction of the African Penguin.

On the social front, De Beers made a total tax and economic contribution of \$2.9-billion in 2024, which it says highlights the socioeconomic value that responsibly sourced natural diamonds can deliver.

In particular, De Beers spent \$1.7-billion on local procurement during the year, comprising 74% of its total procurement spend, which provides ripple effects across local economies.

The group also achieved its best-ever safety performance in 2024, with a total recordable injury frequency rate of 1.2.

De Beers has several high-impact programmes in place across its host countries. For example, through the EntreprenHER programme, in partnership with UN Women, De Beers has supported more than 500 women entrepreneurs and aims to reach 1 500 more in the next three years.

De Beers also backs the Stanford SEED programme, which supports entrepreneurs across Southern Africa. This initiative has helped to create 3 400 jobs since its inception in 2018.

As part of De Beers' engagements with the government of Botswana for a new Debswana sales agreement and mining licences, De Beers developed a ten-year Diamonds for Development Fund.

In recognising the importance of responsible sourcing and traceability, De Beers advanced and scaled its Tracr blockchain platform in 2024, with nearly three-million individual diamonds having been registered on the platform since 2022.

Producers and suppliers can register the source of diamonds



ETHICAL SPARKLE

De Beers' commitment to green energy, conservation, traceability and community shines through every facet

on the platform, with the platform then providing country-of-origin information for all De Beers Group-sourced rough diamonds weighing more than 1 ct.

The Tracr platform is now undertaking both rough-to-rough and rough-to-polished objective verification of diamonds on the platform, which enhances the levels of assurance it can provide throughout the value chain.

Additionally, owing to the growing consumer interest in where a product originates and the impact it has had along its journey, De Beers enables participating retailers to access polished diamonds that have been sourced by De Beers and tracked through the value chain by Tracr.

De Beers has been running its Best Practice Principles Assurance Programme since 2005, which involves independent yearly assessments across the diamond value chain to account for best practice environmental, social and governance standards. In 2024, this programme covered 274 000 people in 79 countries.

De Beers brands and diamond desirability CEO **Sandrine Conseiller** says sustainability is embedded in the group's operations, from developing renewable energy in its host countries to advancing gender equity and supporting long-term national development. 🌱

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Kwikspace Level 1 BBBEE status delivers tangible benefits to its clients

TRACY KLÜCKOW | CREAMER MEDIA CONTRIBUTING EDITOR

Africa's largest manufacturer of prefabricated and modular buildings Kwikspace offers proven capability and unmatched empowerment credentials.

"Kwikspace is a tried and tested company that can meet the toughest African conditions. Our product range is broad, our national footprint is extensive and our innovation keeps us ahead," says Kwikspace CEO and FD **Dirk Steinberg**.

In an exclusive interview with *Engineering News & Mining Weekly* publisher **Martin Creamer**, he highlighted that by securing a Level 1 broad-based black economic empowerment (BBBEE) contributor status – one of the highest designations available in South Africa – Kwikspace offers clients real advantages, whether in tendering or preferential procurement.

Being 82.5% black-owned and 56.5% black-women-owned, for Kwikspace, transformation is not just a compliance exercise – it is a business model that empowers clients, employees and communities alike.

South Africa's BBBEE framework was designed to drive inclusive growth and greater representation in business. For many corporates and public entities, choosing the right supplier is as much about meeting transformation goals as it is about securing reliable products and services.

"Most of our clients, particularly in the public sector, require higher levels of empowerment credentials for tendering processes. We're proud that Kwikspace can meet those requirements. For the private sector, the preferential procurement benefits are equally valuable, with clients receiving up to 135% recognition on their BEE scorecards when procuring from us," elaborates Steinberg, emphasising that the company's business model drives transformation across the value chain.

Shareholding Reflects Confidence and Growth

Kwikspace's ownership structure was bolstered when Vulindlela Holdings and Lehumo Women's Investment Holdings increased their stakes following the exit of private equity partners. Having already been minority shareholders since 2022, they recognised the growth trajectory and return on investment potential of the business.

"This uplift in shareholding is testament to the confidence our shareholders have in the business and its future," Steinberg notes.

Transforming Skills

Kwikspace's transformation efforts are not limited to equity ownership. The company has embedded empowerment into its broader operations, from employee development to supplier partnerships.

Through its on-site training centre, Kwikspace offers accredited courses, apprenticeships and bursaries. In the last financial year, 29 graduates qualified and several of them, along with some interns and artisans, transitioned into permanent roles.

"Transformation must benefit more than just the shareholders. It must benefit employees, local suppliers and communities. We are proud that our model extends opportunities to many stakeholders, not only those within the business," Steinberg stresses.

On the procurement front, Kwikspace has mapped out its high-spend areas and deliberately prioritised compliant black-owned vendors. This ensures that its empowerment commitment resonates throughout its supply chain.

The company's senior executives have also invested personally in the business, ensuring they share directly in its successes.

"Our management team has been together for many years. They don't just design and

execute strategy – they have skin in the game. That ownership fosters accountability and provides a strong succession plan for the business," says Steinberg.

Proven Solutions Across Africa

With more than 50 years in operation, Kwikspace has built a reputation for delivering modular solutions that meet Africa's toughest conditions. Its projects range from massive 12 000 m² mining camps to small guardhouses, with applications in education, healthcare, government and commercial sectors.

The company's product offering includes classrooms, offices, kitchens, ablution facilities and living quarters – all designed to be safe, durable and adaptable. Beyond manufacturing units for sale, Kwikspace also runs the largest modular rental fleet in South Africa, supported by a national footprint that allows it to serve clients across the country.

Driving Kwikspace's ability to deliver is a culture of innovation. Its manufacturing facilities continuously refine designs, ensuring products are safer, stronger and smarter.

"Innovation is part of who we are. Our factories don't just produce units, they test and improve them constantly. That's how we've managed to remain competitive and reliable over five decades," concludes Steinberg.

Watch a video in which *Engineering News & Mining Weekly* publisher **Martin Creamer** talks to Kwikspace CEO and FD **Dirk Steinberg** about its commitment to transformation.



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BASE METALS

Military Nudge

Defence industry expected to spur demand for nickel as world invests in armaments

MARTIN CREAMER | CREAMER MEDIA PUBLISHING EDITOR

The global defence industry is expected to stimulate considerable demand for nickel as the world invests in more armaments that require nickel-containing steels.

“I think there’s going to be a big demand-side inflection coming quite quickly from the global defence industry as the world invests – and I think, unfortunately, has to invest – in more armaments that all require stainless steel and specialised steels that contain nickel for gun barrels, for armour, for ships.

“I’m not seeing, yet, that it’s factored into the demand-side analysis much at all, but I think it’s going to be big. It’s going to be bigger than anyone’s thinking about at the moment,” Lifezone Metals founder and chairperson **Keith Liddell** outlined to *Engineering News & Mining Weekly* in a Zoom interview.

“We think that the nickel price will start to trend up over the next few years, and we want to be commissioning into a rising price, rather than where we are at the moment where the price is in a bit of a doldrum.”

New York-listed Lifezone recently took full control of Kabanga Nickel, which in turn holds an 84% interest in Tembo Nickel, the Tanzanian operating company behind the Kabanga project. The remaining 16% is held by the Tanzania government.

Lifezone’s comprehensive feasibility study for the Kabanga project outlines the initial development phase, including a 3.4-million-ton-a-year underground mine, processing infrastructure and tailings storage.

The project will produce a high-grade nickel, copper and cobalt concentrate for downstream processing and has an expected 18-year mine life.

“It’s very big and it’s a very high grade nickel resource – and those two things, large tonnage and high grade, don’t often come together.

“You either get one or the other, but not both, and this is what makes Kabanga so great,” said Liddell, who is well known in South Africa for conceiving the smelterless Kell Technology that enables the production at mine sites of refined platinum group metals (PGMs), substantially cutting capital expenditure and operating costs.

Liddell was also instrumental in the development of South Africa’s Kroondal PGMs



KEITH LIDDELL

We think the nickel price will start to trend up over the next few years

project, which gave birth to a low-cost and efficient PGM business.

Now, Kabanga is on its way to bringing benefits to the people of Tanzania, and Liddell is going all out to make sure it does so.

The feasibility study contains the reserve statement, which at the project level is 52-million tonnes of ore grading 2% nickel, and that contains 1.0-million tonnes of nickel in the reserve, 78-thousand tonnes of cobalt and 140-thousand tonnes of copper.

“So you can see it’s big, over 1.0-million tonnes of nickel in reserve. That’s massive,” Liddell pointed out.

Steady-state output of 60 000 t/y of nickel in product would make it one of the larger nickel mines in the world, particularly underground nickel mines.

Project-level financial metrics include a post-tax net present value (NPV) of \$1.58-billion at an 8% discount rate at just over \$8/lb nickel price, with an after-tax internal rate of return (IRR) of 23%.

On a capital expenditure (capex) of just under a billion dollars to build a mine and a concentrator first, a \$1.858-billion NPV is described as being eminently fundable with both debt and equity.

The feasibility study initially is based on the sale of concentrate and the Kabanga concentrate runs at 17.5% nickel with no penalty elements contained in it.

The initial assessment includes a Lifezone-hydromet-technology-using refinery making an entry five years after the startup of the mining concentrator, so cash can be generated to pay for most of the refinery capex, but also derisk the project from a debt and equity perspective, to open the way for the mining concentrator to be built as fast as possible.

In addition, inferred resources contained in the initial assessment add six or seven years on to the mine life. The inferred resources will be drilled out from underground once down there and brought into production in the later years of the project.

The initial assessment contains the refinery, the after-tax NPV, which increases the feasibility study concentrate sales of \$1.58-billion to \$2.37-billion, again with a 23% IRR, but with the refinery significantly increasing the NPV and elevating the mine life with the inferred resource beyond the 25-year level.

Early Cash Benefit for Community

Liddell regards as “very important” the bringing of “lasting and tangible benefits” to Tanzania and the host region in the north-west of the East African country, which has an agrarian population.

Lifezone, which is working with the Tanzanian government at central, district and village levels, has already made all the initial cash compensation payments for all the affected people and families and households on the mining lease that will have to relocate.

Well ahead of time, the company has already paid the cash payments for fixed assets and crops to community households and many of the recipients are using those cash payments to better their lives, to build new businesses, including developing businesses that feed the Kabanga camp.

They are also preparing to enter the jobs that arise as the mine is built and begins to produce nickel, copper and cobalt.

“That’s really important to us to have done all that very early, and that’s a big part of the capex that we’ve made to date.

“We’ve already built half a dozen show houses in the relocation sites that people will move into, and we’ve taken feedback from those, and they’re different designs, so people have decided what designs they want. We’ve been very proactive in that,” Liddell pointed out.

The local Tembo Nickel subsidiary, with Tembo meaning elephant, is already 95% staffed by local Tanzanians – “and we’re

• To page 30



Zimile unveils new brand identity, establishing innovation and energy business units

TRACY KLÜCKOW | CREAMER MEDIA CONTRIBUTING EDITOR

As part of its rebranding, multi-disciplinary consulting engineering and built environment firm Zimile is in the process of developing two new business units – Innovation and Energy – that are central to the company’s transformation.

Zimile founder and CEO **Shawn Gama** discusses the company’s new brand identity and its strategic push into innovation and energy in an exclusive interview with *Engineering News & Mining Weekly* publisher **Martin Cremer**.

A South African engineering solutions provider known for its purpose-driven infrastructure projects, Zimile has unveiled a bold new brand identity that signals a strategic realignment to meet the evolving demands of clients.

“We wanted to get to a point where we are ready to welcome the world and meet it at the pace it is moving by embracing innovation, being technology-savvy and staying ahead of the curve,” explains Gama.

This thinking inspired the company’s new tagline: “Unbounded Engineering”. The phrase encapsulates Zimile’s refusal to be limited by traditional industry boundaries or constrained approaches.

“Engineering has no limits. It is open, wide and full of possibility. We wanted a tagline that communicates that people can come to us with any engineering problem, knowing that we will apply an open-minded, innovative approach to find a solution,” Gama emphasises.

Innovation and Energy

By developing two new business units – Innovation and Energy – Zimile aims to future-proof the organisation and strengthen its position in a competitive market.

The innovation department will monitor emerging technologies and global market trends to inform all other business divisions.

This unit will be tasked with ensuring that Zimile’s projects incorporate the latest solutions, processes and tools – enabling the company to meet and exceed customer expectations in terms of quality and delivery timelines.

“The innovation department will ensure our solutions are not just relevant, but leading – matching the pace at which clients expect to be served in today’s market,” says Gama.

The inclusion of the energy department responds to one of the most pressing global and continental challenges: sustainable power generation, with energy scarcity and climate change having emerged as critical issues for governments, businesses and communities across Africa, he adds.

“We wanted to bring in a department that addresses the climate change challenge head-on. Our designs will prioritise renewable energy use and green engineering principles.”

Driving Digital Transformation

Zimile sees the innovation department as the driving force behind a major digital transformation push. The goal is to make every process trackable, efficient and collaborative, regardless of geographic location.

“With the right technology, I could be in South Africa and seamlessly collaborate with someone in another country on the same project. Digitalisation removes barriers and improves the way we deliver solutions.”

While Zimile’s transformation signals a forward-looking, technology-driven approach, the company remains committed to the delivery of essential services to uplift underserved communities.

Zimile is active in transport and water infrastructure, with a special focus on ensuring rural areas receive the same quality of engineering as urban centres.

“People deserve infrastructure that truly

improves their lives, no matter where they live,” states Gama.

The company’s growth strategy includes expanding beyond South Africa’s borders, with initial focus on countries such as Lesotho, Eswatini and Zambia. These regions face acute infrastructure and energy challenges – and for Zimile, that means opportunity, notes Gama.

“Our approach is to first understand our space as Africans, then expand with that insight. We want to go into Africa fully aware of the challenges, so that our solutions are not only technically sound but contextually relevant.”

The energy unit is expected to play a key role in these expansion efforts, with its focus on renewable and sustainable projects that can help bridge the power gap in many African countries. Zimile is actively recruiting a business unit head to steer the energy unit once it has been launched.

For Gama, Zimile’s transformation is ultimately about adopting a mindset of possibility to deliver projects that result in positive change.

Watch a video in which Zimile founder and CEO **Shawn Gama** discusses the company’s new brand identity and its strategic push into innovation and energy in an exclusive interview with *Engineering News & Mining Weekly* publisher **Martin Cremer**.



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TRADE@WORK

Metal review II

It truly is the year of sequels. By now, you might be wondering how many sequels there must be before a reboot happens. According to my search engine, there is no set number – reboots are a creative decision rather than a rule. They often occur when a franchise’s continuity becomes too complicated, a new vision is desired or there has been a significant gap between instalments to refresh the story.

The prequel to this article, titled ‘Metal review’, was published on April 11. It dealt with an invitation published in the Government Gazette on March 19, with comments due by April 16. The invitation was republished in the Government Gazette on March 28, this time with tables that had not been included, but with the exact same closing date.

Now you have been given a second – technically, a third – bite of the cherry, if you are involved in the manufacture and import of iron and steel, or articles made of these materials, as well as articles made of base metal. In that case, you may want to consider responding to an invitation for comments from the International Trade Administration Commission of South Africa (Itac), which was published in the Government Gazette of August 20 and closes on September 5.

The comments are required as part of Itac’s self-initiated review of the tariff structure and investigation into the possible introduction of an import surveillance system for steel products classifiable under chapters 72 (iron and steel), 73 (articles of iron and steel), 82 (tools, implements, cutlery, spoons and forks, of base metal, as well as parts thereof), and 83 (miscellaneous articles of base metal).

In the Government Gazette of August 20, Itac announced that, during the publication period, in excess of 150 comments were received from interested parties, ranging from requests for duty increases, the creation of rebate provisions, the inclusion of specific products under import control, and general comments on the potential impact of the

review on the steel value chain.

The core focus of the application is on the ‘water in the tariff’, also known as the tariff overhang, tariff cliff, binding overhang principle, or tariff water – which is simply the difference, or gap, between the ‘bound tariff’ and the ‘applied tariff’ under the most favoured nation principle. Economists call it the ‘policy space’, as governments can easily increase the tariff rate from the ‘applied rate’ to the ‘bound rate’.

Based on the submissions it received and its analysis of the evidence, the commission decided to make several preliminary determinations. These include increasing the rate of customs duties on all listed products to their respective bound rates, creating additional rebate provisions for steel products, and subjecting all listed products to import control, in line with the International Trade Administration (ITA) Act.

Itac also made a preliminary determination that, as and when standards are developed for any listed steel-related product category, such standards or compulsory specifications be incorporated into the import permit control system as additional conditions for the issuing of import permits. In addition, it was determined that input products used in steelmaking, particularly stainless steel, as outlined, should remain free of duty. Itac further found that the prevailing geopolitical landscape constituted an unprecedented emergency, necessitating urgent action in line with the General Agreement on Tariffs and Trade. Finally, it proposed that a committee comprising industry



Riaan de Lange

role-players and members of Itac be established to advise the commission on steel-related matters, in line with the ITA Act.

Itac wanted it specifically noted that it had not yet made its ‘final determination’ on any of the preliminary determinations, and that nothing in the Government Gazette should be construed as such. Itac’s final determination will only be made once it has considered all comments from members of the public (interested parties).

The ‘product lists’ are accessible at <https://www.gov.za/documents/notices/international-trade-administration-act-review-tariff-structure-and-investigation>.

As part of your preparation, you might want to review ‘The South African Steel and Metal Fabrication Master Plan 1.0’ (https://www.thedtic.gov.za/wp-content/uploads/Steel_Industry_Master_Plan.pdf), South Africa’s World Trade Organisation bound rates. (https://www.wto.org/english/thewto_e/countries_e/south_africa_e.htm), and the South African Customs Tariff (<https://www.sars.gov.za/wp-content/uploads/Legal/SCEA1964/Legal-LPrim-CE-Sch1P1Chpt1-to-99-Schedule-No-1-Part-1-Chapters-1-to-99.pdf>).

● This economic and trade-focused column is prepared by Riaan de Lange – christiaanvdelaugel@gmail.com. The views expressed in this column are the author’s personal views

• From page 28
really impressed with the skills that already exist in Tanzania, both technical, commercial and corporate.

“Again, I think it’s a testament to the fact that there’s an established mining industry in Tanzania, and those skills already exist.

“As the mine will be a long life mine, and effectively multi-generational, we’re very focused on bringing skills development into the local population, into the younger persons, and so they will have career paths in the mine as it’s built and operated, so we’re

very focused on that, and that leaves the lasting legacy,” he added.

The mining concentrator operation has 1 090 permanent job positions, and the plan is for 95% of those to be filled by Tanzanians.

The government of Tanzania is expected to receive \$3.6-billion in royalties, taxes and dividends through its 16% interest under the country’s economic benefit sharing principle.

Standard Chartered Bank has been appointed as Lifezone’s financial adviser to arrange short-term development financing, which will fund early works and resettlement

activities and bridge the company to final investment decision (FID).

Societe Generale is advising on the long-term project finance package, which could include support from the US International Finance Corporation and export credit agencies.

How far is Lifezone from taking a final investment decision on Katanga Nickel?

We’re into that phase now, finally. We’re sort of on the home stretch, really, before construction – and I never look at construction as a home stretch. That’s the start of a new phase. The

AFRICA BEAT

Africa's shameful silence

I've often lamented in this column the African Union's (AU's) dismally impotent threats whenever a military coup occurs in one of its member States, a pattern that has likely contributed to the democratic backsliding we have witnessed since 2020.

But now, on an issue where even one of those hollow condemnations would be the proverbial half loaf better than no bread at all – the deportation of illegal migrants from the US to third countries in Africa – the AU has remained utterly silent. Not even a whisper of disapproval from Addis Ababa.

This lack of leadership has facilitated the piecemeal normalisation of African countries being used as dumping grounds for migrants who are unwanted by their own countries.

The first batch landed in South Sudan in early July. It comprised eight individuals, all with criminal convictions and only one of whom was a native of the East African country. Owing to the secrecy surrounding the deal, the nationalities of the other seven are unclear.

Only days later, Eswatini received a further five. The shroud of secrecy was lifted just enough for us to know that they hail from Cuba, Laos, Jamaica and Yemen, that the crimes they committed prompted US officials to describe them as “uniquely barbaric” and that their own countries are avoiding them like the plague, similar to the group that found itself in South Sudan.

It has emerged that Rwanda agreed in June to accept up to 250 deportees, with an initial list of ten having been vetted. A Rwandan government spokesperson elaborated that those who qualified would be provided with workforce training, healthcare and accommodation support to jump-start their lives in the country.

Uganda has also jumped on the bandwagon, announcing two weeks ago that it had inked a deal with the US that will see

it receive an unspecified number of deportees. It highlighted provisos it had imposed: the individuals must be citizens of African countries with no criminal record and must not be unaccompanied minors.

The motivations behind these deals are depressingly familiar: economic desperation or geopolitical bargaining. Take Uganda. With an economy still reeling from pandemic-era shocks, border insecurity and a refugee burden estimated at 1.7-million people, President **Yoweri Museveni's** government is in constant need of financial support, and the deal with Washington provides just that – in exchange for complicity in Washington's clearly unethical scheme, which is possibly illegal too.

In Rwanda, President **Paul Kagame's** government has gained a reputation for leveraging such arrangements into geopolitical capital, first with the UK's now-stalled deportation agreement and now with the US, but this turns governance into transactional diplomacy where unwanted migrants and favour are exchanged.

Regular readers of this column will recall that, many years ago, both Rwanda and Uganda took in thousands of mostly African migrants whom Israel had decided it no longer wanted. As we now know, the scheme collapsed.

In the midst of the ongoing scandal (no word more aptly describes what **Donald Trump** is doing) the AU and both the regional blocs to which the current recipient countries belong – the East African Community and the Southern African Development Community – have maintained a deathly silence. The only



Martin Zhuwakinyu

voices we have heard have come from individual countries, notably Nigeria. A spokesperson at the country's Ministry of Foreign Affairs told the media last month: “We have our own issues we are struggling with. We will not allow ourselves to be pressured into accepting deportees, regardless of what other nations are doing.”

To its credit, South Africa, as a neighbour, has lodged a formal protest with Eswatini.

I wish the AU's, and not the Nigerian government's, voice would be the most strident in condemning this scheme. The continental body's silence is not neutrality; it's tacit approval. It creates a precedent; once a handful of African governments open their doors to the unwanted deportees in exchange for US goodwill, others are likely to follow suit – not because the scheme is just, but because the AU's silence has normalised it.

Where is the outrage we witnessed in 2021, when the AU rebuked Denmark for passing a law allowing asylum seekers to be sent abroad while their applications were processed?

● Dr Zhuwakinyu, who holds a PhD in communication (media studies) from the University of South Africa, is Creamer Media senior deputy editor – martinz@engineeringnews.co.za

Lifezone board has accepted and approved the Kabanga feasibility study that we put out in July, and straight away empowered management to formally commence the FID process. We think that'll take till somewhere around the middle of next year.

It really depends on the how fast the debt process moves, and we're looking at about \$600-million of debt funding. The critical path to that FID is definitely the banks. But we actually started at the beginning of the year. We've got two banks mandated, Standard Chartered Bank and Societe Generale. Standard Chartered is undertaking

the pre-FID financing and has assisted with replacing BHP as a partner in Kabanga Nickel. Both of those we've just successfully done in the last few months. We've now purchased back 17% of our subsidiary Kabanga Nickel Limited.

We've raised \$60-million pre-FID short-term bridge financing, which means that we can keep spending on Kabanga as we go through FID. Both ourselves and the Tanzanian government want to keep momentum going – starting the mining boxcuts next year, keeping the relocation going by commencing house construction, so that we can move people well in

advance of when we need to, and all the other associated things that you need to be doing in pre-development of a project.

All the front-end engineering designs and everything else. It'll be the mining concentrator, and then getting the big one, the mining contract, finalised, embedded down and ready to go. ■■

To watch a video in which Lifezone founder and chairperson Keith Liddell is interviewed by *Engineering News & Mining Weekly's* Martin Creamer, scan the barcode or visit www.miningweekly.com.



RAIL REFORM

Private Passage

First 11 train operators selected for 41 routes as SA takes big step in opening freight rail to private sector

TERENCE CREAMER | CREAMER MEDIA EDITOR

Transport Minister **Barbara Creecy** has announced that 11 of the 25 private train operating companies (TOCs) that applied to operate routes on Transnet's rail network have met the requirements to do so and will now enter into contract negotiations to enable them to gain access to the network and begin operating the routes.

The announcement represents a significant step in opening South Africa's freight rail network, which has hitherto been monopolised by State-owned Transnet, to third-party operators.

This change is catered for in the country's rail policy and has been facilitated by the recent vertical separation of Transnet's rail business into the Transnet Freight Rail Operating Company and the Transnet Rail Infrastructure Manager (TRIM), which published the Network Statement that created the operating and tariff framework for the entry of private TOCs.

The inaugural application process for slots opened in December following the publication of the Network Statement and closed in February. It was followed by an evaluation process that culminated in the Minister's August 22 confirmation of the first 11 successful TOC applicants.

Creecy confirmed during the briefing that these applicants had applied for a total of 41 routes across six corridors, including:

- the North Corridor, where six new entrants applied for 15 routes for the transportation of coal and chrome;
- the Iron Ore Corridor, where one new entrant had applied for one route for the transportation of iron-ore;
- the Cape Corridor, where two new entrants applied for two routes for the transportation of manganese;
- the Northeast Corridor, where six of the TOC applicants had applied for 16 routes for the transportation of coal, chrome, magnetite, fuel, and containers;
- the Central Corridor, where one new entrant applied for two routes for the transportation



BARBARA CREECY

The announcement is a step towards a future where railways drive economic growth

of coal, containers (manganese); and

- the Container Corridor, where four new entrants applied for five routes for the transportation of containers, coal, and sugar.

The identities of the successful TOC applicants, their shareholders and the routes for which they had applied were not immediately disclosed.

However, Transnet CEO **Michelle Phillips** confirmed that letters had been sent to these TOCs indicating that they could now enter into a commercial process with Transnet to finalise an access agreement.

Once these negotiations were finalised, the names of the TOCs would be released, alongside details of their routes and the commodities that would be transported.

The durations of the allocations range from one to ten years, and operating companies can commence with operations once the contract conditions have been addressed.

Phillips revealed that one of the TOCs had indicated that it should be in a position to begin operating in the second half of 2026, while others had stated that they were likely to begin operating only in 2027 or 2028.

Letters had also been sent to the

unsuccessful applicants explaining reasons for the decision, and to indicate that TRIM would be running an ad hoc process under the same Network Statement, or version three, and that they would be entitled to submit revised applications, alongside new applications, during the 2025/26 timetable.

A date of publication of Volume 4 of the Network Statement would be announced by the Department of Transport, together with a timeline for the opening of applications for available slots for the 2026/27 timetable.

Phillips confirmed that some of the TOCs had applied to lease surplus rolling stock from Transnet, which was also in the process of setting up a new partnership for a leasing company, dubbed LeaseCo. However, it was also possible that the TOCs would source rolling stock elsewhere.

She also stressed that the TOCs were aware of the poor state of parts of the network on which they had applied to operate, and that they would, thus, be accessing the network at their own risk.

That said, Transnet had existing plans and capital budgets for upgrading and maintaining the network, and it would also be seeking to supplement that funding through applications to the National Treasury's Budget Facility for Infrastructure (BFI), which would be holding more

regular bid windows.

Transnet had applied for R16.4-billion from the BFI in July, R10-billion of which was to fund upgrades to the North and Ore corridors, and the balance for port development in Durban and Ngqura. It was preparing a second BFI submission for R18.6-billion in October.

In the medium term, the network could be further upgraded through private sector participation in infrastructure development, most probably through concessions, with the first requests for proposals in this regard expected before the end of 2026, following a strong response to a request for information earlier in the year.

Creecy said the opening of the rail network to private sector participation was motivated by a desire to lift freight rail volumes from 160-million tons to 250-million tons by 2030, with the lion's share of the 90-million-ton gap expected to be closed by the private TOCs.

"Today's announcement is not just about the allocation of rail slots — it is a step toward a future where our railways drive economic growth, job creation and sustainability," she added. 🇿🇦

CREAMER MEDIA WAS among the winners of the Consulting Engineers South Africa (CESA) Aon Engineering Excellence Awards 2025, held on August 21 at Vodacom World, in Midrand. The yearly ceremony recognises the projects, people and partnerships that are shaping South Africa's infrastructure landscape. Creamer Media's Engineering News was crowned the winner in the publisher – trade category. Pictured (from left) are Aon South Africa professional risks head Clarissa Rizzo, Creamer Media contributing editor Shannon de Ryhove, Creamer Media sales and marketing COO Reinette Classen and CESA CEO Chris Campbell.



LAST MONTH, AUTOMOTIVE company TATA Motors Passenger Vehicles (TMPV) marked a significant milestone with the arrival of its first shipment of passenger vehicles at the Durban port, signalling the brand's official return to the South African automotive market. This shipment, which arrived on August 21, included the Tiago, Punch, Curvv and Harrier models, and signalled not only TMPV's renewed presence in the country but also its confidence in South Africa's economic potential and the strength of its automotive sector. The vehicles will be distributed to dealerships nationwide, with sales expected to start this month. Pictured at the ribbon-cutting ceremony are (from left): Transnet terminal manager Prince Manganyi, Transnet – Durban Terminals managing executive Earle Peters, Tata Motors new business development head Hemal Shah, TMPV South Africa distribution business CEO Thato Magasa and MOL Auto Carrier Express GM Jarred James.



AS AI STARTS to automate more and more tasks in the consulting engineering realm, the spotlight shifts to what technology cannot replicate: human insight, strategic decision-making, innovation management and stakeholder engagement. This makes the cultivation of non-technical, critical skills not just valuable, but vital, for engineers navigating the future of the business of consulting engineering, states industry association Consulting Engineers South Africa (CESA). Through its School of Consulting Engineering, CESA, toward the end of last month, celebrated the graduation of the Business of Consulting Engineering Management Development Programme's (BCE MDP's) Class of 2024. The organisation states that the BCE MDP is uniquely equipped to meet the industry's future challenges, through a blend of management and leadership training, coupled with essential critical thinking skills.

PUSH PAUSE

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ON THE MOVE



ANDISIWE RWEQANE

Engineering consultancy Zutari announced the appointment of **Andisiwe Rweqane** as Gqeberha office manager. A professional civil engineer with 13 years' experience, Rweqane's career includes senior positions at leading engineering consultancies where she managed multimillion-dollar infrastructure projects across the Southern African Development Community region.



GCINA DELIWE

Zutari also announced the appointment of **Gcina Deliwé** as East London office manager. Deliwé has over 22 years of experience in the infrastructure sector and is a registered Professional Quantity Surveyor. She has held senior roles at the Eastern Cape Development Corporation and the Eastern Cape Provincial Treasury. Deliwé's qualifications include a BSc (Hons) in Quantity Surveying.



AUTOMOTIVE COMPANY STELLANTIS notes that it is proud to support the Ndlovu Youth Choir's Heritage Tour, a nationwide celebration of South Africa's cultural richness, resilience and youth potential. This partnership reflects Stellantis' global commitment to diversity, inclusion and community engagement — values that guide its ambition to shape mobility with purpose. Taking place this Heritage Month, the tour brings the choir's powerful message of hope and unity to towns across the country, including Groblersdal, Mbombela, Emalaheni, Potchefstroom, Rustenburg, Kimberley, Bloemfontein and Sasolburg, culminating in a flagship performance at the Sun Arena in Tshwane on Heritage Day, September 24. Beyond performances, the choir will host outreach workshops with schools, using music and the arts to foster cross-cultural dialogue and youth development.

Marula Green Power plant



Name of the Project

Marula Green Power plant.

Location

Limpopo, South Africa.

Project Owner/s

Palabora Mining Company (PMC) has partnered with Mzansi Energy Consortium.

Project Description

The project entails the development of 132 MWp of solar PV capacity, a 360 MWh battery energy storage system, and a dedicated 132 kV transmission line to wheel clean, green power to PMC's mining operations.

Potential Job Creation

Not stated.

Capital Expenditure

Not stated.

Planned Start/End Date

Commercial operations are expected to start in early 2027.

Latest Developments

None stated.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

PMC, tel +27 15 780 2911.

Mzansi Energy Consortium, tel +27 71 879 6445

Sandton Drive link bridge



Name of the Project

Sandton Drive link bridge.

Location

Sandton, Gauteng, South Africa.

Project Owner/s

Real estate investment group Growthpoint Properties.

Project Description

The development will span Sandton Drive, linking office, residential and retail spaces to create a more integrated precinct. It will establish a dedicated pedestrian connection between Growthpoint's The Place, located at 1 Sandton Drive, and the Sandton City shopping centre.

Architecturally, the bridge will comprise an angular walkway with stainless steel balustrades and a centrally positioned, enclosed glass viewing deck offering vistas of Sandton.

The deck incorporates environmentally sustainable lighting that can shift colours to reflect seasonal changes and local events. The stainless steel components and the glass viewing enclosure are being prefabricated off site in sections. Construction of the concrete columns and walkway is under way alongside

Sandton Drive, between Rivonia road and Alice Lane.

The prefabricated elements will be assembled on-site.

Potential Job Creation

Not stated.

Capital Expenditure

R26-million.

Planned Start/End Date

Construction started in June 2025.

Latest Developments

None stated.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

Growthpoint Properties, tel +27 11 944 6000 or email investorrelations@growthpoint.co.za.

Hope Downs 2 iron-ore project



Name of the Project

Hope Downs 2 iron-ore project.

Location

Western Australia's Pilbara region.

Project Owner/s

Hope Downs Joint Venture (JV), comprising multinational mining company Rio Tinto and Australian-owned mining and agricultural business Hancock Prospecting.

Project Description

The project aims to develop Rio Tinto and Hancock Prospecting's Hope Downs 2 and Bedded Hilltop deposits. Hope Downs 2 is part of Rio Tinto's tranche of replacement projects, which will have combined total capacity of about 130-million tonnes a year.

The two new above-water-table iron-ore pits will have a combined production capacity of 31-million tonnes a year and will sustain production from the Hope Downs JV into the future.

The project includes new nonprocess infrastructure precincts, railway crossings and haul roads, as well as realigning a 6 km section of the Great Northern Highway.

Ore mined at the two sites will be transported to Hope Downs 1 for processing.

Potential Job Creation

More than 950 jobs will be created during construction and, once operational, the project will help sustain a workforce of about 1 000 full-time-equivalent roles at Greater Hope Downs.

Net Present Value/Internal Rate of Return

Not stated.

Capital Expenditure

\$1.6-billion.

Planned Start/End Date

First ore from the deposits and associated infrastructure is scheduled for 2027.

Latest Developments

The project received all necessary state and federal government approvals in June 2025.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

Rio Tinto, tel +61 3 9283 3333 or email media.enquiries@riotinto.com.

Cariboo gold project



Name of the Project

Cariboo gold project.

Location

British Columbia, Canada.

Project Owner/s

North American gold development company Osisko Development Corp.

Project Description

The project is envisioned as a traditional underground operation using mechanised longhole open stoping to extract ore from gold-bearing vein corridors – a complicated network of mineralised quartz veins predominantly hosted within unmineralised sandstone.

Underground mining will target five mineralised zones along 4 400 m of strike, accessed by two ramps – the currently operational Cow portal and the new Valley portal.

Each zone includes several vein systems extending to a vertical depth of about 650 m.

The April 2025 optimised feasibility study estimates average production of about 190 000 oz/y of gold over a ten-year mine life, and 202 000 oz over the first five years. Peak throughput is put at 4 900 t/d.

The feasibility study proposes ore beneficiation to be exclusively completed at the mine site complex. This would produce saleable gold doré from a gravity concentrate and about 66 t/d of high-grade flotation concentrate averaging about 133 g/t gold.

Significant opportunities exist to potentially enhance project economics and extend the life-of-mine through conversion of mineral resources adjacent to mineral reserves through infill drilling.

Potential Job Creation

The optimised feasibility study shows strong support for local employment, with up to 613 direct jobs expected to be created during peak construction and 525 permanent jobs during operations.

Net Present Value/Internal Rate of Return

Using a base case gold price of \$2 400/oz, the feasibility study estimates a net present value, at a 5% discount rate, of \$943-million and an internal rate of return of 22.1%, with payback from commercial production estimated at 2.8 years.

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Capital Expenditure

Initial capital costs are estimated at \$881-million.

Planned Start/End Date

The feasibility study envisages first gold in the second half of 2027, assuming construction starts in the third quarter of 2025, and subject to progress on ongoing project financing discussions.

Latest Developments

None stated.

Key Contracts, Suppliers and Consultants

BBA Engineering (optimised feasibility study).

Contact Details for Project Information

Osisko Development Corp, tel + 1 514 940 0685 or email info@osiskodev.com / ir@osiskodev.com.

Electra battery recycling facility



Name of the Project

Electra battery recycling facility.

Location

North of Toronto, in Ontario, Canada, adjacent to Electra Battery Metals' cobalt sulphate refinery.

Project Owner/s

Electra Battery Metals, in collaboration with the Aki Battery Recycling joint venture, a partnership between Electra and the indigenous-owned Three Fires Group.

Project Description

Electra Battery Metals is developing a modular lithium-ion battery recycling facility as part of its integrated Battery Materials Park strategy.

The company finalised a Class 3 feasibility-level engineering study in June 2025, which confirmed the technical and economic viability of the modular facility.

The facility will process black mass derived from end-of-life batteries and production scrap using a hydrometallurgical process to recover critical materials, including lithium, cobalt, nickel, manganese, graphite and copper.

Designed to work in tandem with Electra's adjacent cobalt sulphate refinery, the plant will use hydroelectric power from the Ontario grid, reducing emissions and water consumption.

Potential Job Creation

Not stated.

Net Present Value/Internal Rate of Return

Not stated.

Capital Expenditure

Not stated. The feasibility study for the project has received C\$5-million in funding from Natural Resources Canada.

Planned Start/End Date

No specific start and end dates for full commercial operations have been provided.

Latest Developments

The company is conducting continuous operations and working with original-equipment manufacturers and battery manufacturers to define the commercial framework and scale of the project.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

Electra Battery Metals, tel +1 416 900 3891 or email info@electrabmc.com.

Highland Valley copper mine life extension project



Name of the Project

Highland Valley copper mine life extension (HVC MLE) project.

Location

The HVC MLE will be located at the current HVC site, in British Columbia, Canada.

Project Owner/s

Canadian resources company Teck Resources.

Project Description

The HVC MLE will extend the life of Highland Valley Copper to the mid-2040s.

Potential Job Creation

HVC MLE is expected to create about 2 900 jobs during the construction phase of the project. After construction, ongoing operations will support an estimated 1 500 direct jobs and \$500-million in yearly GDP.

Net Present Value/Internal Rate of Return

Not stated.

Capital Expenditure

\$100-million to \$110-million is expected to be invested in the project in 2025.

Planned Start/End Date

Not stated.

Latest Developments

The British Columbia government issued an environmental assessment certificate for the project in June 2025. Site preparation work is expected to start shortly, along with work to secure additional required permits, with a final construction sanction decision by Teck expected in the third quarter of 2025.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

Teck Resources, tel +1 855 523 3429 or email HVCMLE@teck.com.

Lancaster Clean Energy Centre



Name of the Project

Lancaster Clean Energy Centre.

Location

Lancaster, California, in the US.

Project Owner/s

Green hydrogen production company Element Resources.

Project Description

The energy centre, spanning 558 ha, will be the biggest off-grid renewable green hydrogen production project in the US. The project aims to produce about 21 000 t/y of hydrogen, with potential for expansion.

Potential Job Creation

The project is expected to create 250 jobs during the construction phase and about 36 permanent jobs.

Capital Expenditure

\$1.85-billion.

Planned Start/End Date

The project is expected to start commercial operations in 2027.

Latest Developments

None stated.

Key Contracts, Suppliers and Consultants

Not disclosed.

Contact Details for Project Information

Element Resources, email info@elementresources.com.

COMING UP

• Electric company Hokkaido Electric Power Co's Tomato-Atsuma power station CO₂ capture plant, in Japan, is expected to be the largest CO₂ capture plant in the country. The project entails the basic design of a CO₂ capture plant (front-end engineering design, or FEED) for the power station with the capacity to capture 5 200 t/d CO₂.

• Canadian-based intermediate gold producer Alamos Gold reported results of the base case life-of-mine plan completed on the Island Gold District operation, in Canada, in June 2025. The aim is for the operation to become one of the largest, lowest-cost, and most profitable gold mines in Canada.

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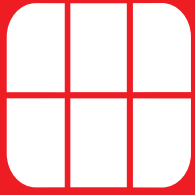
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HEAP LEACH SAMPLING

Scientists prepare samples in the heap leach area. Mintek is undertaking a multi-phase, multi-year project in investigating ways to improve the biological heap leaching of low grade chalcopyrite ores

As the bulk of South Africa's mines reach maturity, they face evolving grades of ore, often times resulting in declining ore grades and thereby necessitating newer and different methods for minerals processing to lift efficiencies and lower plant operational costs.

In the field of minerals processing technique development, Randburg-based State minerals research institution Mintek is focusing on further developing biological metallurgical processes to tackle the various and varying grades of ores mined in South Africa.

"Declining ore grades are really a reason

why bioleaching is becoming so much more relevant today," says Mintek bio-metallurgy executive manager Dr **Thanos Kotsiopoulos**, adding that declining ore grades are becoming cost prohibitive to process using conventional methods of milling, crushing and smelting.

Using a biological metallurgical process

provides "very low energy intensity" and enables operations to be undertaken at, or close to, ambient temperatures, he adds.

Biological metallurgy was, in the past, usually considered mostly for the processing of copper sulphides and gold ores, but Mintek's research has uncovered "a very large spectrum based on the types of organisms that we identified as a result", Kotsiopoulos tells *Mining Weekly*.

In addition, biological leaching can also be

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Mining technology for a sustainable future

Smelter rebirth bodes well for local beneficiation

LUMKILE NKOMFE | CREAMER MEDIA WRITER

The acquisition of *Metalloys* by Menar Capital and Ntiso Investment Holdings signifies a move towards revitalising the manganese alloy industry in South Africa, which has experienced a decline in production over recent years, highlights Menar special projects head **Waheed Sulaiman**.

Khwelamet, as the business and plant will be known going forward, will be operated as a subsidiary of Khwela Capital, which is jointly owned by Menar Capital and Ntiso Investment Holdings.

Detailing the significance of Khwelamet's acquisition from past owners Samancor, Sulaiman says it provides Menar with options to process its own manganese ore and third-party ore, thereby representing a strategic asset owing to the existing infrastructure, skills available in the surrounding Meyerton area and licensing permits.

The acquisition also enables Khwelamet to leverage the smelter complex's existing rail infrastructure to transport manganese from the Northern Cape to minerals export-capable ports.

"Before its closure, the smelter complex was a significant contributor to global ferromanganese output, and it also supported South Africa's manganese mining sector.

"Reviving the complex is a key step to rein-

dustrialising South Africa, allowing us to take advantage of our abundant raw manganese reserves," outlines Sulaiman.

Currently, South Africa exports most of its raw manganese ore to China, where it is beneficiated and used in the global steelmaking industry, thereby representing a lost in-country beneficiation opportunity for South Africa, as both minerals-derived revenue and jobs are being exported.

Nonetheless, through Khwelamet, Sulaiman says there remains hope to inspire the redirection of employment opportunities and divert revenue generation back to South Africa.

Energy Challenges, Smelting Technology

South Africa's ferromanganese sector has declined over time owing to unreliable power supply and the high cost of electricity.

Despite these challenges, Sulaiman says Khwelamet is exploring multiple options to ensure the availability of sufficient, unin-

terrupted power to support beneficiation operations.

He further highlights that the Khwelamet smelter complex has its own power generation capacity, which will be used to supplement Eskom's supply.

With South Africa's declining reliance on loadshedding to stabilise the grid, Sulaiman also highlights that Menar is currently involved in conversations with Eskom to develop more competitive electricity tariffs for Khwelamet to alleviate the high costs of operating an energy-intensive smelting operation.

In this regard, he also points out that the implementation of modern smelting technology will assist in alleviating some of the issues that led to the complex's closure, such as electricity costs and the reliability of power supply.

The manufacturing options currently under consideration for the planned restart of the Khwelamet smelter include using existing electric arc furnaces (EAFs) on-site or building new advanced technology blast furnaces.

Sulaiman notes that EAFs have a lower environmental footprint compared with traditional blast furnaces.

"We are also exploring the potential of applying innovative technology to the existing EAFs, which could dramatically reduce electricity consumption and emissions," he adds.

Immediate Aims

Khwelamet, says Sulaiman, is intent on building a vertically integrated manganese business, providing a business model upon which to generate synergies across the manganese value chain.

Regarding the importance of establishing open communication channels with communities surrounding the complex, he says Khwelamet has conducted due diligence to ensure that they identify key stakeholders and community forums that need to be engaged.

Further, the rail siding at the smelter complex offers "great optionality" in that it is connected to the national rail network and includes facilities to directly load rail containers and wagons.

"We will then focus on setting the business up for long-term success through starting up limited industrial activities," concludes Sulaiman. ■■



SECTOR RESILIENCE

The revival of the Khwelamet smelter helps to ensure the continued viability of South Africa's manganese mining and beneficiation sector



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• From page 36
undertaken by exploiting the exothermic heat that is generated through the process, thereby facilitating the maintenance of the process to get to higher rates of minerals extraction.

“It’s a very low-cost alternative. The opportunities here are kind of endless as a result of it.”

Mintek’s research into biological metallurgy is also progressing into the fields of critical raw minerals (CRMs) and rare earth elements (REEs).

“CRMs and REEs may be associated with low grade ores, which are unlocked in the initial process, sometimes as a waste stream. Bioleaching is very exciting in this space at the moment.”

Here, Mintek is helping not only South African mines and minerals processors in metallurgical technique development, but is also assisting clients in Zambia, the Democratic Republic of Congo, Botswana and Namibia, in terms of minerals amenability.

Understanding the Heap of Leaching

Mintek is currently undertaking a significant commercial campaign through a multi-phase, multi-year project in which it is investigating ways to improve the biological heap leaching of low grade chalcopyrite ores – a notoriously difficult sulphide mineral to bioleach.

In this vein, the company’s scientists and engineers are looking at ways to maximise the heat distribution within the heap bed and maintain heat within that region so as to enhance extraction rates.

In this phase of minerals extraction from ores, Kotsiopoulos says Mintek devotes a lot of focus to maintaining and adapting the microorganisms – including mesophiles, moderate thermophiles and thermophiles – involved with biological leaching.

Mesophiles are associated with temperature ranges of between 30 °C and 37 °C, while moderate thermophiles can get to work in processes with heat ranges of between 42 °C and about 55 °C. Thermophiles can operate in temperature ranges of between 50 °C and 60 °C, but can also extend to as high as 80 °C.

In its bioleaching research and development (R&D), he says Mintek maintains a lot of the associated cultures in different environments to make them adapt and to test their thresholds.

“As organisms and human beings, we adapt to different environments, and we are less performant in very harsh conditions. In terms of microorganisms, some microorganisms can be very sensitive to high metal concentrations.

“At Mintek, we adapt these microorganisms and grow them in these harsh environments, so they become very adaptive . . . we are

tailoring the microorganisms relative to the type of metal that we are extracting and therefore making them more resilient and therefore more robust.”

Here, Mintek employs tank bioleaching, the work of which is mostly focused on the bioleaching of sulphide mineral concentrates and for cultivating the inoculum.

“A lot of the focus in our R&D work is initially done in tanks because this can be done in a very controlled manner, allowing you to determine how fast the metal of interest can be extracted.”

“There’s a lot of new and innovative ways of designing the heap.”

Kotsiopoulos points out that through heap leaching, the hydrodynamics and microbial dynamics become very important, leading Mintek to develop new patented technologies, including the “exciting” MinBind solution, which works by creating a scaffold for minerals that are not necessarily amenable to heap leaching.

“With MinBind, Mintek has created a scaffold which allows the particles to be more uniformly distributed within the heap and also use smaller particles, thereby enabling the mineral to be disseminated through the bed of the heap without impeding the hydrodynamics of the process,” he explains. ■

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Poor water quality in mining operations contributes to gland water contamination, resulting in frequent packing and mechanical seal failures. John Crane’s SafeJet in-line filtration system protects rotating equipment by removing harmful particles before they can cause damage.

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Asset reliability improved with AI monitoring tech

DONNA SLATER | CREAMER MEDIA SENIOR DEPUTY EDITOR FEATURES

A new offering that brings intelligent, real-time visual monitoring into the maintenance and reliability space – enabling the early detection of issues such as refractory wear, conveyor damage and safety non-compliance, especially within high-temperature and high-risk industrial environments such as smelters and minerals processing plants – was launched by Dickinson Group of Companies (DGC) in August.

The Vision AI for asset reliability is a smart, camera-based monitoring solution that uses AI to identify problems in real time through the continuous analysis of footage from thermal and optical cameras to detect conditions such as refractory degradation, equipment damage or safety violations.

By combining advanced monitoring with DGC’s “deep operational expertise”, group commercial director **Justin Nothnagel** says DGC is helping clients reduce unplanned downtime and improve asset health as well as safety performance.

“We believe this represents a meaningful evolution in how reliability is managed across Africa’s metallurgical and industrial sectors,” he says.

This remote monitoring solution is especially effective in high-temperature, high-risk settings that are difficult to access or hazardous for personnel to engage, such as smelters and minerals processing plants, where traditional manual inspections may be infrequent or unsafe.

“Vision AI acts as an automated set of eyes, monitoring processes and assets 24/7 and triggering alerts long before failures or incidents occur,” explains Nothnagel.

Success through Implementation

Nothnagel highlights that Vision

AI was deployed at a major metals processing facility to monitor the condition of converter refractories using thermal imaging and AI-based crack detection.

The system detected a hotspot forming beneath the surface – one that would not have been visible using traditional inspection methods.

Because the anomaly was flagged early, he says, the site was able to schedule repairs during a planned maintenance window, preventing a possible breakout and avoiding extended downtime.

“This single intervention led to significant cost savings and avoided a major safety hazard,” states Nothnagel.

A key challenge with this deployment was adapting the system to harsh plant conditions that included the elements of dust, heat and limited connectivity.

Further highlighting Vision AI’s applicability to African applications, he points out that many facilities on the continent operate with legacy infrastructure and limited levels of automation.

To overcome this, Nothnagel says Vision AI is deployed using rugged hardware with edge processing, enabling it to function independently of central systems and Internet connectivity, and to integrate with existing workflows using visual dashboards and alerts.

“Our team also ensures that deployment layouts are practi-

cal and field-ready. Our deep site knowledge allows us to design practical deployment layouts that work around existing operational constraints.”

How it Works

Vision AI detects a range of issues early, including refractory damage (wear and cracks) in furnaces and converters; conveyor belt wear, cracks and foreign object intrusion; unsafe work practices or non-compliance with personal protective equipment; movement of molten metal and equipment near hot zones; and oversized or unsuitable materials entering the process line.

By catching these issues in advance, Nothnagel says maintenance can be planned proactively rather than reactively, thereby reducing unplanned downtime, improving process stability and helping to prevent safety incidents.

“Most monitoring systems rely on sensors or scheduled human inspections, which can miss early signs of damage or safety non-compliance.

“Vision AI offers visual context and broader field coverage, allowing it to detect surface anomalies, temperature shifts, movement patterns and other risks that traditional methods might overlook,” he outlines.

Further, the system is hardware-agnostic, easy to deploy and can be used across a range

of applications, from conveyor belts to ladle operations, without requiring large-scale infrastructure changes.

Retrofit-ability

Vision AI can be deployed alongside legacy systems without requiring deep integration owing to its being designed to integrate with most existing environments, whether digital or legacy.

It can connect to supervisory control and data acquisition, programmable logic controller or distributed control systems through open platform communications-unified architecture.

Dashboards can be accessed using secure cloud platforms or local networks.

Vision AI operates using standard power and network connections, and delivers outputs through user-friendly dashboards or alerts.

For plants with low levels of infrastructure, edge-based processing units enable Vision AI to operate independently without relying on high-bandwidth connectivity or advanced IT systems.

“This flexibility makes it ideal for brownfield plants, where infrastructure upgrades may not be feasible in the short term.

“It’s well-suited for phased adoption, easy to scale once the initial use case proves valuable, so starting small and scaling as needed is feasible,” says Nothnagel. ■



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Precious metals refinery hones efficiency initiatives

DONNA SLATER | CREAMER MEDIA SENIOR DEPUTY EDITOR FEATURES

As Africa's only London Bullion Market Association Good Delivery-accredited precious metals refinery, Germiston, South Africa-based Rand Refinery is implementing initiatives to enhance its energy efficiency, improve water stewardship, lower emissions and build on resource efficiency.

In terms of water management initiatives, the refinery started its water sustainability journey by investing in water monitoring technologies across key operational areas to detect and track leaks, and replace faulty pipework, the latter initiative also seeing the above-ground relocation of water pipes for easier maintenance and visibility.

Rand Refinery's water storage capacity was also bolstered by a further 1.25-million litres being approved and currently under installation to enable water harvesting and emergency supply.

Together, says Rand Refinery CEO **Praveen Baijnath**, these systems will provide up to ten days of uninterrupted water supply, without requiring external input.

Complementing this infrastructure, awareness campaigns were rolled out to educate employees on water conservation practices, particularly around showers, equipment washing and other water-intensive activities.

The second phase of the water programme focuses on recycling and effluent reduction, enabling the company to lower its freshwater intake while increasing recovery efficiency.

"The nature of the business lends itself to recycling initiatives, as this makes good busi-

ness sense. Our mindset of 'no milligram of valuable product to leave this site' drives our urgency in reuse and recycling initiatives," he adds.

These water initiatives have significantly reduced water intensity for every unit of production across three key operational areas.

In parallel, water stewardship has emerged as a priority area, notes Baijnath, adding that Rand Refinery has tackled water use and leaks, resulting in a substantial reduction in its water footprint.

Through operational improvements and the installation of water management systems, Rand Refinery has surpassed its 22% water-savings target by reducing consumption from a baseline of 72-million litres in 2022 to 55.16-million litres by this year, reinforcing its commitment to resource efficiency and climate resilience in a water-scarce region.

Looking ahead, Baijnath says Rand Refinery aims to achieve zero effluent discharge by 2030, with a chemical purification project scheduled to start in 2026, for which preliminary laboratory tests have yielded "promising results".

In the final phase of its water stewardship initiative, Rand Refinery will launch an

intense water harvesting programme, creating a self-sustaining water body and treatment system.

"If executed successfully, this could not only eliminate freshwater intake but also alleviate regional water scarcity, with potential for broader community impact," he informs *Mining Weekly*.

Energy Efficiency, Decarbonisation

Being an energy-intensive operation, Rand Refinery has taken a multi-pronged approach to reducing energy consumption, with key developments including the deployment of energy-efficient lighting, variable-speed drives, high-efficiency equipment and power factor correction systems.

The refinery's energy consumption is tracked using monitors and overseen by a dedicated energy management team.

Rand Refinery's flagship energy project is a R75-million investment in a 4.5 MW solar PV system, implemented in two phases and fully commissioned and optimised as of February this year.

"The solar PV plant has significantly reduced energy intensity in both refining and fabrication operations."

This investment has already delivered tangible benefits, with the company achieving an electricity saving of almost 24% by 2024, from a 2021 baseline, and contributing to more than 8 500 t of CO₂ decarbonisation savings.

"As a consequence of these investments and deliberate strategies, the refinery and fabrication resource intensities per ounce of refined and fabricated product have also reduced by 60% to 80% from the 2021 baseline," says Baijnath.

The next step in its renewable-energy journey, for which feasibility assessments have been completed, involves the installation of an additional 1 MW to 2 MW of renewable energy, which Baijnath advises will fully decarbonise refinery and fabrication operations.

These projects aim to reduce Rand Refinery's carbon footprint by over 13 000 t of CO₂-equivalent emissions by 2030, even with the addition of new plants.

On the emissions front, although Rand Refinery has an "impeccable emissions record", Baijnath points out that the company is taking active steps to enhance air quality monitoring and management.

A gas monitoring system is currently being installed to track CO₂ and other airborne emissions in real-time, providing a critical layer of transparency and responsiveness.

Plans are also underway to extend this monitoring capability to the four remaining emissions stacks, as part of a broader investment in advanced abatement technologies designed to further mitigate environmental impact. ■



LOWERING POWER CONSUMPTION

Rand Refinery has taken a multi-pronged approach to reducing energy consumption, including deploying energy-efficient lighting, variable-speed drives, high-efficiency equipment and power factor correction systems



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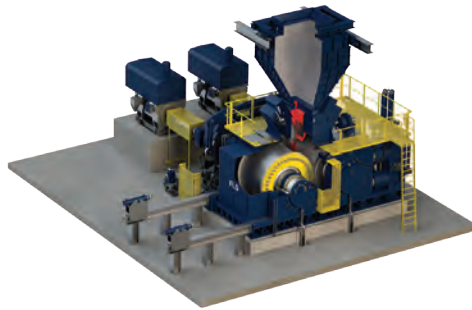
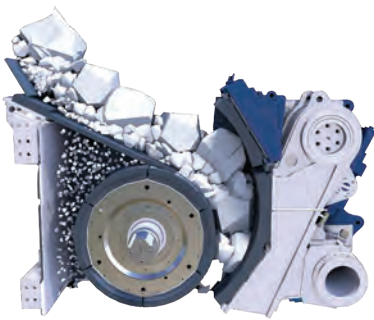


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FLS powers sustainable mining with MissionZero innovations



Flowsheet technology and service provider FLS's MissionZero strategy drives innovation to enhance mining sustainability by reducing emissions, energy use and water consumption while boosting operational performance. With over 50% of its research and development budget dedicated to sustainability-focused technologies, FLS supports the growing demand for critical minerals like copper, vital to decarbonising global economies.

Key technologies include the Eccentric Roll Crusher (ERC®), which reduces energy consumption by up to 40% while increasing throughput by as much as 20%. Its integrated grizzly and crusher design, along with a high reduction ratio of 1:6, ensures both efficiency and productivity.

FLS has also advanced its High Pressure Grinding Roll (HPGR) solutions with the HPGR Pro, featuring innovative rotating side plates that enhance material feeding and uniform wear distribution. This innovation

improves throughput and reduces concentrated wear, cutting energy consumption further and extending equipment lifespan.

In flotation, FLS's coarseAIR™ Flotation Cell technology enables the recovery of coarser particles. This improves mineral recovery and allows for coarser grinding within the circuit. The REFLUX Classifier®, REFLUX™ Flotation Cell, and coarseAIR™ Flotation Cell empower miners to achieve increased plant throughput and obtain their ESG goals for energy, water and tailings management.

By continuously developing cutting-edge technologies, FLS aligns its MissionZero initiative with mining operations' sustainability and zero emissions goals. These efforts ensure the industry can meet growing production demands for critical minerals while minimising environmental impact, paving the way for a more sustainable future.

FLS Full flowsheet technology & services optimizing asset efficiency



Non Ferrous Metal Works Group

Non Ferrous Metal Works Group (NFM) is one of the major non-ferrous metallurgical undertakings in Southern Africa.

Established in 1947 and employing over 300 people, NFM is a family-owned business with its head office and production facilities situated just south of Durban, and sales centres located in all the major South African metros, including Durban, Cape Town, Gqeberha, East London, Johannesburg and Pretoria to provide fast and efficient service to all its customers in the industrial and non-industrial sector.

NFM's primary activities include:

- Manufacture of semi-fabricated copper and copper alloyed products
- Trading of all non-ferrous products
- Trading of various niche commodities

Manufacturing

• The NFM Extrusion Division was established in 1966 and today is one of the largest and most diverse extruders of copper

and brass alloys, and manufacturers of wrought copper, brass and bronze in South Africa, and is ideally situated within easy access to port as well as road transport routes.

- NFM's facility has ample capacity to extrude and supply wrought copper, brass and bronze alloys in a variety of shapes, sizes and tempers to meet domestic range requirements.
- NFM's production facilities are ISO9001-accredited and all its products meet the requirements of the following international standards: ASTM, DIN, EN, BS, SANS, Jish and Chinese Standards T1 and T2.

Product

The two primary copper designations are C102 Oxygen-Free Copper - high purity copper with 101% IACS conductivity, ideal for high performance electrical and thermal applications; and C110 ETP Copper - Electrolytic Tough Pitch Copper.

NFM's products include bus tubes, bus bars, profiles, copper rods that are used in various applications such as power distribution, Earthing products, electro rail, electrical contact applications and anodes for electrowinning in copper mining applications.

NFM's major focus on electrowinning hanger bar anodes ensures that the ultimate tensile strength requirements are achieved to ensure that the anodes are secure during the electrowinning process. Mould design is carefully reviewed in line with the hanger bar shape to ensure that the mould can completely seal when the lead is cast over the copper hanger bar.

Its production team have many years of non-ferrous casting and extrusion experience and would be happy to discuss its customer's unique requirements, as well as define its capabilities in order to meet and exceed customer expectations.

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OIL REFINERIES & FUEL STORAGE

Compiled by DEVINA HARIPERSAD

Acoustic camera tech boosts refinery safety

DEVINA HARIPERSAD | CREAMER MEDIA REPORTER



ACTIONABLE DATA

By turning sound into actionable data, GammaTec's range of Sorama acoustic cameras enable predictive maintenance strategies

“With an acoustic camera, you visualise sound. Instead of capturing visual images like a regular camera, it uses an array of 64 tiny microphones, similar to the ones in a smartphone, to listen to the environment. It then creates a visual heatmap that shows exactly where sounds are coming from,” explains GammaTec marketing officer **Jonathan Welch**.

Unlike traditional methods, Sorama's technology focuses on high-frequency sounds – such as the faint hiss of a gas leak under pressure – that the human ear cannot detect.

“These sounds are translated into a visual image, allowing technicians to see the leak even in noisy, complex environments like refineries, in a non-invasive way,” he says.

This capability is critical for leak detection and repair programmes, which aim to reduce emissions and ensure regulatory compliance in the energy sector.

“Leaks can occur in pressurised pipes, valves or tanks and are often invisible and silent to workers. With Sorama's technology, the sound of escaping gas becomes visible from metres away, allowing teams to act quickly and safely.”

The Sorama CAM iV64Ex model carries an International Electrotechnical Commission system certification for explosive environments, such as ATEX Zone 2, ensuring safe operation in hazardous areas.

“It helps refineries meet safety standards while also contributing to the realisation of climate goals,” Welch adds.

Early detection is a key advantage of this technology, as even minor faults can escalate into serious hazards if left unchecked.

“A tiny crack in a pipe carrying

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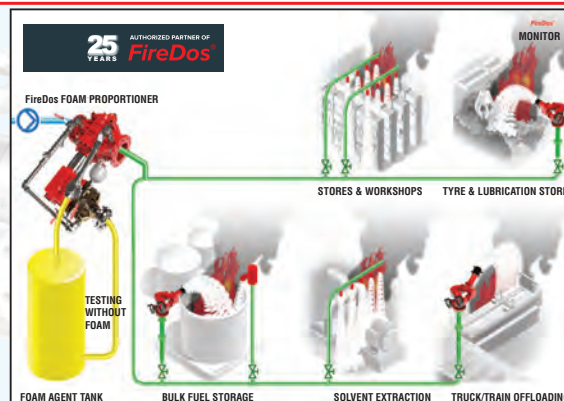
A partnership between non-destructive testing equipment, accessories and consumables supplier GammaTec and global acoustic technology company Sorama will help drive innovation in refinery safety, using Sorama's advanced acoustic camera technology. The technology is designed to detect and visualise leaks that are otherwise invisible and inaudible.

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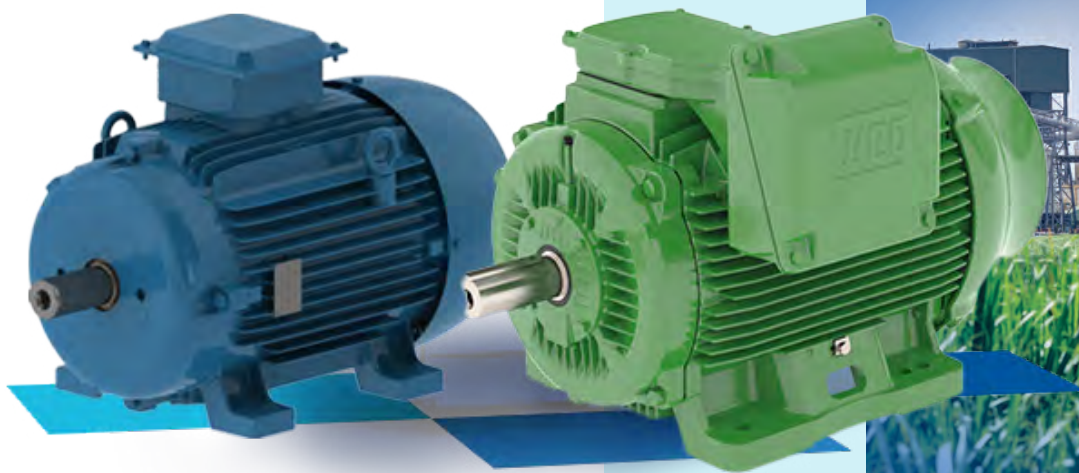
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How the Engineering & Mining Industry Can Recycle Oil in Partnership with the ROSE Foundation

The engineering and mining sectors are at the heart of South Africa's economic development, providing energy, raw materials, and infrastructure for industries that power the nation. However, these sectors also generate large volumes of used lubricating oil—one of the most common yet hazardous industrial wastes if left unmanaged.

When disposed of irresponsibly, used oil can contaminate water supplies, damage soil quality, and release toxic pollutants that are harmful to communities, ecosystems, and future generations. It takes just one liter of used oil to pollute up to one million liters of clean water. This sobering fact highlights the urgent need for engineering and mining companies to manage oil waste responsibly.

This is where the ROSE Foundation (Recycling Oil Saves the Environment) plays a crucial role. For more than 30 years, ROSE has provided a framework for the safe collection, recycling, and reuse of used lubricating oil across South Africa. By partnering with ROSE, the engineering and mining industries can embed sustainability into their operations while meeting compliance requirements and advancing their Environmental, Social, and Governance (ESG) goals.

ROSE Foundation operates a **national network of licensed collectors and processors**, ensuring that used oil is managed in line with legal and environmental standards. The organization also works closely with government, industry stakeholders, and the public to drive awareness and education on responsible oil management.

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Rose Foundation Models a Partnership Approach

Partnering with ROSE offers several advantages:

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- **Trusted Collection Network**
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- **Environmental Stewardship**
Companies demonstrate measurable commitment to sustainability by preventing pollution and reducing their carbon footprint through recycling.
- **Industry Recognition & Stakeholder Value**
Demonstrating responsible oil management supports corporate ESG strategies, strengthens stakeholder confidence, and positions companies as leaders in sustainable mining and engineering practices.

www.rosefoundation.org.za

• From page 46

pressurised gas might seem insignificant, but it can release flammable vapours into the air,” says Welch, adding that such a leak could lead to a fire, an explosion, toxic exposure for workers or it could be devastating for the environment.

By turning sound into actionable data, Sorama’s acoustic cameras facilitate predictive maintenance strategies, as technicians can scan equipment in real time and identify issues before they escalate. This allows for repairs to be scheduled during planned maintenance periods, thereby avoiding costly interruptions, he adds.

The cameras are portable and easy to deploy, needing no changes to plant infrastructure. “Technicians can walk through the plant with the device, scan for leaks and get instant visual feedback.

“This makes the cameras ideal for older refineries, where retrofitting new systems can be expensive or impractical,” says Welch.

Sorama’s technology has already demonstrated its value in the field. At a Dutch refinery, the acoustic camera detected a high-frequency leak in an ATEX Zone 2 area, 4 m above ground. The leak had not been detected using the traditional methods of gas sniffers and soap-solution tests.

Welch recalls that, owing to early detection,




Source: Bloomberg

TANGIBLE BENEFITS

The Sorama acoustic camera helps refineries meet safety standards while also contributing to the realisation of climate goals, owing to its ability to facilitate effective and efficient leak detection and repair programmes

the team could repair the leak during scheduled maintenance.

As refineries continue to prioritise safety and environmental responsibility, acoustic imaging is becoming a critical part of their operational strategy.

“By integrating acoustic imaging into their operations, refineries gain a fast, non-invasive, and highly effective way of enhancing safety, improving efficiency and demonstrating environmental responsibility,” he concludes. 

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Supplier grows capacity to meet increased demand

DEVINA HARIPERSAD | CREAMER MEDIA REPORTER

To meet rising demand for refinery infrastructure projects across Africa, stainless steel and specialty products supplier EMVAfrica is expanding its capacity. The company says its growth has been “exponential” over the past few years and continues to follow an upward trajectory.

“We are able to meet the full range of refinery infrastructure requirements across Africa. Our stockholding, supplier network and technical capabilities have been developed to support projects of any scale,” says EMVAfrica’s Multi Alloys division metals sales manager **Jason Brokken**.

Refinery expansions and upgrades require numerous components, including specialised pipes and fittings that can withstand high pressures, extreme temperatures and corrosive chemicals, he notes. These projects often have strict timelines, which means supply reliability is critical.

The company addresses this challenge by combining local stockholding with international sourcing: “We offer available stock, as well as products from mill production or overseas stockists, to provide the best possible turnaround of supply to all refinery projects,” says EMVAfrica Valves division valve sales manager **Preshan Pillay**.

This combination helps clients avoid delays and simplifies the procurement process.

“Instead of dealing with multiple suppliers, clients need only rely on EMVAfrica as a single-source solution provider,” he adds.

The company also notes that every refinery project comes with its own set of specifications for size, wall thickness and material grade, and meeting these requirements is essential.

“It’s very important to ensure

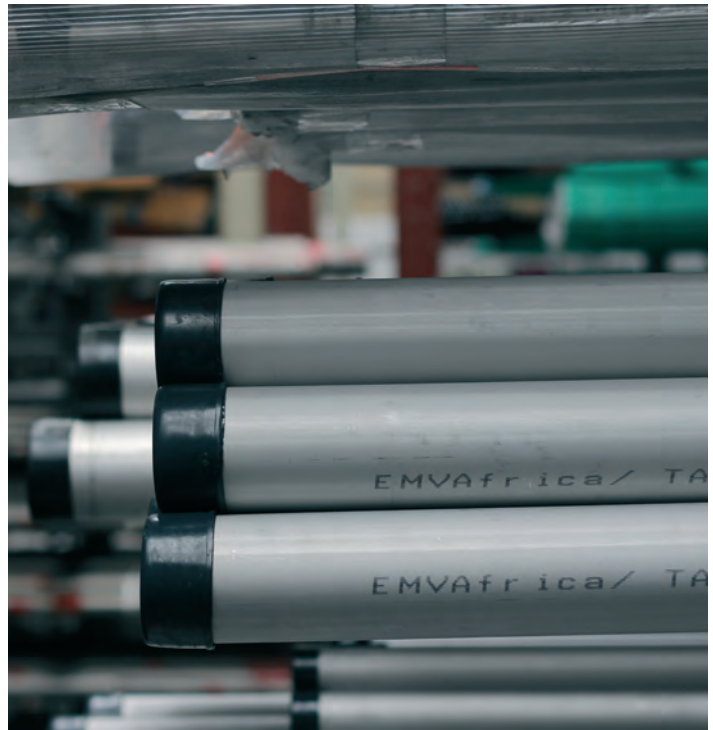
we adhere to all specifications requested from the refinery. We ensure [that] all our products are sourced from compliant mills that produce to the highest standard,” says Brokken.

This adherence to global quality benchmarks, including American Society of Mechanical Engineers and American Society for Testing and Materials standards, helps to ensure safety and reliability in refinery operations. EMVAfrica works only with vetted mills and manufacturers, reducing the risk of defects or failures.

Downtime is a major cost factor for refineries, and the company believes that its quality assurance plays a key role in preventing operational disruptions. Pillay adds that having a large stock of different alloys shortens the replacement time if and when components need to be changed, further reducing downtime.

In addition to quality control, the choice of material is also critical. Brokken says EMVAfrica supplies a variety of corrosion-resistant alloys to meet refinery requirements.

This capability has become more important as refineries modernise their processes to meet new environmental and efficiency standards. Pillay notes that some EMVAfrica products play a role in cleaner fuel production and emissions reduction in that they prevent leaks, ensure tight sealing, and enable reliable operation of desulphurisation and hydrocracking units for low-sulphur fuel output.



QUALITY ASSURANCE

EMVAfrica believes its quality assurance helps prevent operational disruptions

Africa’s refinery sector is growing, as countries aim to reduce their dependence on imported fuels and strengthen energy security. Several large-scale projects, including the Dangote refinery, in Nigeria, and upgrades across the continent, highlight the investment under way.

For EMVAfrica, this growing demand presents a challenge and an opportunity. The company

states that it is ready to deliver the products, technical support and logistics required to help clients complete complex refinery projects on time and within budget.

“With our combination of local stock, international sourcing, compliance with global standards and technical expertise, EMVAfrica is well positioned as a key partner in Africa’s refinery upgrade drive,” says Brokken. 



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Firms target refineries' upgrade ambitions

DEVINA HARIPERSAD | CREAMER MEDIA REPORTER

South African fire protection equipment supplier DoseTech has partnered with Italian company SA Fire Protection to provide African refineries with advanced fire protection systems as the sector modernises to meet new standards and strengthen fuel security.

This partnership combines SA Fire Protection's engineering

expertise with DoseTech's local support capabilities, ensuring reliable implementation in challenging environments.

DoseTech acts as a local distributor and integrator, ensuring that SA Fire Protection's monitors, deluge systems and valves are installed, maintained and supported to meet the demanding conditions of the region.

DoseTech offers products designed to protect high-risk zones such as pumpstations, tank farms, loading bays and process units.

"Our systems are engineered for rapid, large-scale water or water-and-foam suppression. They are critical in areas where fast, decisive action is needed to prevent escalation," says SA Fire Protection business development manager **Sharé Mason**.

An important focus is the company's firefighting monitors, available in bronze or stainless steel. They are also offered in manual, electric and electro-hydraulic versions, and deliver long throw ranges and precise flow control.

"They allow operators to cool critical equipment, put out spill fires or shield nearby structures, [thereby preventing them] from catching fire — all from a safe distance," she explains.

Refinery upgrades increase fire risk because of mixed infrastructure, new process flows and construction activity.

"Temporary layouts can create bottlenecks or ignition points. That is why we deploy modular deluge skids and strategically placed monitors that can be integrated into existing systems as work progresses."

This approach keeps vulnerable areas protected during transitional phases, reducing downtime and improving safety, adds Mason.

Common hazards in refineries include jet fires from pressurised leaks, spray fires from joints and pool fires caused by spills. Deluge systems deliver immediate, wide-area cooling and extinguishing to prevent equipment failure, while monitors provide targeted suppression to stop a fire from

spreading.

"Deluge valves are triggered automatically or manually to cover fixed zones, while monitors allow [for] flexible response to changing fire patterns. Together, they provide a strong layer of protection," she says.

Further, SA Fire Protection designs its systems to meet strict international safety standards. These include those stipulated by the National Fire Protection Association, the American Petroleum Institute, European Standards, Safety Integrity Level standards, and NORSOK standards for offshore structures. The company also boasts certifications from Underwriters Laboratories and approvals from accreditation organisations Det Norske Veritas and Lloyd's Register.

"Materials and components are tested for corrosion resistance, flow performance and operational reliability, which is critical in harsh African environments," Mason notes.

The company also works closely with refinery safety teams on design, installation and maintenance. Its manufacturing base, in Italy, ensures strict quality control, while local service teams provide inspection and compliance support to maintain system readiness.

Mason says African refineries often struggle with outdated suppression systems, limited spares and inconsistent maintenance: "We address these challenges with modular solutions for faster installation and locally supported maintenance programmes. Our aim is to keep systems operational and compliant, even in difficult conditions".

As refineries upgrade to produce cleaner fuels, fire safety remains a priority.

"We are constantly improving actuation systems, corrosion resistance and monitor ergonomics."

Mason concludes that SA Fire Protection's goal is to provide reliable, innovative fire protection so that clients can operate with confidence during and after modernisation. ■



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COMPANY PROFILE



Local manufacturer MetaleN produces heat exchanger tubes in various alloy inner tubes with Copper or Aluminium fins, in lengths of up to 15m. An ISO 9001 certification ensures controlled processes for the highest quality to EN specification. The highest quality materials ensure the final product will last. MetaleN also offers finning service of your own inner tubes (free issue). We service various industries, including: Petrochemicals, Process industries, Heating and Cooling, Drying, Refrigeration and Energy generation.

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SOLAR ENERGY

Compiled by TRENT ROEBECK

EMS solutions reduce grid pressure, enhance supply

TRENT ROEBECK | CREAMER MEDIA WRITER

RESIDENTIAL SOLAR POWER

Blockpower's solar solutions are accompanied by cost-saving and optimisation benefits for residential establishments, businesses and industry

Innovations in solar energy, such as off-grid energy solutions company Blockpower's Blackbox, an energy management system (EMS), allow for energy savings and cost-efficiency, as well as system longevity for households, businesses and heavy-duty industries, says Blockpower engineering head Timothy Mahlangu.

An EMS offers several benefits, including optimising surplus solar energy through intelligent hot-water control solutions and managing high inrush consumption by staggering equipment startup. This is particularly appropriate for South African hospitality industries, as it helps ease the load on the national grid, which is frequently unable to keep up with increasing demand and ensure the timely provision of electricity.

The Blackbox provides additional optimisation solutions for clients when needed, adds Mahlangu. These solutions include real-time monitoring and control, and ongoing techni-

cal support, which helps with performance management in various operational processes, such as equipment monitoring for predictive maintenance.

"While residential development projects encompass about 75% of our portfolio, 25% of our work involves solving the challenges facing businesses and industry. We conduct detailed energy-use studies, model tariff scenarios and design systems that reduce reliance on the grid during peak hours," says Mahlangu.

Much like any other solar energy product and service provider, Blockpower must

contend with regulatory obstacles and variable sunlight, as well as the lack of robust communication networks that can affect the performance of its real-time monitoring and control offering.

Fortunately, the Blackbox overcomes the challenge of limited sunlight by storing energy in the battery energy storage solution (BESS) during the day for use at night, while intelligently shifting geyser loads to daytime hours when surplus PV is available for hot-water storage. At the same time, it optimises system performance and reduces consumption to extend backup capacity during power outages.

Further, Blockpower's products and services meet existing regulatory requirements.

"We tackle challenges head-on. Our storage systems are sized to handle cloudy days, our designs meet or exceed grid code from the

• To page 56

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Subscriptions-based power model helps shore up energy security

TRENT ROEBECK | CREAMER MEDIA WRITER

Solar energy solutions company GoSolr is giving schools and small- and medium-sized businesses access to subscription-based solar power, thereby reducing their reliance on the national grid.

GoSolr CEO **Andrew Middleton** says that it is important for South Africa to increase the percentage of solar-based generation in its energy mix, as this will ensure that businesses can avert the negative effects of increased tariffs and the unreliability and carbon emissions associated with supply from State-owned power utility Eskom.

He adds that increased flexibility in power supply options, such as wheeling solutions, will allow independent power producers (IPPs) to create viable business models, enabling consumers to choose between pre-paid, post-paid and time-of-use billing models.

“People who are willing to generate and sell power should be able to do it, and those activities should facilitate a marketplace. It actually becomes very dynamic in different parts of the

world, where you can choose between four or five different power producers, and power price changes by the hour,” says Middleton.

Turnkey Solar Solution

Middleton says that GoSolr has replicated its residential sector solar installation model to accommodate business and industry, offering commercial customers a turnkey product and service solution that reduces reliance on the country’s grid.

Firstly, he says that GoSolr conducts an in-depth analysis of the site, identifying the customer’s specific requirements and the best solution for their operations from an efficiency and cost savings perspective.

“If we are talking about an office space or a warehouse, it is quite easy to identify a solution that will minimise the cost from the grid,

reduce reliance on the grid and protect the client from unwanted outages.

“For a building with manufacturing processes or heavy machinery, an in-depth analysis of the power demand and power quality is needed to identify whether certain measures are required to improve on overall energy efficiency and power quality before installing a solar solution,” he notes.

When GoSolr has obtained the full scope of the project, and financing has been confirmed, the solar solution installation process is completed.

“Once installed, we will monitor and maintain the system to ensure optimal performance over time,” Middleton adds.

Going forward, he predicts that the road to stabilising and properly regulating IPPs and the trade of solar power – as well as to cementing the practice of and regulations around wheeling – will be “rocky”, given that some government entities and Eskom are hindering the processes related to licensing alternative, renewable-energy provision.

However, there have been noteworthy developments regarding the acceptance and use of renewable energy that is readily available.

“The momentum is shifting after the release of new regulations requiring utilities to facilitate the export of excess solar power to the grid. This is very welcome as it shows that the country is serious about using a resource that is readily available and will contribute to alleviating strain on the national electricity network,” he concludes. ■

COUPON ON PAGE 16 E703964

• From page 54
start, and our monitoring systems are built with backup communication paths so we’re never flying blind. We also work with trusted suppliers and maintain critical spares locally, so our clients aren’t left waiting weeks for a replacement.”

Mahlangu adds that client requirements vary, but the company puts every kilowatt hour “to work”, allowing for flexible fine-tuning of solar-related performance.

“For homeowners, it’s all about matching energy use to solar production. We make sure batteries charge first to guarantee evening supply, then push any extra into things like geysers or electric vehicle (EV) charging. Businesses, on the other hand, are more complex and loads need to be prioritised, tariffs analysed and control settings adjusted for seasonal changes.”

BESS solutions are further enhanced when combined with emerging digital innovations that improve the performance and reliability of solar power installations. For example, Blockpower is rolling out a comprehensive

energy ecosystem through its Energy-as-a-Service (EaaS) model, designed to maximise efficiency and ensure consistent energy availability, while also delivering cost savings and providing clients with hassle-free management of metering and billing, leaving these responsibilities in the hands of experienced professionals.

“EaaS combines high-efficiency solar PV with battery storage and the Blackbox, and can be scaled as needs grow,” Mahlangu adds.

Wheeling

Mahlangu believes that wheeling offers numerous benefits. Wheeling – the sale of solar power through third parties – helps households and businesses save money and can also enable them to sell excess solar energy directly to third parties or back to the municipality.

This would, however, require EMS and monitoring solutions to ensure that proper monitoring and metering is in place, and that technical requirements are met.

“We can design systems to prioritise a

business’s own usage first, then export the surplus when it makes financial sense . . . At Blockpower, we design solutions with the long game in mind, producing systems that not only perform today, but adapt as the client’s needs, tariffs and overarching regulations change,” he explains.

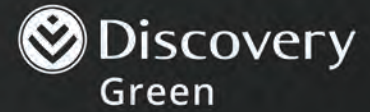
With the regulatory framework for the solar industry evolving, Mahlangu says the future will likely involve the trade of solar power or wheeling by independent power producers and businesses with excess solar reserves; the adoption of smart demand management for EVs and smart appliances; and the implementation of hybrid systems and/or smart controls for increased automation.

“A successful solar project starts long before the first panel is installed. It’s about understanding the energy profile, choosing the right technology and planning for operations over the next decade or more . . . quality and compliance will become critical, and there’s no room for shortcuts,” he concludes. ■

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<p> 2031: Carbon tax implemented Utility prices continue to rise significantly above inflation</p>		
<p>FUTURE: "40% isn't giving me enough protection from my Utility and tax - I'd like to increase my coverage to 90%"</p> <p>Remaining electricity consumption profile (after installing solar)</p> <p>Time-of-use period</p>	<p>COVERAGE: 90%</p> <p>PRICE: ~R1.75 per kWh (wheeled solar on full 90%) ~R1.25 per kWh (first 40% solar, next 50% wheeled wind)</p> <p>After installing solar for the first 40%, businesses are left with an awkward off-peak heavy consumption profile, and face 1.8 times the cost to cover the remaining 60% with renewable sources.</p>	<p>COVERAGE: 90%</p> <p>PRICE: Lower effective cost per kWh</p> <ul style="list-style-type: none"> Access additional coverage at pre-determined attractive rates – maximising savings over the long-term PLUS the ability to scale down coverage should more favourable technologies become available

Solar trade bolsters supply, promotes cost-efficiency

TRENT ROEBECK | CREAMER MEDIA WRITER

The growing trade of solar power by independent power producers (IPPs) is playing a pivotal role in South Africa's rapidly deregulating electricity market, says digital solutions provider for energy markets Enerweb. By diversifying the energy mix and increasing competition in the power sector, solar trading is "setting the stage for a cleaner, more cost-efficient grid".

"Trade in solar energy has laid the groundwork for a more open and competitive electricity market, shifting away from a single-buyer model towards a dynamic, multi-actor environment that supports competitive pricing," says Enerweb CEO **Santego Govender**.

He notes that, while solar power offers significant advantages, its weather-dependent variability makes it difficult to consistently match supply with demand. The rapid rise of large-scale embedded solar will exacerbate grid congestion, which can negatively affect operations and supply reliability for customers.

However, Govender emphasises that these challenges can be efficiently addressed through smart deployment of technology, including the deployment of battery energy storage systems (BESS), which enable solar power to be dispatched when the sun is not shining, reducing intermittency and enhancing reliability.

He adds that another promising development is the rise of virtual power plants (VPPs), where distributed energy resources, such as rooftop solar and BESS, are aggregated and integrated into the grid. By participating in VPPs, end-users can further enhance the reliability and dispatchability of solar power, ensuring stable supply.

Benefits for Business, the Economy

Beyond technical advancements, trading in solar power holds an array of economic and environmental benefits for South Africa.

Trade among IPPs, traders and utilities leads to competitive pricing, lowering costs across the electricity market and ensuring reliable supply to minimise downtime for businesses and industry, says Govender.

IPPs that specialise in solar power trading can also assist businesses in reducing their operational costs by providing access to the inherently lower costs of solar energy, provided their demand profile aligns with solar

production. They also allow users to reduce the reliance on carbon-based electricity, which could, in turn, improve the entity's environmental, social and governance credentials—an increasingly critical factor for global export competitiveness, particularly in markets demanding "clean" energy.

"Solar trading speeds up the shift to a cleaner grid by giving renewables real market access and clear price signals. This allows solar to displace more carbon-intensive generation, especially during the day," he states.

Digitalisation for Optimisation

For solar trading to realise its full potential, it is essential that IPPs ensure that their digital systems work hand in hand with their physical infrastructure.

IPPs and other grid electricity suppliers ought to ensure that their physical infrastructure, including smart meters, reliable grid connections and possibly even BESS systems are complemented by intelligent digital systems such as meter data platforms, forecasting tools, scheduling engines, predictive maintenance solutions, market portals and energy trading and risk management (ETRM) systems.

"From metering and forecasting to settlement and analytics, Enerweb's technology stack is helping to unlock real participation in the market, positioning the company as a key enabler in South Africa's energy transition." The company has delivered ETRM systems across Africa and has created, and continues to support, core trading platforms such as the Southern African Power Pool (SAPP) and Eastern African Power Pool. It has also enabled private traders to participate in traditional wheeling—and soon, virtual wheeling—as well as regional trading through SAPP and is preparing customers for the South African Wholesale Electricity Market (SAWEM) next year. Enerweb's products are all underpinned by advanced analytics for optimisation, risk management and planning.



SANTEGO GOVENDER

Virtual power plants enable end-users to enhance the dispatchability and reliability of solar power

"These systems help automate bidding, trading and settlement. They also ensure that everything stays compliant and transparent. At Enerweb, we sit right at this intersection, bringing together the platforms and tools that enable producers, traders and utilities to operate in a connected, scalable way."

Govender warns, however, that technology alone is insufficient.

"Like the rest of the energy sector, we're seeing a shortage of people who combine advanced IT skills with deep energy market knowledge. At Enerweb we are continually building our team to meet this challenge, ensuring we have the talent to match sector growth and market evolution," adds Govender.

Outlook

Govender says the future looks "bright" for the trade of solar power in South Africa, with traders expected to play a significant role in driving growth in the country's electricity market, adding to the expected positive impacts owed to the unbundling of Eskom, the increase of open access policies and evolving trading frameworks.

The planned introduction of the SAWEM is set to formalise this transition, offering a wholesale platform that integrates solar and, over time, other renewables into transparent, competitive markets.

He expects an increase in the value placed on data, digital integration and forecasting with exponential growth in bilateral over-the-counter trading of electricity. He also predicts an increase in participation of other traders for demand response and flexibility services as well as more hybrid models, incorporating BESS with solar solutions.

"In the longer term, an open regional electricity market would help unlock cross-border value and drive deeper emissions reductions across the continent. Enerweb continues to invest in the tools and the talent needed to support this transition," Govender concludes. ■



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Renewables investments bolster growth despite dim infrastructure outlook

As South Africa grapples with ongoing electricity shortages and a heavy reliance on ageing coal-fired power plants, renewable energy remains critical to ensuring long-term energy security and economic stability.

With a strong secondary market emerging for renewable-energy assets, strategic investment and successful exits are becoming increasingly important in shaping the future of the country's energy landscape.

In a significant milestone highlighting this trend, banking group Old Mutual Alternative Investments' subsidiary African Infrastructure Investment Managers (AIIM) – through its IDEAS Fund – has successfully exited stakes in three prominent renewable-energy assets, in a transaction valued at over R750-million.

The assets include two solar PV projects and one wind project – both developed under South Africa's Renewable Energy Independent Power Producer Procurement Programme.

The transaction involves the sale of AIIM's 21% stake in the Jeffreys Bay Wind Farm, a 138 MW facility located in the Eastern Cape, to existing shareholders in the project, namely electrical engineering firms Enzani and Usizo.

AIIM has also exited its 10% stakes in both the 73 MW Kalkbult and 38 MW Linde solar PV projects in the Northern Cape, with renewable-energy company Gaia Renewables 1 acquiring these stakes.

"AIIM has been a committed investor in these high-quality renewable-energy assets since their financial close more than 12 years ago and they have delivered strong returns while contributing significantly to the sector's growth. This successful exit reinforces AIIM's strong track record in renewable energy, aligns with our strategic focus on majority-controlled investments and ensures value realisation for our investors," says AIIM investment director **Zaahid Ganey**.

The assets involved were initially constructed to provide reliable and sustainable energy, under 20-year power purchase agreements with State-owned power utility Eskom, thereby supporting the country's transition to cleaner energy. This exit highlights both the IDEAS Fund's capability to realise sub-



RENEWABLE-ENERGY GENERATION

Solar and wind power generation will help South Africa produce electricity to reduce the load on the local grid

stantial returns for investors and the strong appetite within South Africa's secondary market for renewable-energy infrastructure.

Additionally, the assets have had a tangible social impact in local communities through cumulative social spend of more than R100-million since starting commercial operation, including charitable support for community projects or facilitating small business creation.

Renewable-energy investments have seen significant growth in South Africa over the last decade, driven largely by the government's commitment to diversifying its energy mix and reducing carbon emissions. This growing market has created opportunities not only for initial investors but also for secondary buyers looking to enter established projects with proven performance.

The IDEAS Fund has been instrumental in pioneering renewable-energy investment in the region, setting benchmarks for financial returns and operational excellence.

"These pioneering renewable-energy projects, built with a robust and low-risk approach, have demonstrated an excellent operational track record and we are confident they will continue to deliver inflation-linked returns to our investors. With Gaia's expertise, we also see exciting opportunities to further optimise and enhance the use of these assets in the years ahead," says Gaia chief investment officer **Hendrik Snyman**.

"Enzani and Usizo are happy to be growing their renewable-energy footprint, in line with the objectives of the Ubuzwe Group. Jeffreys Bay Wind Farm is a fantastic asset and increasing our presence helps us get closer to this objective," say Enzani CEO **Bheki Lembede** and Usizo MD **Sakhi Dumakude**.

The transactions have reached financial close, showcasing AIIM and the IDEAS Fund's ongoing commitment to unlocking investor value and driving growth within South Africa's renewable-energy sector. ■



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Solar panel lifting product simplifies system installation

The solar energy market is surging in South Africa – particularly in the commercial and industrial sectors – as businesses seek cost-effective, sustainable solutions to manage rising electricity costs. For this reason, solar power has become an increasingly attractive investment.

While loadshedding has eased in recent months, energy costs remain high, prompting companies operating in agriculture, engineering, and manufacturing to turn to rooftop solar to manage long-term operational expenses.

However, while the benefits of solar are clear, the road to installation is not always smooth.

“Transporting and installing solar panels presents a unique set of logistical challenges. These panels are not only bulky and fragile but getting them safely onto rooftops using traditional lifting methods can be time-consuming, risky and expensive,” says SkyJacks MD Alistair Bennett.

Large-scale solar panels, often used in commercial and industrial projects, are delicate by nature and susceptible to damage from mishandling. Rooftops can be difficult to access and using the wrong equipment can lead to costly breakages and long project delays, which are concerns that weigh heavily on contractors with tight budgets and timelines.

Breakages do not just increase hardware costs, but ripple through the entire project

life cycle.

“When panels are damaged during lifting or installation, it’s not just about replacing the equipment. There are lead times for new panels, and in some cases, entire teams are idled while waiting. It impacts [on] the bottom line and the contractor’s reputation,” Bennett explains.

Solar Installation Solution

The GEDA Solarlift is a lifting solution designed specifically for the solar industry, says Bennett. “With its modular, compact design and a lifting height of up to 19 m, the Solarlift provides an efficient, safe, and cost-effective way to transport PV panels onto rooftops.”

The GEDA Solarlift was developed with the realities of solar projects in mind. It is lightweight and easy to set up, even on uneven ground or in tight construction sites. The adjustable platform holds solar panels securely during the lift, reducing manual handling and lowering the risk of both damage and injury, he adds.

This has made the system particularly valuable for rooftop installations in industrial parks, warehouses and commercial farms, where rooftop access and project scale can vary significantly.

“For installers working in remote regions, such as those popular for utility-scale solar in the Northern Cape, the Solarlift’s portability and quick setup offer added advantages.”

Flexible Rental Model

SkyJacks, the local supplier of the GEDA Solarlift, has introduced a “pay-as-you-use” rental model that reduces the barrier to entry for contractors and renewable-energy developers.

“Our rental model is designed to be as flexible and supportive as possible, and there is no need for a big upfront investment, which helps ease cash flow constraints . . . all equipment is fully serviced and tested before each use, so contractors know they’re getting equipment that’s safe, reliable and ready to go,” he notes.

This model allows small and mid-sized contractors to compete on larger projects without committing the capital needed to own specialised equipment. It also helps solar providers scale their operations more easily; renting additional lifts as needed without incurring permanent overheads.

Hands-On Support

Bennett says that SkyJacks’ offering extends “beyond equipment”. The company provides end-to-end support, including site assessments, technical advice and on-site setup assistance.

“We work closely with our clients to make sure the GEDA Solarlift is properly integrated into their workflow. Our technical teams are available to assist with setup, troubleshooting and compliance, which takes pressure off the contractors.”

This comprehensive support ensures that even the less experienced contractors can safely and efficiently operate the GEDA Solarlift, helping them meet deadlines and reducing costly mistakes.

As solar uptake accelerates in South Africa, driven not just by the promise of energy security, but also long-term financial savings; solutions like the GEDA Solarlift are helping streamline the installation process. This does not just save time and money; it improves workplace safety, reduces waste through minimised breakages, and boosts the overall reliability of solar project rollouts.

“Innovation isn’t just about panels or batteries, it’s about the tools that help make clean energy accessible and viable at scale. The GEDA Solarlift is a practical solution to a very real problem in the industry, and we believe it’s going to play a big role in how South Africa builds its solar future,” he concludes. ■



GEDA SOLARLIFT

The GEDA Solarlift optimises the process of transporting solar panels from ground-level to building rooftops, making solar installation a seamless process



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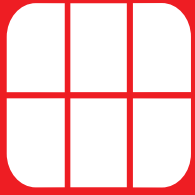
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MINING IN ZIMBABWE

Compiled by LYNNE DAVIES

Lithium boom drives mining transformation



SECTOR ENTRY

Artisanal and subsistence miners being able to procure the correct machinery and obtain advice boosts their ability to graduate into the formal sector

Zimbabwe's emergence as "Africa's leading lithium producer" is a signal of "deep and exciting" transformation that will see Zimbabwe take its place as a mining powerhouse, reports turnkey crushing solutions provider Gold Rock Projects marketing manager Chris Marsay.

With over \$1-billion in Chinese-backed investment and new refinery projects at Bikita and Sandawana, he says the country is shifting from raw minerals extraction to domestic value addition.

"This shift, not only with high-level large-scale international investments, but also with the mass graduation of once artisanal and subsistence miners into the formal mining sector, is a success story that Gold Rock Projects has played a part in with its focus on these smaller local mining investments," emphasises Marsay.

He adds that the planned 2027 ban on

concentrate exports underscores this pivot, demanding new infrastructure, technology and policy alignment, noting that Gold Rock Projects views this transition as a strategic inflection point.

"Our work in mining project development and advisory across Southern Africa positions us to support Zimbabwe's lithium ambitions through infrastructure planning, compliance and community engagement frameworks."

Growing the Zim Sector

Zimbabwe's revamped Mines and Minerals Bill, in conjunction with the near-complete roll-

out of an online permitting system, are "commendable steps" toward transparency and efficiency of mining regulations in Zimbabwe, highlights Marsay.

However, he notes that enforcement against illegal mining and environmental violations must be matched with support for formalisation and training.

"Gold Rock is actively engaged in these areas."

Further, Marsay says that with increasing numbers of artisanal and subsistence miners being able to procure the correct machinery and obtain advice, the greater their ability to "graduate" into the formal "legal" sector.

Marsay Crushing and Screening Equipment, with decades of experience in crushing and

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ONE STEP AHEAD.

Tyre solution gains traction in Zim mines

LYNNE DAVIES | CREAMER MEDIA REPORTER

The growing problem of sending big volumes of waste to landfill and general waste issues associated with used tyres is intended to be addressed through tyre filling solutions provider Carlisle TyrFil's long-standing tyre filling and flatproofing solutions.

Through the flatproofing solution, which has been used in South Africa for over 40 years, the company is aligning itself with Zimbabwe's focus on reducing environmental impact as well as meeting stricter environmental enforcement by building a local dealer network with its local service partner.

This will play a vital role in introducing TyrFil to Zimbabwe's mining operations, helping to prevent delays in production, according to Carlisle TyrFil business manager for Africa **Walter Roux**.

TyrFil's flatproofing technology is especially valuable in this context, as mines invest in more advanced machinery, move towards mobile trackless machinery and extend operations, including processing facilities.

Flat tyres not only slow down operations but can also bring an entire operation to a halt, adds Roux.

The durable polyurethane (PU) elastomer is designed to replace all the air in off-road pneumatic tyres of mining vehicles, curing into a flexible, shock-absorbing elastomer core that is not only "durable but also eco-friendly". This will increase uptime and ensure that projects stay on track, he adds.

Tyres that use this core can be recycled and repurposed, reducing the environmental



DURABLE TYRE CORE

The durable polyurethane elastomer employed to replace the air in tyres cures into a flexible, shock-absorbing elastomer core

impact of tyre disposal.

"We recycle our [flatproofing] product back into the tyre, which means that we have a recycling capability that reduces petrochemical use by up to 65%."

To get Carlisle TyrFil's flatproofing into the tyre, the company's patented AutoFil-GenII pump can mix virgin tyre fill with PU grind, or both rubber crumb and PU grind, while delivering enhanced pump and grind speeds and significantly reducing clean-up time.

The recycling technology's computer systems have been field-proven for more than a decade to measure and mix controlled amounts of virgin liquid tyre fill and granulated tyre fill into a homogenous Tyrfil mixture that fills the tyre in the same way as virgin liquid tyre fill, Roux explains.

In addition, the company's Green Machine – which uses up to 65% of reclaimed tyre filling – aims to reduce the carbon footprint of Carlisle TyrFil's customers while also saving on costs.

In addition, the AutoFil recycler pump system has made it possible to keep more than 68-million kilogrammes of tyre fill out of landfills every year since 2002, and is a tyre filling system that can recycle and reuse post-consumer oil-based tyre fill.

This system employs a one-step process to increase efficiencies and requires little labour, making it easy to operate by a single person, with clean-up only taking up to five minutes, says Roux.

Expanding Network

When considering mines in remote areas of Zimbabwe, often with limited infrastructure, Roux says that TyrFil can enable mining operations to replace or repair fewer tyres by making their current tyres last longer.

Introducing TyrFil into their operations will increase tyre life as the tyre stays at the optimal pressure for its life span. In some instances, tyre performance is

increased two to three times. The need for pressure checks is reduced and machine availability increases.

Roux notes that TyrFil also makes a vehicle "a lot more stable", which results in operators having more control over the vehicle.

Here, TyrFil cushions the ride of a vehicle, providing operators with a smoother experience that reduces fatigue and enhances their ability to work efficiently and safely compared to solid aperture tyres.

"It especially works well underground, as it replaces the air in the tyre, meaning that you don't have a pressure vessel underground . . . you now have a vehicle that's even more safe than it was before using the product," he concludes. 🇺🇸

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screening solutions, is ready to support Zimbabwe's beneficiation drive, states Marsay.

The company's crushing plants, conveyors and feeders are already supporting operations across the region.

"Our high-capacity front-end crushing and screening solutions are ideal for lithium, gold and chrome processing.

"We offer further beneficiation equipment through long-standing partnerships with specialised engineering houses," he adds.

With the company's combined experience in the Africa market, Marsay says it is able

to offer solutions that reduce downtime and enhance throughput, thereby helping operators meet production targets and environmental standards.

Beyond lithium, he adds that Zimbabwe's mining momentum in gold, coal, platinum and diamonds demands a robust supply chain of equipment and expertise.

Investors of mining projects seeking long-term returns will find value in operations that integrate beneficiation, local partnerships and environmental stewardship, notes Marsay.

In this regard, he says there is a need to shift

the investment mindset to that of partnership and move away from purely extracting value out of the African ground and sending profits elsewhere.

"As Zimbabwe redefines its mining identity, collaboration between government, investors and service providers will be key.

"Gold Rock and Marsay [Crushing and Screening Equipment] stand ready to contribute not just equipment and expertise, but a vision for mining that uplifts communities, protects ecosystems, and builds lasting value," concludes Marsay. 🇺🇸

COUPON ON PAGE 16 E703962



Unleashing Zimbabwe's Mineral Wealth for a Sustainable Future

Miner undertakes smelter, solar expansion

LYNNE DAVIES | CREAMER MEDIA REPORTER

With the commissioning of a \$360-million smelter expansion project and the first 35 MW phase of its \$37-million solar PV power programme having been finalised, platinum mining company Zimplats has entered into a “new era of industrial growth and sustainability”, says Zimplats corporate affairs head Sibusiswe Chindove.

Completed in December 2024, the 38 MW smelter expansion project is designed to process 380 000 t of concentrate yearly, tripling Zimplats’ smelting capacity.

This will strengthen Zimbabwe’s local processing capabilities, advance beneficiation, support third-party producers and reinforce Zimplats’ national industrialisation goals, she says.

The two flagship projects – officially inaugurated in July by Zimbabwe President Dr Emmerson Mnangagwa at Zimplats’ Selous metallurgical complex – form part of the company’s \$1.8-billion expansion programme, agreed under a beneficiation roadmap between Zimplats and the Zimbabwe government in 2020.

The smelter expansion demonstrates a “belief in the platinum-group metals (PGM) industry’s future, belief in the power of col-

laboration and belief in what becomes possible when bold ambition meets sustained action,” says Zimplats chairperson advocate Thandi Orleyn.

Chindove highlights that the capacity expansion will ensure that other PGM mines along the Great Dyke are able to focus on exploration and mining development since processing capacity, catering for significant national PGM production, has been installed.

Built over 36 months, the smelter plant encompasses 17 000 m³, with 3 500 t of steel, 18 km of pipework and 350 km of cabling used, says Orleyn.

Zimplats is also onboarding third-party PGM producers to use the expanded smelter, which positions Zimbabwe as a regional PGMs processing hub while enabling cross-border collaborations.

“Effective, early onboarding and align-

ment with local partners on safety, culture and skills transfer are critical. There has been significant skills transfer, to such an extent that operations and maintenance of the plants will be undertaken exclusively by locals,” adds Chindove.

Further, insights gained throughout the implementation of these projects will guide enhanced future onboarding and local capacity building, which, in turn, will reduce reliance on expatriate skills in future cross-border collaborations, she says.

Solar Shift

Zimplats constructed a 35 MW solar plant in August 2024 to support its operations by using clean reliable energy.

The plant supplies Zimplat’s operations with 8% of the total energy consumption required.

“The project brought together Egyptian engineering, procurement and construction expertise, and seven local firms, who collectively employed around 800 workers at peak, most from nearby communities,” outlines Orleyn.

The plant spans 109 ha and features 74 880 solar panels on a single-axis tracking system that follows the sun throughout the day.

Phase 2A of this \$54-million solar expansion project is expected to generate 45 MW, and will be complemented by the establishment of a sulphur dioxide (SO₂) abatement plant.

Zimplats is also exploring dual land-use options, including agricultural production beneath the solar panels to enhance land use efficiency and reduce environmental impact.

To uplift the nearby community, the company intends to foster an ongoing partnership with the community, which will play a role in cleaning the solar panels to ensure they remain energy efficient and meet nameplate capacity generation.

However, Zimplats also intends to increase its use of renewable energy and is planning to roll out three additional phases of solar PV generation to increase its solar capacity to 185 MW through an investment of \$201-million.

“The full 185 MW solar capacity will enable Zimplats to power operations entirely from renewable energy, eliminating fossil fuel use and drastically reducing our carbon footprint,” states Chindove.

Simultaneously, the sulphuric acid produced in the SO₂ abatement plant will be used in the production of fertiliser to support Zimbabwe’s agriculture sector.

“The abatement plant will help us meet environmental, sustainability and governance standards, aligned with World Health Organisation guidelines, while producing sulphur for fertiliser manufacturing, supporting our diversification strategy,” concludes Orleyn. ■■



SOLAR POWERED

Zimplats’ solar PV plant spans 109 ha and features 74 880 solar panels on a single-axis tracking system



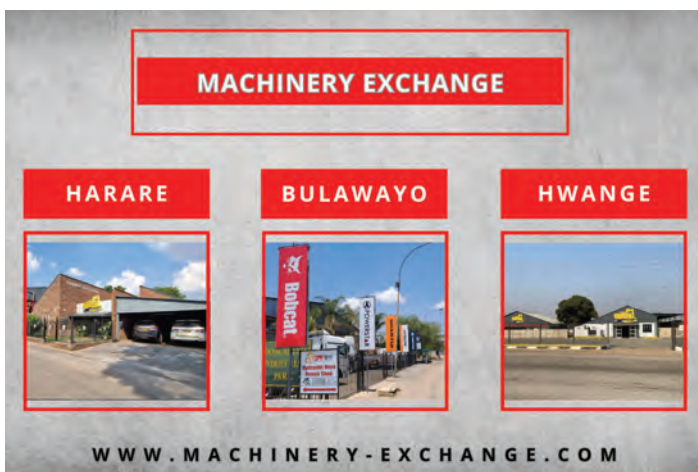
Machinery Exchange



About us

Machinery Exchange was founded in 1954 as a Private Limited company, with the purpose of trading after-market parts to the earthmoving industry.

From humble beginnings, the company is now based in a 9 000 m² facility with more than 200 staff, branches in Bulawayo and Hwange, and over 400+ sold or rented equipment in the field.



Distributorships

Machinery Exchange has secured the distributorship of the following reputable earthmoving and power generation brands for Zimbabwe, which customers can buy or rent: Shantui, Hitachi, Wirtgen, Rokbak and Bobcat.



Divisions

- Customer Support Division:

This division is responsible for the after-sales support of all the equipment sold and rented in the field. It prides itself on its commitment to supporting its customers with a comprehensive after-sales infrastructure, designed to improve equipment uptime while lowering the total cost of ownership.

- Engineering Division:

With its team of highly experienced boilermakers, machinists, welders and undercarriage technicians, Machinery Exchange can repair and recondition buckets, h-frames, swing levers, z-bars and associated linkages, as well as machining of pins, bushes and line boring – both in the shop and on site. Furthermore, with its 200-ton track press, the Engineering Division offers rehabilitation and reconditioning of all undercarriage components and field service repairs.

- Sales & Rental Division:

In addition to the aforementioned brands, the Sales & Rental Division provides unrivalled after-sales support services both in-house and on-site. Be it short-term support or long-term rentals, our machines are ready to perform in the toughest conditions.

Michael Feldon

DoseTech Fire

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Full Name: Michael Grant Feldon

Position: MD of DoseTech Fire

Main Activity of the Company: Supply and support of the latest firefighting equipment and technology

Date and Place of Birth: January 29, 1963, Johannesburg

First Job: Apprentice fitter/machinist

Career History Prior to Current

Position: I began my career as an apprentice fitter at AECL, followed by a role as an apprentice draughtsperson at the same company. I then joined Spirax Sarco as a junior salesperson and was later promoted to senior salesperson. After that, I opened Armstrong Steam's Cape Town office and subsequently merged the business with my father's flow measurement and chemical dosing company, DoseTech. Together with my father, we established and developed DoseTech Fire in Cape Town

Size of First Pay Packet: R220 a week

First Job with Present Group: Director

Number of People under Your Leadership: 8

Management Style: Participative

Personal Best

Achievement: My family and our business

Professional Best

Achievement: Securing the FireDos foam proportioning agency in 1999 and adding Akron Brass and SA Fire Italy to our scope

Person Who Has Had the Biggest

Influence on Your Life: My father, Wally Feldon.

Person Who Has Had the Biggest

Influence on Your Career: Rod Mountain, owner of Armstrong Steam, and Heinrich David, founder of FireDos GmbH

Person You Would Most Like to Meet:

Sir Peter Blake, a legendary New Zealand sailor and racing icon, widely regarded as one of the greatest yachtsmen in the history of the sport

Philosophy of Life: Work hard, play hard

Biggest Ever Opportunity: Securing FireDos products and the fire protection industry

Biggest Ever Motivation: Being reminded most days by my high school teachers that I would amount to nothing



Hope for the Future: An end to crime and high-level corruption and to see South Africa's true potential for all our people

Favourite Reading: Books by Deon Meyer

Favourite TV Programme: Watching the Springboks and travel shows

Favourite Food/Drink: A good old braai with family and friends/red wine

Favourite Music: Cat Stevens, U2 and Pink Floyd

Favourite Sport: Sailing and golf (when I get a chance)

Favourite Website: www.firedos.de

Hobbies: I enjoy visiting food markets and cooking, and I have recently taken up oil painting lessons

Car: Audi Q5

Pets: None since my best friend – Storm, a Labrador – had to leave us

Miscellaneous Dislikes: Dishonesty and arriving late for meetings

Favourite Foreign Company: FireDos

Life Partner: Sherry (née Ollis) for 32 years

Children: Michaela, 25

Clubs: Royal Cape and Langebaan Yacht clubs, as well as Virgin Active

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