Europe €10, Ghana C1.8, Kenya Ksh200, Nigeria N330, South Africa R25, UK £7, USA $12

FINANCE
How local knowledge is critical for bridging trade finance gap P15

WAREHOUSING
Five ways better warehousing can make a difference to growth P20

POWER
Genset market remained positive in 2019 P28

CONSTRUCTION
Machinery highlights from Conexpo 2020 P48

African Review

APRIL 2020

of BUSINESS and TECHNOLOGY

P22
MOZAMBIQUE LNG
Can the gas-rich country turn around its fortunes?

P16
GULF INVESTMENT
GCC countries expand trade links with Africa

P19
MANUFACTURING BOOST
Enugu-based ANAMMCO creates jobs

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Cover picture: An artist's impression of the Coral FLNG project in Mozambique.
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Editor's Note

Welcome to the April issue. Our cover story this month focuses on Mozambique LNG and its potential to transform the country's economy and bring enormous benefits to its people. This is possible so long as ministers follow the World Bank's recommendations, and implement the appropriate infrastructure investment policies to ensure revenue from the gas reserves goes towards those that matter the most, page 24.

Thanks to economist Moin Siddiqi, we have special coverage on Arabian Gulf countries investing and expanding their trade links into Africa as they pursue their economic diversification agenda, page 18.

Over in the power section, we look at the latest genset engines, and the countries where the large-scale power projects are driving demand in the gensets market, page 30.

Elsewhere in the issue, we look at the new excavators available in Africa, page 50, and select a few highlights from Conexpo-Con/Agg – North America's largest construction machinery show – in Las Vegas last month, on page 54.

Finally, since the tragic outbreak of Covid-19, many events have either been postponed or cancelled. Please see our updated calendar on page 12, and check our website for the latest news – www.africanreview.com

On that note, I'd like to say to all our readers keep healthy and safe during this time.

Samantha Payne, *Editor*

Contents

Azelio inaugurates renewable energy storage at Noor Ouarzazte solar complex

Azelio has completed the installation of its renewable energy storage with 24-hour clean power production at Noor Ouarzazate solar complex in Morocco.

Image Credit: Azelio

The renewable energy storage at the Noor Ouarzazte solar complex in Morocco.

A well-attended inauguration ceremony of Azelio's renewable energy storage took place at the Noor Ouarzazate solar complex in Morocco on 5 March together with the Moroccan Agency for Sustainable Energy (Masen).

There were government representatives from several countries, the World Bank, IFC, Ambassadors, among others. The installation is the partial result of a joint technical and business development agreement between Azelio and Masen. A verification of the storage will be initiated during the first quarter of 2020, with commercial installations later the same year, followed by volume production in 2021.

Azelio has developed a solution to efficiently store renewable energy from solar and wind power and make it available all hours of the day as electricity and heat. The system uses recycled aluminum as a storage medium, containing no rare minerals and suffers no reduced capacity over time. The system is scalable from 100 kW to 100 MW and by that fills a void in the market towards the goal of universal access to affordable and sustainable energy.

"Our collaboration with Azelio is a good example of Masen's R&D strategy to evaluate, co-develop and promote disruptive solutions. We are proud of Azelio's energy storage represented on Noor Ouarzazate solar complex", said Mustapha Bakkoury, CEO of Masen.

"We have an ambitious development and commercialisation of our technology, where Masen's profound experience in renewable energy is of great value. Being present on one of the world's leading arenas for renewable energy marks a big step for Azelio and is the platform from where we take the next step in becoming a global industrial player", said Jonas Eklind, CEO of Azelio.

LEADERSHIP ROLES FOR WOMEN AT CANON

Canon has announced that more than half of Canon Central and North Africa's leadership positions are filled by women. It said it keeps women in managerial posts with flexible working arrangements, training programmes, helping to create a more level playing field and empower females.

Canon also encourages women to return to the workforce and achieve success after a career break. For instance, it introduced extended maternity leave and flexible working hours to provide more career opportunities for women in the technology and imaging industry.

Mai Youssef, corporate communications and marketing services director, Canon Middle East, said, "The survey findings are extremely encouraging as we can see there is an overall positive sentiment to women empowerment in the workplace in Central and North Africa, with the region seeing an improvement in terms of policies and gender parity in the last five to ten years."

LIBYAN BANK CHOOSES TEMENOS FOR DIGITAL

Temenos, the banking software company, has announced that Assaray Trade and Investment Bank (ATIB) has selected Temenos Infinity and Temenos Transact to power its digital transformation.

The Temenos cloud-native, cloud-agnostic banking platform will enable the bank to quickly launch new digital products for retail and corporate banking and improve the customer experience.

ATIB has been a fixture in Libyan banking for more than 20 years. It is recognised as one of the most advanced banks in the country, delivering financial services to 50,000 customers nationwide. ATIB selected Temenos' technologically advanced, functionally rich platform to replace its legacy core banking system and accelerate its digital transformation. Temenos upgradeable software will deliver operational efficiencies and improve ATIB's cost/income ratio.

Temenos Model Bank and Temenos Islamic Banking solution will help ATIB reduce the time taken to deploy the new digital banking platform. Temenos model bank approach brings preconfigured country-specific functionality to help ATIB meet regulatory requirements in a cost-effective way.

Farouk Laabidi, general manger, ATIB, said, "Temenos' track record for delivering class-leading software and its extensive presence in the Middle East made it the obvious partner for this ambitious project. Deploying Temenos' technology will allow us to benefit from rapid ROI and reap the benefits of remarkable efficiency gains and cost savings. Temenos technology will help us innovate at speed, and deliver digital banking products and better experiences to our customers. This partnership marks a step forward in our journey towards digitalisation and, most importantly, means we are better able to meet the needs of our customers."

BRIEFS

Egyptian start-up secures US$40mn

Image Credit: Adobe Stock

Healthcare start-up Vezeeta receives boost from Gulf Capital.

Gulf Capital raised US$40mn in a Series D funding round for Egyptian digital healthcare start-up, Vezeeta, according to media reports.
"Building a global healthcare powerhouse requires a strong investor base to support and drive continuous innovation and disruptive solutions. Gulf Capital provides us the perfect synergy for our future plans to diversify and expand our product portfolio on a global scale," said Amir Barsoum, Founder and CEO of Vezeeta.

Orange Money comes to Morocco

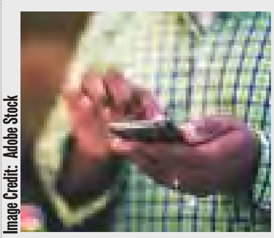

Image Credit: Adobe Stock

Morocco becomes the latest country to offer Orange Money.

Orange Morocco announced the launch of Orange Money in the kingdom after securing approval last summer from the Bank Al Maghrib. This service will allow Moroccans to make mobile payments and transfer money using their phones.
Morocco also becomes the 18th country in the Africa and Middle East region of Orange to offer the Orange Money solution. it offers every mobile user, regardless of their telecom operator, the option of a mobile wallet backed by their phone.

The 5.5 tonne Volvo EC55D gives you more muscle, and more hustle, for longer. A breakout force of 42 kN and superior traction are combined with responsive controls that deliver exactly what the operator intends thanks to a superbly optimized hydraulic system. The arm tear-out force of 29 kN is perfectly matched to the Volvo Tier 3/Stage III 36.5 kW diesel engine, providing high performance and superior fuel efficiency. The spacious cab features all-round visibility and a quiet working environment with improved air conditioning, while the clever wrap-around protective shape of the counterweight enables safer operation in narrower job sites. Talk to your local Volvo dealership today to find out more.

volvoce.com

Volvo Construction Equipment
Building Tomorrow

Liquid Telecom launches superfast fibre broadband in Kigali

Image Credit: Liquid Telecom

Alexis Kabeja, CEO of Liquid Telecom Rwanda.

Liquid Telecom Rwanda, part of the leading pan-African telecoms group Liquid Telecom, has launched Liquid Home, an affordable superfast broadband. This announcement coincides with the company's re-brand of its retail arm from Hai to Liquid Home.

"With Liquid Home, users get unlimited high-speed internet, significant price reductions and free installation across all of our packages. This includes feature-rich options for the most demanding consumers. By making it easy for more homes to connect to the fastest and most reliable broadband network, Liquid Telecom has set a new benchmark for affordable internet connectivity aligned to the government's digital agenda," said Alexis Kabeja, CEO of Liquid Telecom in Rwanda.

With Liquid Home, people living in selected residential areas across the city of Kigali will benefit from:

affordable 24/7 internet connectivity across Liquid Telecom's fiber network, unlimited data across all packages with free fiber installation, a choice of download speeds of up to 150 Mbps, crystal clear voice calling on Liquid Telecom's fiber infrastructure seamlessly linking with other networks, flexible online payment options with prices starting from just 27,999 Rwf (US$29.70) a month, and high quality of service with a dedicated online portal and local customer support team.

"Rwanda is one of the fastest-growing African countries in ICT with more of our citizens than ever now using the internet. Liquid Telecom is playing a major role in driving internet penetration and bridging the digital divide by offering faster, reliable and affordable broadband internet connectivity to more people as the Government of Rwanda's continues to push the ICT agenda," said Sam Nkusi, chairman, Liquid Telecom East Africa.

2ND CALL FOR BUSINESS CHALLENGE IN KENYA

The UK has launched the second round of a business innovation challenge fund that will see an additional five promising businesses receive grant funding and technical assistance of up to KES 13,000,000 (US$125,888) each. The call for proposals will seek to support initiatives that are innovative, sustainable and with the potential to stimulate job creation. The funding made available through the Kenya Catalytic Jobs Fund, will focus on three thematic areas: agriculture and manufacturing; the informal sector; and people in marginalised groups and areas.

The first call for proposals was launched in April 2019 and saw five successful businesses receive awards, namely, TakaTaka Solutions, Ten Senses Africa, Lynk Jobs Limited, Savanna Circuit Technologies and BuildHer.

BOLLORÉ OPENS NEW SUBSIDIARY IN ETHIOPIA

Bolloré Transport & Logistics Ethiopia has officially opened its doors for business.

The new subsidiary was created as part of a joint venture between Bolloré Transport & Logistics and the Ethiopian company CLS Logistics. It is set to offer Ethiopia a wider world of capabilities and solutions to support industry, business growth and to power greater development in regional logistics.

"We have been the exclusive agent of Bolloré Transport & Logistics in Ethiopia since 2008 and through this partnership we have successfully completed a number of projects. The joint venture will enable us to provide local industry with more infrastructure, technologies and equipment," said Teodros Abraham, founder and CEO of CLS Logistics, who has been appointed as chairman of the board of directors of Bolloré Transport & Logistics Ethiopia.

Image Credit: Bolloré Transport & Logistics

Bolloré Transport & Logistics opens new subsidiary in Ethiopia.

"Bolloré Transport & Logistics shares a common vision with Ethiopia. The logistics sector, a pillar of industrial development, needs to be improved. With this new agency, the company is boosting its presence in East Africa while contributing to the logistics transformation in Ethiopia," said Patrick Gerenthon, director of the Horn of Africa Cluster at Bolloré Transport & Logistics.

With its 120 Ethiopian employees, Bolloré Transport & Logistics Ethiopia, which started operating on 21 February, has an air-freight operations site at Addis Ababa Bole Airport, 4,000m^2 of warehouses in Kaliti and agencies in Hawassa and Bole Lemi.

BRIEFS

COVID-19: Ethiopia & Djibouti update

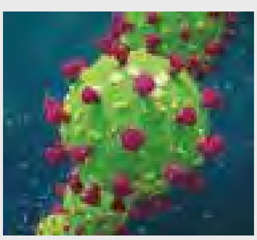

Image Credit: Adobe Stock

Ethiopia and Djibouti shut down flight operations.

Due to additional mobility restrictions for COVID-19, Ethiopian Airlines flights to Milan Malpensa have been suspended until further notice. Customers willing to do so can be re-booked free of charge to/from Rome Fiumicino, where operations continue on a regular basis.

The Djibouti International Airport was closed on 18 March. All passenger traffic will be shut down until a date to be set, while freight traffic will remain active to prevent the spread of COVID-19.

Renewables boost for Tanzania

Image Credit: Adobe Stock

Jaza will be expanding its services into new areas in Tanzania.

Jaza, an Atlantic Canadian start-up, providing sustainable and affordable energy in Tanzania, has secured US$1.7mn in seed funding to develop its service into new regions, according to latest media reports. "Jaza's mission is to provide an affordable, high-value service for homes in rural Tanzania, powering light and small appliances for a fraction of what a typical off-grid household spends on kerosene for lighting," said Jaza's CEO, Jeff Schnurr in a release.

Cummins Zambia commissions new coolant plant in Kitwe

Cummins Zambia has completed a coolant plant project in Kitwe on the Copperbelt that received approval from the Zambia Environmental Management Agency (ZEMA) in 2019. The 'plug-and-play' plant will produce two types of coolant, namely ES compleat Hybrid (Blue) and ES compleat OAT (Red). PLC-driven and automated, the plant has the capability to carry out batch correction. It has a blending capacity of around 1,600 litres over two hours, including quality testing. The system has two 2,500 litre product tanks for product storage.

Image Credit: Cummins Zambia

Cummins Zambia has completed a coolant plant project in Kitwe.

"The ZEMA approval was necessary to ensure that the coolant plant had no impact on the environment or the surrounding community," explained ohn Kambing'a, Cummins Aftermarket leader (Zambia) Kambing'a. This is also in line with Cummins Inc.'s PLANET 2050 strategy, focused on addressing climate change and air emissions, using natural resources in the most sustainable way, and improving communities.

To date, Cummins Zambia's main coolant customer has been First Quantum Minerals (FQM), a major copper producer in the region. The new plant will allow Cummins Zambia to supply coolant to other customers in different packages, according to their specific requirements.

Meshach Kwegyir-Aggrey, GM Cummins Zambia, said, "With the new coolant plant at Cummins Zambia, what we have succeeded in doing is to basically halt the importation of water, which forms more than 90 per cent of the coolant product, from South Africa into Zambia. This will also assist us to serve diverse markets, with volumes ranging from five litres to 1,000 litres. We will also increase our footprint in the Zambian coolant market and offer more value to customers."

Looking to the future, Kwegyir-Aggrey pointed out that the new coolant plant will assist Cummins Zambia in penetrating the key automotive market. "It will help us leverage out other filtration products as a single package. Coolant is key in the operation of any machine, and the quality of the coolant matters. We offer superior-quality coolant that will help customers get real value out of their machines. Using the Cummins Fleetguard product range will guarantee world-class performance by unleashing the power of Cummins," he concluded.

IMF CONCLUDES VISIT TO NAMIBIA

An International Monetary Fund (IMF) team led by Geremia Palomba, IMF mission chief for Namibia, visited Windhoek in February.

Palomba said in a statement that the economy is projected to return to positive growth this year, although downside risks include COVID-19 virus risks and fiscal slippages. He highlighted the need to continue fiscal adjustment policies to stablise public debt and reforms to support growth and job creation. He said, "It is important to improve the efficiency of the economy, including by streamlining business regulations, strengthening market operations of key public enterprises, removing obstacles that contribute to high electricity and transportation costs, and better align wage dynamics in the public sector and in the economy to productivity trends. Over time, it is important to remove obstacles to exports and address shortages of skilled workers." He added that the financial sector remains sound, and financial reforms are advancing.

WORLEY APPOINTED ENGINEERING CONTRACTOR PARTNER

Worley has been appointed by Group Technology, a division of Sasol South Africa, as its engineering contractor partner.

The five-year agreement will see Worley providing engineering, procurement and construction services for Sasol's capital projects portfolio, including efficiency improvement and environmental initiatives, from front-end engineering design to project completion.

Worley's Energy & Chemicals Services business in South Africa, jointly owned by Worley and Matasis Investments, offers global expertise to help energy, chemicals and power customers develop, build and maintain technically complex facilities. The company's approach to project execution focuses on innovation and best practices, and includes systems and tools to drive safety and efficiency throughout all phases of project delivery.

Frans Oosthuizen, Worley's Southern Africa senior business development manager for E&C Services, said that the partnership will enable Worley to make a significant impact on Sasol's project execution performance in the country and empower the business to help shape and improve the engineering and construction landscape in South Africa.

As Sasol's engineering contractor partner, Worley will not only be closely collaborating with local companies in the South African design and construction industry, but will also provide training and upskilling for young graduates and artisans.

"Worley will play an important role in developing talent in the local market. This includes working with our various construction and supplier partners to develop young engineering and artisan talent to advance their career opportunities and supply the industry with needed skills," said Oosthuizen.

BRIEFS

Image Credit: Adobe Stock

Businesses supported by Endeavor South Afria have created many jobs.

Entrepreneurship success

Between 2017 and 2019, 26 entrepreneurs supported by Endeavor South Africa collectively created over 4,650 additional jobs, with a 29 per cent annual growth in headcount over the past three years. At the end of 2019, all the businesses combined employed a total of 11,670 people. The companies in the Endeavor South Africa portfolio generated an impressive R11.5bn (US$663mn) of revenue in the period from 2017 to 2019, with R4.7bn (US$271mn) amassed in 2019 alone.

Image Credit: Shutterstock

Southern African countries are performing well in renewable energy.

Advancing in renewables

Southern African countries are performing disproportionately well in terms of their renewable energy fuel mix, with tthe majority generating close to, if not 100 per cent renewable energy, according to analysis by Business Electricity Prices. The Democratic Republic of Congo generates 100 per cent of its energy from renewables and Zimbabwe, Zambia, Namibia and Mozambique all generate a fuel mix of at least 50 per cent renewable energy,

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VOLVO PENTA

Welaptega, STAT-Marine partnership wins Nigerian FPSO contract

Leading underwater inspection services provider Welaptega, has delivered on contracts to support two energy supermajors in West Africa, after establishing a strategic partnership with engineering and training organisation STAT-Marine Nigeria.
The awards saw the Ashtead Technology-owned business inspect the mooring systems on two floating production storage and offloading (FPSO) vessels for ExxonMobil and ENI in Nigerian waters.

Welaptega undertook inspection services on ENI's Abo FPSO, on the western edge of the Niger Delta, at water depths of 550-1,100m. It also inspected moorings on ExxonMobil's Usan FPSO in the Gulf of Guinea at depths of up to 850m.

Image Credit: Welaptega

Welaptega has completed inspections of two FPSOs offshore Nigeria.

The company stated that using its advanced chain measurement system (CMS) technology, Welaptega chain inspections can be completed up to 40 per cent faster when compared to traditional methods. By using optical systems to take three separate measurements, chain diameter measurements can be assessed from video footage instead of requiring equipment to physically grip the chain.

Tyler de Gier, general manager at Welaptega, said, "This partnership is part of our ambitious growth strategy and the completion of two recent projects in the region highlights the importance of a local presence backed up by international capability for our clients.

"Nigeria is currently the largest oil producer in Africa, and our technology is ideally-placed to service assets and monitor corrosion caused by the warm Atlantic Ocean waters. Our partnership with STAT-Marine will ensure reliable and on-time project delivery for clients in the region."

Ronye Egborge, managing director of STAT-Marine Nigeria Ltd, said, "STAT-Marine is known for excellence in subsea engineering and technical consultancy services.
"The partnership with Welaptega provides an opportunity for us to increase local expertise in underwater inspection of mooring systems and to grow our business in Nigeria. It is a win-win for both entities."

WEST AFRICAN RESOURCES PROCESSES FIRST ORE AT SANBRADO

Gold producer West African Resources has announced that it has completed all construction activities and has started processing ore through the milling and CIL circuits its Sanbrado Gold Project, Burkina Faso.

Richard Hyde, West African executive chairman, commented, "This is a major milestone for West African Resources and testament to the quality of our team and contractors. Commissioning activities will continue over the next four weeks with the first gold pour on track for early Q2 2020."

On Saturday 7 March, 2020, West African Resources introduced ore to the milling and CIL circuits at Sanbrado Gold Project. Construction activities have now been completed on all areas of the process plant and tailings storage facility. All four heavy fuel oil generators have been commissioned in the power station and are now operational. The desorption and gold room circuits are undergoing commissioning in preparation for a maiden gold pour within the next four weeks.

GHANA SEEKS AFDB'S INVESTMENT

The African Development Bank's (AfDB) support for Ghana has boosted its government's efforts to consolidate the economy, according to the country's vice-president Mahamudu Bawumia.

Bawumia, welcoming a team of executive directors and senior officials of the bank on an official visit, cited various Bank-supported projects, especially in the areas of infrastructure, agriculture and technical innovation, as examples of interventions that have helped to boost the government's efforts to consolidate the economy.

The bank delegation, led by Bright Okogu, executive director for Nigeria and São Tomé & Príncipe, will meet local authorities, the private sector, civil society and other development collaborators. Bawumia said that Ghana's economy has begun to show great potential following three years of bold fiscal policy reforms, which included the adoption of a law capping fiscal deficit at five per cent of the gross domestic product as part of measures to enhance debt sustainability and win investor confidence.

Ghana is looking to the bank for investment in integrated aluminium industry, using the country's large bauxite deposit as raw materials. The bank should consider supporting Ghana to tackle climate change in line with the Group's crosscutting interventions, the vice-president said.

The executive directors commended the country for its newly constructed Terminal 3 facility at the Kotoka International Airport, which was partly financed by the bank.

Major financing for development to the country includes mobilising a seven-year US$600mn syndicated receivables-backed loan for Ghana Cocoa Board to improve productivity and domestic value addition; approval of the first phase of the eastern corridor road project estimated at US$102mn; and an urban transport project entailing a three-tier interchange.

BRIEFS

Image Credit: Lekela

Since last December, PETN has provided 50MW to the Senelec grid.

PETN wind farm inaugurated

Parc Eolien Taiba N'Diaye (PETN) was inaugurated by the Senegalese Head of State Macky Sall. The project, carried out by Lekela, the renewable power generation company that delivers utility-scale projects across Africa, is a major achievement for Senelec, Senegal's national electricity company. PETN will provide more than 450,000 MWh of electricity per year to more than two million people.

Image Credit: Kateryna Babaieva/Pexels

Atinkou will provide affordable power to thousands of homes and businesses.

IFC finances gas-fired plant in Côte d'Ivoire

IFC, a member of the World Bank Group, has announced the signing of a US$343mn financing package for a new gas fired power project in Côte d'Ivoire. The new plant – called Atinkou – will boost power generation and supply in a country, where, as of 2017, only 66 per cent of the population has access to electricity. By using highly efficient combined-cycle turbine technology, the plant will substantially contribute to reducing Côte d'Ivoire's generation costs and GHG emissions, in part, through the displacement of older generation units.

"Africa is more than just a continent producing security threats or unregulated migration that must be contained."

UHURU KENYATTA
President of Kenya

"The Ecobank Fintech challenge and fellowship have been improved upon to create even additional value for Ecobank and the Fintechs. We took feedback from the past editions and one of the major innovations this year is the opportunity for shortlisted Fintechs to access our APIs through our Pan African Sandbox."

DJIBA DIALLO
Ecobank senior fintech advisor

"Our goal is not to match our peers in the developed countries, but to surpass them...The African Development Bank is ready to walk the talk and lead the efforts for the digital transformation of the continent."

STEFAN NALLETAMBY
Acting vice president for the private sector, infrastructure and industrialisation complex

"It is estimated that emerging markets need an annual US$2.5 trillion investment to meet the SDG targets by 2030. A bulk of this investment will need to be focused on Africa and the Middle East, which is home to some of the key sustainable development opportunities. The financing gap in Arab countries has been estimated to be more than US$100bn annually, whilst in Africa this figure stands between US$500bn and US$1.2trn. For the goals to be met by 2030, investors and banks need to coordinate and connect capital to promote sustainable development."

SUNIL KAUSHAL
Regional CEO for Standard Chartered Bank, Africa and the Middle East

"The establishment of SAPZs in Nigeria will boost the structural transformation of the economy by providing opportunities for public and private sector investment in agriculture. When fully operational, the SAPZs will enhance national food and nutritional security, optimize the export of value-added agricultural commodities and improve the quality of livelihoods through wealth creation for rural farming communities."

EBRIMA FAAL
Senior Director for the African Development Bank in Nigeria

"As COVID-19 continues its rapid spread, WHO would like to send a clear message to malaria-affected countries in Africa. Do not scale back your planned malaria prevention, diagnostic and treatment activities. If someone living in a place with malaria develops a fever, he or she should seek diagnosis and care as soon as possible."

DR PEDRO ALONSO
Director, WHO Global Malaria Programme

"I am happy that by the time our plant is fully commissioned, the country will become self-sufficient in fertiliser production and even have the capacity to export the products to other African countries. Right now, farmers are forced to utilise whatever fertiliser that is available as they have no choice, but we need to know that the fertiliser that will work in one state may not be suitable in another state, as they may not have the same soil type and composition. The same fertiliser you use for sorghum may not be the fertiliser you will use for sugar cane."

DEVAKUMAR EDWIN
Group executive director, strategy, portfolio development and capital projects, Dangote Industries

New dates fixed for events in 2020 due to Covid-19

JUNE

3 - 5
WAMPEX
Accra, Ghana
www.wampexwestafrica.com

30 - 1 July
SECUREX WEST AFRICA
Lagos, Nigeria
www.securexwestafrica.com

30 - 3 July (no change)
AEF
Lisbon, Portugal
www.africa-energy-forum.com

JULY

9 - 11 July
WEST AFRICA WATER EXPO
Lagos, Nigeria
www.westafricawaterexpo.com

AUGUST

13 - 14
SEAMLESS AFRICA
Johannesburg, South Africa
www.terrapinn.com/exhibition/seamless-africa/index

20 - 21
POWER & ELECTRICITY WORLD AFRICA
Johannesburg, South Africa
www.miningindaba.com

SEPTEMBER

7 - 11
ELECTRA MINING
Johannesburg, South Africa
www.electramining.co.za

24 - 30
IAA
Hannover, Germany
www.iaa.de/en/cv

7 - 11
IFAT 2020
Munich, Germany
www.ifat.de/en/

22 - 24
NIGERIA ENERGY
Lagos, Nigeria
www.nigeria-energy.com

OCTOBER

21 - 25
SAMOTER
Verona, Italy
www.samoter.it/it

NOVEMBER

24 - 26
AFRICAN UTILITY WEEK AND POWERGEN AFRICA
Cape Town, South Africa
www.african-utility-week.com

African Utility Week and Powergen Africa rescheduled to November

Following the South African Government's announcement of a national state of disaster and subsequent ban on public gatherings of more than 100 people, in response to the COVID-19 pandemic, Clarion Events Africa (formerly Spintelligent) is rescheduling African Utility Week and POWERGEN Africa. The event, which was due to take place from 12-14 May, will now run from 24- 26 November.

The venue – CTICC in Cape Town, South Africa – remains unchanged.

African Utility Week and POWERGEN Africa attracts more than 10,000 people from more than 90 countries and is the largest energy show in Africa. 2020 marks its 20th anniversary.

"The health and safety of our exhibitors, visitors, employees and the wider public is of paramount importance to us," said managing director David Ashdown.

"Following the government's announcement, we have worked with industry to reschedule African Utility Week and POWERGEN Africa to November, in order to minimise potential health risks to those connected to the event.

"It is expected that the current challenges presented by the Coronavirus will slow down significantly within the next few months, which means the new November date for African Utility Week and POWERGEN Africa will allow us to deliver the most meaningful event in terms of maximising ROI for our exhibitors and excellent content and experiences for our visitors.

"The power sector in South Africa is facing incredibly challenging times. By committing to running the event this year, Clarion Events Africa can continue to drive energy security on the continent, support the local industry and provide business-critical market opportunities to support our exhibitors' future prosperity."

A spokesperson for South Africa's national power utility, Eskom, said, "Eskom recognises the role that this event plays in addressing the challenges facing the provision of electricity on the continent. We recognise that COVID-19 presents unprecedented challenges and are glad that a solution has been found to allow the event to continue this year. We look forward to welcoming energy stakeholders from around the world to Cape Town in November 2020."

African Utility Week and POWERGEN Africa attracts more than 10,000 people from over 90 countries.

Eskom is also the Host Utility of African Utility Week and POWERGEN Africa.

Mobile money can help Africa fulfil its potential

Africa is gearing up to become one of the great success stories of this century, with the continent set to have a larger working age population.

Image Credit: Adobe Stock

Mobile money accounts have opened up financial services to the unbanked populations in Africa.

This abundance of human capital holds huge potential to accelerate our economies and fuel business success and greater prosperity for everyone. An early indicator of these possibilities is our fintech scene. EY estimates that sub-Saharan Africa's fintech sector has grown by approximately 24 per cent annually for the past 10 years and that the number of fintech start-ups has grown eight-fold between 2008 and 2018. Yet this burgeoning fintech sector is not just a signal of future success – it's also playing a key role as an enabler of growth, in the form of mobile money. Traditional banking has bypassed the majority of Africans, not addressing their needs or making it easy for them to access finance. There are only five bank branches per 100,000 people in sub-Saharan Africa, according to World Bank data.

Make it mobile

By contrast, mobile phones are everywhere with penetration across the continent at 73 per cent. These phones provide connectivity and routes to digital services, and mobile money providers such as M-Pesa have stepped in to give Africans what traditional banks have found it difficult to deliver. We can now lay claim to nearly half of the global total of registered mobile money accounts, with nearly 400 million in total.

These accounts have brought financial services to a raft of groups who have been traditionally excluded from the system, particularly people in rural areas and women. Not only has this expanded payment options for people who might have a limited supply of cash, but it has also opened up new business models to, for example, financial services institutions who are keen to offer microloans and other forms of microfinance.

By moving people and businesses onto a formalised financial services platform, mobile money accounts create new and better quality data on how people use financial services. This creates a feedback mechanism whereby financial services organisations can garner a better understanding of traditionally underserved customers and can therefore provide them with better services.

The challenges of complexity

Yet mobile money is now pushing up against the limits of African technological and regulatory infrastructure. Our young and optimistic population is keen to drive new ideas forwards, to collaborate with people across the continent, and to do business without borders – 70 per cent of African migration takes place between African countries. They require financial services that operate on similarly open and interconnected principals.

Unfortunately, Africa is beset by complex and fragmented financial services and telecoms systems. There are a variety of different digital payment schemes, each designed to meet the specific needs of one (or more) of 55 countries operating in a variety of languages and business cultures. Many of these lack the ability to communicate or inter-operate with other systems or across borders.

The impact of this uncoordinated complexity can be clearly seen in remittances. Fees are simply too high, and they inhibit the flow of money and services across the continent, acting as a drag on business activity and innovation. A Nigerian entrepreneur looking to launch, say, a pan-African e-commerce fashion brand that draws on the best trends has to contend with these obstacles when contracting a cutting-edge designer based in Gambia.

A different approach

When it comes to financial services, African businesses and indeed people should not be restricted by where they are from. Bringing down these barriers to the flow of finance will help unleash our creativity, and it is this vision that motivated me when I developed MFS Africa. Having worked at MTN, one of the biggest telcos on the continent, I came to the conclusion that something novel was required to take on this challenge.

The idea was simple: an underlying system that would connect the vast array of different financial services and telco providers. To work at a continent-wide scale, it would need to ensure that money could flow smoothly across different regulatory regimes and markets by also carrying out vital tasks such as authentication, credit checks, and know your customer processes.

We created our platform from scratch, working with telcos and financial services organisations to ensure it met their needs and making it inter-operable so that it would not be restricted to only working with a particular system. But it isn't just the technology that needs to be adaptable to different approaches – we have also ensured that our team is, with a 70-strong (and growing) team on the ground across sub-Saharan Africa, feeding their in-depth local knowledge into our development.

With 200 million users already covered, a reach of 33 countries, and 70 partners connected, we're well on our way to fulfilling our long-term vision of connecting 400 million people across sub-Saharan Africa and beyond, through their telcos, banks, money transfer operators and other partners. Mobile money can be the engine that drives Africa's prosperity and enables us to be the home of the business successes of the 21st century, and we're excited to be taking on the challenge. ■

Dare Okoudjou,
Founder & CEO of MFS Africa

Harnessing local expertise provides answer for bridging trade finance gap


Image Credit: BACB
Susie Aliker.

Providing African companies with the finance they need requires in-country expertise and knowledge of the nuances, says Susie Aliker, CEO of BACB.

African trade continues to grab headlines, and the continent's potential was on prominent display at the UK-Africa Investment Summit in London. Indeed, trade accounts for half of the continent's GDP, according to the World Bank.

And with a strong track record of growth – expected to reach 3.9 per cent in 2020 and 4.1 per cent the following year – the continent offers unparalleled opportunities for African and international businesses.

Converting opportunities into concrete business ventures and growth is another matter, however. When it comes to trade, exporters naturally want to be paid upon shipping, and importers want to delay payment until they have the goods in their hands. Trade finance exists to form a bridge between these two conflicting desires. It is therefore the foundation upon which international trade is built.

Unfortunately, supply of trade finance does not always meet its demand. While a global problem, it is particularly pertinent in Africa – the African Development Bank's chief trade finance officer recently put the size of the region's "trade finance gap" at between US$90bn and US$120bn. Further, the ICC Banking Commission's 10th Global Survey on Trade Finance found some 17 per cent of all African trade finance requests are declined, with micro, small and medium-sized enterprises the most affected.

This leaves a huge amount of opportunity for growth on the table, but it may inhibit the success of crucial projects such as the African Continental Free Trade Area (AfCFTA). Estimates suggest that this initiative may provide a boon of some 15-20 per cent to the value of intra-African trade by 2040 – but it seems unlikely without an associated uptick in flows of trade finance to the region.

We need not be too pessimistic, however; the opportunities represented by African trade far outstrip the challenges. But it is having strong on-the-ground connections and in-country knowledge that allows for this more optimistic view. Without such expertise, compliance with the due diligence protocols required for African trade becomes almost insurmountable.

Re-building the bridge

The most significant threat to trade in Africa is one of perceived rather than actual risks. Indeed, analysis from the ICC's 10th Annual Trade Register shows African trade as relatively low-risk – exposure-weighted default rates have dropped from 0.59 per cent to 0.05 per cent and obligor-weighted default rates from 0.07 per cent to 0.01 per cent.

Yet the risk appetite of international banks has deteriorated in recent years – either because of capital constraints, or concerns and costs associated with regulatory and compliance requirements. The ICC survey adds a lack of collateral and documented history of past commercial transactions to the list of reasons for falling supply.

The approach to trade should, therefore, be one of managing risks. This requires an understanding of local business customs, which requires a banking partner that brings intimate knowledge while also understanding the exporters' needs. When it comes to Africa, local knowledge is critical.

It is for this reason that BACB works with companies in 22 of the 54 countries in Africa, with an extensive network of partner banks and a strong risk appetite supported by on-the-ground knowledge and expertise. We are one of the few banks that has such a presence, but we believe it crucial to helping local companies and their banks seize trading opportunities.

We continue to operate our representative offices in Algiers and Tripoli, and have successfully navigated significant challenges to continue working with both Libya and Sudan, providing crucial support to those nation's economies deespite wide-scale de-risking by global banks. We see a opportunity in promoting intra-African trade between north and sub-Saharan Africa, in strategic goods.

The picture is similar in West Africa: despite several international banks reducing their exposure, with some exiting completely, we have instead strengthened our commitment, completing due diligence and on-boarding of new banking partners in the region over the last year. We have seen trade loans and structured LC-based lending as crucial components of increasing liquidity in West Africa, providing local banks with the means to finance greater volumes of trade transactions.

Clearly, more than a simple presence is required. African markets are highly diverse – so much so that cookie-cutter solutions won't work. Transactions must instead be structured to fit bespoke needs. Lending against bespoke structures in challenging markets has not been a recipe likely to attract the global banks. But it is one well suited to smaller, specialist banks with local knowledge and strong niche structuring skills.

> "The most significant threat to trade in Africa is one of perceived rather than actual risks"

Distributing assets, and distributing knowledge

There is only so much risk that any bank can take on its books – which makes active engagement with other banks, brokers and insurers to distribute trade finance assets into the markets a crucial element of bank balance sheet management and, therefore, of providing the continent with the finance it needs.

Playing our part, BACB increased the volume of trade assets distributed by 89 per cent year-on-year in 2019, working with partners in the international financial markets, increasing the appetite for African credit risk and creating a stream of liquidity to the region. As part of this, we distributed trade assets from across North Africa and West Africa. ■

Africa-Gulf cooperation: New strategic partnerships

By virtue of close geographical proximity, cultural and shared religious heritage, the countries of the Gulf Cooperation Council (GCC): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE) have traded with Africans for centuries. They are among the world's 30 richest countries in terms of GDP per capita and hold one-third of global proven oil reserves.

The Arabian Gulf states are expanding trade/investment links with sub-Saharan Africa (SSA) as they pursue economic diversification plans. Forging closer ties in Africa has helped GCC-states to leverage on their geostrategic location, and achieve food security, as well as advancing their diplomatic and philanthropic goals. Africa ranks as the third growth market after Middle East and Asia for GCC-based companies.

Gulf entities have reportedly invested about US$100bn into African infrastructure projects over the past decade, while non-oil GCC-Africa trade rising whopping 700-percent since 2002. Dubai's aggregate non-oil trade (alone) with African countries reached Dh926bn (US$252.3bn) between 2011-18, according to Dubai Chamber of Commerce and Industry (DCCI).

Africa's emergent middle-class and rapid urbanisation are spurring demand for consumer products and commodities from the Gulf. In 2018, UAE trade with SSA was worth US$22bn, making it Africa's 5th largest trading partner after Europe (US$155bn), China (US$120bn), India (US$60bn) and the U.S. (US$38bn). The emirate has leveraged its superior shipping and port infrastructure to become GCC's biggest trader with Africa.

Attractive FDI destination

Africa offers ample opportunities for institutional investors and family offices as countries look to modernise their infrastructures. Power, renewables, healthcare, agriculture, transportation, logistics zones, fast-moving consumer goods and financial services are popular outlets open to Gulf investment. East Africa is "the most appealing region for non-commodity investment from the Gulf, with retail and hypermarkets, automotives, commercial banking and tourism considered essential sectors. Manufacturing in Ethiopia, leisure, retail and tourism in Kenya and Mozambique and education in Uganda "were also popular with Gulf investors," DCCI.

The United Nations Conference on Trade and Development (UNCTAD) reported investment worth US$6,060mn and US$5,747mn, respectively, from Saudi Arabia and UAE into African greenfield projects during 2017-18. The UAE is also among the top 10 source countries for foreign direct

Qatar is one of the many Gulf countries which has traded with African nations over the years.

investment (FDI) in SSA. "Middle Eastern investors were especially strong in real estate, hospitality and construction, financial services and retail," notes Ernst & Young.

Dubai serves as a major trade hub for some 12,000 African companies seeking growth opportunities and easy access to expand their footprint in Gulf, Asia, and Europe. African-owned businesses with global headquarters in UAE cite the ease of travel, access to capital and more conducive visa policies as primary motivators. The World Bank rated UAE 16th out of 190 countries on the ease of doing business. The country also ranks among the top 20 for global service business, according to A.T. Kearney Consultancy.

> "We see scope for increased engagement by Middle Eastern countries in major sectors including agriculture"
>
> STANDARD CHARTERED BANK

Achieving food security is a major priority for GCC states, which import between 80 and 90 per cent of food requirements. Since 2008, GCC-members (lacking in water and arable land) have signed numerous strategic agreements with Sudan, Mali, Mozambique, Tanzania and Mauritania. These countries provide the GCC with crops in exchange for funding. Saudi Arabia is the top investor in the agriculture sector – its current investments in Sudan exceed US$12bn, according to Saudi sources.

Private net inflows

The continent's private equity (PE) activity is scaling up with a total value of US$19.5bn being raised between 2013 and first-half 2019, according to African Private Equity and Venture Capital Association (AVCA). Gulf PE investment in Africa is a niche play, dominated by a handful of funds such as Abu Dhabi's Waha Capital, Kuwait's Global Investment House and Saudi-based Kingdom Africa Management. Co-investments with international PE firms, purchases of PE businesses, and direct buyouts or minority share acquisition represent the most significant modes of entry for Gulf investors in SSA.

Africa is home to a quarter of the world's Muslim population, which places Islamic finance industry in a strong position to meet demand for sustainable development across the region. Sukuk (Islamic bonds) fits well with infrastructure projects that generate cash-flows to cover periodic payments – with investors reaping profits or rents in accordance with proportional ownership in tangible assets but not coupon interest rates. Sukuk issuance enables African issuers to diversify and tap Gulf's huge investor base – alternative to medium or long-term bank loans to finance key projects.

Global sukuk issuance reached US$115bn in 2019, of which the GCC-bloc accounted for US$47.6bn, according to S&P Global Ratings. Islamic finance in Africa, albeit in early stages, but potential is vast given demographic profile. In recent years, sovereign Sukuk issuances were reported in Côte d'Ivoire, Gambia, Ghana, Kenya, Niger, Nigeria, Senegal, South Africa, Sudan and Togo.

Migrant labour networks are also a vital aspect of Gulf-Africa economic ties. The Middle East is the second largest region of destination for African migrant

The GCC Region in perspective 2019

	GDP US$bn	Pop Mn	Per capita US$mn*	Exports US$bn	Imports US$bn	Official reserves/ US$bn	FDI outward stock~ 2018 US$mn	Oil output mn barrels per day	Proven oil reserves Bn barrels
Member states									
Saudi Arabia #	750	34.1	55,650	284.2	128.9	558.2	105,656	9.78	297.7
United Arab Emirates	411	10.1	75,300	343.0	246.0	129.5	139,529	3.08	97.8
Qatar	172	2.8	124,130	80.2	33.9	44.3	56,406	2.00	25.2
Kuwait	142	4.7	83,390	64.6	32.5	39.7	32,852	2.68	101.5
Oman	77	4.8	41,230	39.9	24.2	17.6	10,876	1.00	5.4
Bahrain	38	1.6	44,620	17.1	18.0	2.0	19,344	0.2	nil
GCC Total	**1,590**	**58.1**	**70,720 >**	**829.0**	**483.5**	**791.3**	**364,663**	**18.56**	**527.6**

**Purchasing power parity (PPP); / Exclude foreign assets of Sovereign Wealth Funds (SWFs); ~ direct investment abroad; # Saudi Arabia is the world's 19th largest economy; > Regional average higher than Switzerland and USA*

Sources: World Bank, IMF, UNCTAD World Investment Report, OPEC and BP database

Estimated portfolio asset value of GCC-states' SWFs.

Abu Dhabi Investment Authority (US$875bn); Saudi Arabian Monetary Agency (SAMA) (US$500bn-plus); Kuwait Investment Authority (US$412bn); Qatar Investment Authority (US$335bn); Investment Corp. of Dubai (US$239.4bn).*

**SAMA assets consist mostly of surplus Petro-dollars controlled by the central bank.*

workers (after Europe) and remittances flows are a critical source of income for home countries. The UAE was the second highest remittance sending country in 2017, followed by Saudi Arabia (World Bank).

Conglomerates at the forefront

Gulf states' expertise in infrastructure building make them especially attractive to African countries trying to achieve structural transformation through growth-enhancing investments. GCC infrastructure financing has traditionally focused on Arab-dominated North Africa and few SSA countries. "This is shifting as Gulf firms broaden their involvement to parts of southern and eastern Africa," wrote The Economist Intelligence Unit.

Arab investors have predominantly targeted telecoms and ports and are now investing in power and extractive industries as well as consumer-driven sectors such as retail (specifically, e-commerce), Islamic banking and food processing. "We see scope for increased engagement by Middle Eastern countries in major sectors including agriculture, infrastructure and finance in SSA," noted Standard Chartered. Thus, SSA is a growing region for strategic investors seeking portfolio diversification and access sectors with growth potential.

A range of conglomerates operates across Africa, notably UAE's DP World in port infrastructure (Somalia, Senegal, Mozambique and inland logistics facilities in Mali and Rwanda). In March 2018, Qatar and Sudan signed a US$4bn deal to manage a Red Sea port jointly. Gulf contractors are also bringing their expertise led by Saudi Binladin Group (construction of Dakar airport, Senegal). Kuwait logistics co. Agility and UAE-based retailer Lulu Group have build storage facilities and logistics centres in Ghana, Mozambique, Côte d'Ivoire and Nigeria.

ACWA Power (Saudi Arabia) is developing three energy projects with roughly 300 and 150 megawatts, respectively, of coal and solar power plants in South Africa. In extractive sector, Emirates Global Aluminium is developing huge bauxite mine and export facilities in Guinea and Dubai Aluminium Co owns a smelter in Cameron. The Oryx Gas To Liquid (GTL) project is a partnership between South African energy giant SASOL and Qatar Petroleum. The UAE government-owned telecoms provider Etisalat operates in nine African countries. It has made direct investments in local providers such as Onatel, Sotelma and Gabon Telecom.

On other fronts, Qatar National Bank (GCC largest bank by assets) is a major investor in Pan-African banking group – Ecobank Transnational; Kuwait's Kharafi Group owns hotels in Gambia and South Africa; UAE's Al Futtaim Group owns Kenyan car retailer CMC Holdings; and Salalah Mills Co. (Oman) in food processing – mostly in East Africa.

In sum, GCC-Africa collaboration in terms of FDI, official funding and external trade is poised to increase in coming years. As 'developed' world becomes increasingly saturated, Gulf investors look for new opportunities in African 'frontier' markets to underpin future expansion. The expertise, plus financial capabilities of GCC states enable them to co-fund SSA's infrastructure needs, which falls between US$130bn and US$170bn a year, according to the African Development Bank. ■

By Moin Siddiqi, economist

EXPLAINING THE GULF'S GROWING BUSINESS INTEREST IN AFRICA

*__Mass land area:__ 11 million square miles – three times the size of Europe.

*__Eight of the 10 most growing economies__ in the last decade were in Africa.

*__Total population projected at 1.7 billion by 2030;__ urbanisation rate reaching 46 per cent, up from 36 per cent in 2010, hence the ongoing need for urban infrastructure development with more than half of the population living in 89 cities by 2030.

*__US$6.6 trillion annual projected consumer and business spending by 2030.__

*__By 2034, African workforce will exceed both China and India.__ Half of Africa's total population are under 25 years ago.

*__The continent holds world's largest reserves of platinum-group metals, diamonds, gold, bauxite, iron ore, phosphate, manganese, cobalt, and chromium.__

*At 20 million hectares, __SSA contains two-thirds of world's uncultivated arable lands__ and uses 2 per cent of is renewable water resources compared to 5 per cent globally. Gulf states view Africa as a way of achieving food security.

*__SSA has recorded the highest number of reforms each year since 2012,__ according to the World Bank's Doing Business 2019 report.

*__The quality of government in Africa is improving__ as countries adopt technological changes that help them curb corruption and bureaucracy.

*__The African Continental Free Trade Area__ (ACFTA) __would create a single market of more than 1 billion consumers__ with a total GDP US$2.5 trillion – making investments on the continent more attractive.

Dangote revives Nigerian truck manufacturer

Dangote Group has in the past five years invested more than N63bn (US$171.6mn) in south-east Nigeria with the purchase of 3,500 units of locally assembled Shacman trucks at Anambra Motor Manufacturing Company (ANAMMCO) in Enugu.

The ANAMMCO plant has revived the south eastern area of Nigeria.

The partnership between Dangote Group and Transit Support Services (TSS), a subsidiary of ABC Transport, started in 2016 with an initial order of 350 trucks by Dangote and, as of today, more than 3,500 trucks have been supplied to Dangote from the ANAMMCO plant. Each of the trucks costs over N18mn (US$48,600).

The Shacman range of trucks is the brand of trucks assembled under TSS.

Apart from being the single largest buyer of the locally assembled trucks, the patronage by Dangote Group has revived the ANAMMCO plant, a vehicle assembly facility commissioned in 1980 by the Federal Government in partnership with Mercedes Benz.

Speaking after a tour of the expansive ANAMMCO plant, which was filled with Dangote trucks undergoing semi knocked down (SKD) production, chairman of TSS, Frank Nneji said if not for Dangote's magnanimity and his commitment to empower local manufacturers, the ANAMMCO plant would have remained perpetually moribund.

According to Nneji the revival of ANAMMCO was made possible by Dangote's patronage "in identifying a plant that has capacity in Enugu in the south east, to give us the opportunity to produce trucks locally instead of importing them."

He said, "And of course you know what it does for us in the south east. For more than seven years, this plant was shut down. There was no activity here until we made an agreement with the Shacman group and started skeletally. But we were only to start full step production when we offered the logistics solutions to Dangote and the production facility of ANAMMCO way back in 2016. That was the time we signed agreement for the first 500 units of trucks."

Nneji, who added that 90 per cent of trucks produced at the ANAMMCO plant were for Dangote, said the patronage has also brought back Onne Port in Rivers State, which he disclosed has handled more than 3,000 containers since ANAMMCO was resuscitated.

He said, "ANAMMCO was commissioned in 1980 by the Federal Government, it used to be in collaboration with Mercedes Benz. Then after what happened to the auto industry we went down over a long period prior to the inception of the automotive policy.

"What we are saying is ANAMMCO coming back is actually as a result of this auto policy. This is one of the benefits. And the second thing is the benefit of Dangote's patronage in identifying a plant that has capacity in Enugu to give us the opportunity to produce trucks locally instead of importing them. And there is the positive impact it does for us here in the south east.

"What this initial capacity surge did was to ensure that all the staff of ANAMMCO who had been at home had to come back to work. Some local suppliers, lubricants, electrolytes and the rest of them also had to come back to doing business.

"According to the National Automotive Policy, Enugu and Nnewi has been designated as the automotive centre for the south east in this axis. This is because of the stay of ANAMMCO over a period. They have acquired a lot of technical capacity. There is also a training school that produces technicians, training young school leavers here.

"Totally here we have done 3,500 units for Dangote. The trucks used at the refinery are also Shacman trucks," he said.

> "The trucks used at the refinery are also Shacman trucks"
>
> **FRANK NNEJI, CHAIRMAN OF TSS**

General manager, media, Dangote Group, Sunday Esan said the group is satisfied with the Shacman Trucks, adding the partnership would last a long time as the group expands across its business segments.

Esan added that as the Dangote refinery comes onstream, the group would require more trucks, helped by the sustained relationship with TSS/ANAMMCO.

According to him, the massive investment in the south east is contrary to the assumption that Alhaji Aliko Dangote, the president/CEO of Dangote Group, is not supporting local manufacturers.

"This is why he agreed we should come and see how the ANAMMCO plant has come alive, the impact he has made in the country and the employment this patronage has generated," he said. ■

The warehouse effect

Development of Africa's warehousing infrastructure could trigger important growth gains right across the continent.


Cummins regional DC at the Agility Warehouse Park, Tema, Accra.


Agility warehouse.

Image Credit: API Events

Warehouses tend to be one of the most forgotten elements of the logistics sector, but are in fact a key part of the global supply chain – and that includes Africa.

Indeed, with the expansion of e-commerce, which relies on high-standard, automated warehousing fulfilment centres, it is a critical piece of the jigsaw, and one that will play an increasingly important role in the future as Africa's economy matures.

That's the view of Agility Africa chief executive Geoffrey White, who outlined his thoughts ahead of a Lagos investment forum towards the end of last year.

"Warehouses tend to be one of the most ignored elements of infrastructure and logistics, but are a fundamental part of the supply chain as they provide storage, distribution, packing, processing, assembling and light manufacturing of goods – all of which are the foundations of any economy, and support domestic and international trade, imports and exports," he said.

The economic development of the West Africa region is a case in point: huge potential, but extremely limited world-class warehousing space and infrastructure.

Nigeria, Benin, Togo and Ghana alone represent a collective close-knit, English-speaking, trade bloc with a population that exceeds 250 million people, 40 per cent of which are below 30 years old.

In Nigeria, the gas sector is expanding rapidly, combined with a new focus on domestic infrastructure, a move away from imports, as well as the world's largest refinery – the US$14bn Dangote refinery in Lekki – which is expected to come on stream in 2021.

West Africa's growth is being driven by a host of other positive macro trends, with Ghana a star performer.

It has overtaken South Africa in gold output, and there is a new focus on improving domestic agricultural production, efficiencies and yields that is reducing expensive imports and creating new employment.

A renewed impetus on the energy sector is improving power supplies, reducing dependency on imports.

Ghana's oil production is also forecast to rise to 500,000 barrels per day (bpd) by 2030, with the Atuabo gas plant expanding output to 220 million standard cubic feet of gas per day (mmscfd) by 2024.

There are other general drivers too: rural depopulation and the transition to increasing urbanisation; increased local manufacturing; and an expanding middle class driving growth and prosperity.

And yet the lack of essential infrastructure to facilitate and support this growth is increasingly a constraint to progress – that stretches into the general absence of top-quality warehousing space.

According to White, investment in this niche could have a huge multiplier effect in terms of aiding and driving growth continent-wide.

"To reach its true potential, Africa needs a fundamental warehousing transformation from low-quality makeshift warehouses that tend to lack basic security and safety features to facilities that meet international standards with consistent, reliable IT connectivity and power," he added.

A warehousing transformation in Africa

Five major ways better warehousing can make a difference to Africa's growth and development:

1. Providing a platform for African manufacturing and the Fourth Industrial Revolution (4IR)

Many multinationals are hesitant to invest in African facilities because of the perceived risks. A warehouse park that is ready to move into, with de-risked land acquisition, reduces the capital required for companies to enter the African market, and helps businesses get to market faster. With the 4IR under way, tech innovations like 3D printing and real-time connectivity are stimulating local manufacturing, increasing the need for secure, environmentally responsible warehousing platforms.

2. Enhancing agricultural value chains and reducing food losses

According to the UN's Food and Agriculture Organisation, roughly one-third of food produced for human consumption gets lost or wasted globally. In

Africa, wastage is particularly high at the agricultural production and post-harvest handling and storage stages. Modern warehouses with security and pest and temperature control could radically reduce this loss. Consolidated warehousing for commodities and agriculture – allowing for local processing and packaging to take place under the same roof as storage – reduces wastage, and allows far more value to be captured in-country.

Image Credit: API Events

Geoffrey White, CEO of Agility Africa.

3. Enabling the growth of African SMEs

Seventy-five per cent of growth in Africa will come from small and medium-sized enterprises, according to McKinsey, that struggle to get access to finance for infrastructure. Flexible warehousing models that allow for lower upfront payments give SMEs easy entry to quality warehouses that meet the standards required by international customers. For example, a Ghanaian entrepreneur was struggling to expand her food processing business to supply the formal sector because the loan costs to set up a processing and packaging facility were prohibitively high. By leasing warehouse space in Agility's Ghana warehouse park, she could use her capital to grow her business instead of having to buy land and build a facility.

4. Accelerating e-commerce

African e-commerce is booming, with projected annual sales of US$75bn by 2025. Last year, African e-commerce company Jumia listed on the New York Stock Exchange. Shares soared 75 per cent on the first day of trading, valuing the company at more than US$1.9bn. E-commerce fulfilment requires four times the warehouse capacity in the destination market compared to the traditional logistics model. The expansion of e-commerce relies on the availability of international standard warehousing fulfilment centres, allowing for the automation and racking.

5. Driving economic growth, regional trade and skilled job creation

Large-scale warehouse parks allow for logistics and manufacturing clusters to form across Africa as an interconnected network, enabling more intra-regional trade. Currently, intra-regional trade accounts for 17 per cent of Africa's exports, compared to 59 per cent in Asia and 69 per cent in Europe. The African Continental Free Trade Area (AfCFTA) will create the world's largest single market, of 1.2 billion people. International standard warehousing will also create a variety of jobs, building skills and prosperity and adding to the continent's competitiveness as it develops its export potential for global markets. ■

BURT'S BEES SHEA BUTTER WAREHOUSE

In February, a shea butter warehouse and processing facility was opened for the Tiyumtaba Women's Shea Cooperative of Sorogu, in northern Ghana. The facility was funded by the US Agency for International Development, in partnership with the Burt's Bees brand, owned by American manufacturer, The Clorox Company, with the Ghanaian firm Savannah Fruits Company. It will increase incomes for 600 women who collect and process shea nuts, a major commodity in Ghana. The facility was inaugurated by the US Ambassador to Ghana, Stephanie S. Sullivan.

Mozambique's natural gas reserves could be the answer to its economic fortunes.

Image Credit: Adobe Stock

Edge of change

Mozambique stands on the cusp of economic revival, thanks to its flourishing gas sector. Now the pressure is on the debt-ridden government to use whatever future gains it will generate from its gas resources towards infrastructure investment.

Revenues from gas production could lift millions of people out of poverty in Mozambique and provide much needed infrastructure investment to bridge the growing disparities between urban and rural areas, especially in the poor central and northern provinces.

A recent World Bank report recommends public investment in basic infrastructure in rural areas is paramount to improve the economy. Despite slight improvements in access to water, electricity and health facilities, transport routes have deteriorated significantly, especially in regard to rural connectivity, the bank stated.

The World Bank's latest economic update for Mozambique reported the gas sector could push growth from 2.3 per cent in 2019 – which slumped because of the devastating impact of tropical cyclones Idai and Kenneth – to 5 per cent by 2021.

"Indeed revenues from gas production are expected to widen fiscal space significantly in the late 2020s, and this is a good thing," said Mark Lundell, World Bank Country director for Mozambique, Madagascar, Mauritius, Seychelles and Comoros. "In such a favourable context, planning infrastructure reforms ahead of time will help in getting public investment priorities right to ensure that the population benefits evenly from these resources."

Shireen Mahdi, World Bank senior economist, who co-authored the report, said it was vital for the country to continue to balance its sheets amid its ongoing debt crisis.

"It will be important that in the near term, the country continues to improve its fiscal position, through improvements in expenditure efficiency, revenue management, and debt reduction," noted Mahdi. "These measures are important as the country continues on the path of macro-stability."

> "Revenues from gas production are expected to widen fiscal space significantly in the late 2020s"
>
> MARK LUNDELL, WORLD BANK COUNTRY DIRECTOR FOR MOZAMIBQUE, MADAGASCAR, MAURITIUS, SEYCHELLES AND COMOROS

Global LNG player

Mozambique is expected to become a global LNG exporter alongside Qatar, Australia, Malaysia and USA following the discovery of huge natural gas reserves in the Rovuma Basin by Texas-based Anadarko Petroleum (now Occidental Petroleum) and Italy giant ENI.

The reserves have the potential to transform the economy of one of the world's poorest countries.

There are three LNG projects currently underway in the country. Total SA is the main operator of the Mozambique LNG project in Area 1 after it acquired Anadarko's 26.5 per cent stake for US$3.9bn in September 2019. The 12.9mn t/yr project is expected to enter production in 2024.

Other major licensees include the state-owned oil company's subsidiary, Empresa Nacional de Hidrocarbonetos (ENH) Rovuma Área Um, S.A, which has 15 per cent, followed by Mitsui with 20 per cent, ONGC Videsh, Beas Rovuma Energy Mozambique and Bharat Petroresources (BPRL) Ventures Mozambique B.V have 10 per cent each, while PTTEP Mozambique Area 1 Limited has 8.5 per cent.

A consortium of McDermott, Chiyoda Corporation, and Saipem is responsible for the engineering, procurement, and construction (EPC) of the onshore liquefaction plant along with its support facilities. Worley, a global engineering company, one of the contractors, was awarded a contract in February to provide engineering and consulting services for the delivery of the onshore and subsea facilities.

"Mozambique LNG is a one of a kind asset that perfectly fits with our strategy and expands our position in liquefied natural gas," Total chairman and CEO Patrick Pouyanne said in a statement, according to a Reuters report.

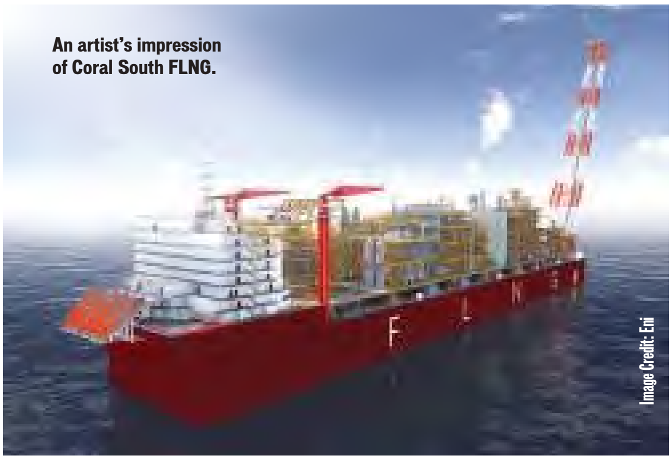

An artist's impression of Coral South FLNG.

Image Credit: Eni

Almost 90 per cent of the Mozambique LNG production has reportedly been sold to major LNG buyers in Asia and in Europe.

The second project is Coral South FLNG: ENI will lead and operate the project while ExxonMobil will construct and operate the liquefaction facilities onshore. ExxonMobil farmed into Area 4 block in 2017 with 25 per cent interest. Other stakes have been taken by CNPC (20 per cent), Kogas (10 per cent) and ENH (10 per cent). The US$8bn project will be able to liquefy more than 3.3 million tonnes of gas per year when it comes into operation in 2022.

The third project is the ExxonMobil-led Rovuma LNG scheme which is due to start operating in 2025. The Rovuma LNG project will produce, liquefy and market natural gas from three reservoirs of the Mamba complex in the Area 4 block in the offshore Rovuma Basin.

In October last year, Mozambique Rovuma Venture (MRV) composed of Eni, ExxonMobil and CNP, awarded a EPC contract to JFT, a consortium made up of JGC, Fluor and TechnipFMC for the Rovuma LNG onshore liquefied natural gas production complex in Cabo Delgado, Mozambique. MMRV has a 70 per cent stake while Galp, Kogas and ENH each have a 10 per cent stake. Insurgents in the north however are trying to jeopardise LNG operations with extreme violence, prompting IOCs to ask the government for additional security to control the situation.

Sasol South Africa already operates natural gas production in Inhambane Province, with reserves of 2.6 trillion cubic feet. The natural gas is produced and processed at a central facility in Temane and then transported via an 865km pipeline to South Africa, linking southern Mozambique for domestic use.

The government has also secured financing for a 400MW gas-fired power plant and transmission line to the capital Maputo. EDM and Sasol New Energy Holdings developed the project along with Globeleq and its consortium partner, eleQtra in the Temane Energy Consortium.

Meanwhile the Port of Maputo grew eight per cent in cargo handling in 2019, reaching 21 million tons and breaking the 2018 record of 19.5 million tons. Chrome was responsible for a third of all the total volumes handled which was transported by road to the port. In addition, the expansion of the container terminal also increased container traffic by 53 per cent in 2019.

In a statement on the port's website, "In 2020, with the completion of the berth rehabilitation project, it is foreseen that there will be additional growth and increased efficiency in cargo handling."

It added that new handling equipment, including two new mobile harbour cranes, payloaders, tractors and rail excavators, also boosted the 2019 bulk cargo handling results. ■

By Samantha Payne

"Gas is critical for sub-Saharan Africa's energy future," says GE's Gas Power Summit

With recent major gas discoveries in Tanzania, Mozambique, Senegal, Mauritania and South Africa, Africa is poised to use gas technologies that are faster, more reliable, more cost-effective and more environmentally-friendly than coal or oil. To deliberate on the changing trends and future direction of gas in the energy industry, GE hosted the Gas Power Summit for Sub-Saharan Africa in Cape Town. The forum brought together senior leaders from governments, financiers as well as major stakeholders and thought leaders from utilities and the private sector across the region to explore industry opportunities and challenges on the future of gas power in sub-Saharan Africa.

Image Credit: GE

GE's Gas Power Summit attracted senior leaders from governments, financiers and major stakeholders from utilities and private sector.

During his keynote discussion, Scott Strazik, CEO of GE Gas Power, emphasised the need for countries in sub-Saharan African to work together with the private sector to meet the growing energy demands. "Bridging the energy gap in sub-Saharan Africa will require continuous, sequential power improvements and the full involvement of governments, fuel suppliers, private capital and technology providers. Gas is a natural choice to help fill the gaps – providing dispatchable, flexible, affordable, and fast power for people and industries – and with more than 120 years of experience in the region, GE is proud to continue to help lead these efforts."

The participants at the forum discussed trends shaping the energy sector, including the use of technology to drive better efficiencies for utilities and the use of natural gas to meet the increasing energy demand. "Energy demand globally is driven primarily by socio-economic development, and sub-Saharan Africa will need to be creative in how we manage the energy deficit," said Hendrik Malan, CEO for Frost & Sullivan Africa. "Adoption of natural gas is an excellent opportunity for the region to reduce carbon emissions and balance the energy mix."

Operational flexibility is critical for gas turbines that compliment renewable energy as it balances electric system loads and helps maintain grid reliability. "GE continues to help countries throughout sub-Saharan Africa meet their growing energy demands. Case in point, our aero-derivative gas turbines provide fast, reliable power for energy emergencies and power crisis while our total plant management solutions demonstrate our strength as a single service provider," said Elisee Sezan, CEO for GE's Gas Power Business in SSA.

EG LNG CELEBRATES LOADING OF 700TH CARGO

EG LNG, the LNG liquefaction and export terminal located on Equatorial Guinea's Bioko Island, celebrated the loading of its 700th LNG cargo on 28 February. The terminal has been successfully operating for thirteen years, and remains one of sub-Saharan Africa's landmark energy projects.

Operated by Marathon Oil Corporation with shareholders Marubeni, Mitsui & Co and SONAGAS, EG LNG has been a major contributor to the socio-economic development of Equatorial Guinea.

The plant allowed for the monetisation of the Alba gas field and delivered its first cargo on 24 May, 2007. The plant was inaugurated by H.E. President Teodoro Obiang Nguema Mbasogo in October 2007, and has been delivering LNG to global markets ever since, including South America, Europe and Asia. The plant is a source of pride for Equatorial Guinea and Africa, and is at the centre of the Punta Europa complex, currently undergoing expansion and diversification to further monetise domestic gas.

MILESTONES FOR LEKELA IN SENEGAL AND EGYPT

Lekela, the renewable power generation company that delivers utility-scale projects across Africa, celebrated two major milestones: the inauguration of its flagship Parc Eolien Taiba N'Diaye (PETN) project in Senegal, which provides the first ever utility-scale wind power in West Africa; and the 250MW West Bakr Wind project in Egypt.

The inauguration of PETN marks the official opening of a wind farm that will provide power for more than two million people. As West Africa's first utility scale wind farm, PETN consists of 46 Vestas wind turbines producing 158.7MW. The first phase is now producing electricity, with 16 wind turbines generating up to 50MW. Once complete in 2020, PETN will provide a 15 per cent uplift to Senegal's generation capacity. The project will generate electricity for two decades.

PETN was inaugurated on 24 February by the President of Senegal, Macky Sall. Also attending the ceremony were Minister of Petroleum and Energy, Mouhamadou Makhtar Cissé; Her Excellency Tulinabo S. Mushingi and Her Excellency Victoria Billing, ambassadors for the USA and UK respectively; Papa Mademba Biteye, CEO of Senelec, and a World Bank delegation.

In Egypt, construction works have started on the 250MW Bakr wind project. To celebrate, an event was held at Cairo's new Administrative Capital and attended by Lekela stakeholders and partners, including the Minister of Electricity and Renewable Energy, the Minister of Environment and the Minister of Planning.

Located 30km north-west of Ras Ghareb, West Bakr Wind is part of the government's Build-Own-Operate scheme. It will provide an additional 250 MW of clean energy to the grid, increasing Egypt's wind energy capacity as the country strives to meet its target of generating 20 per cent of its electricity from renewable sources by 2022.

BRIEFS

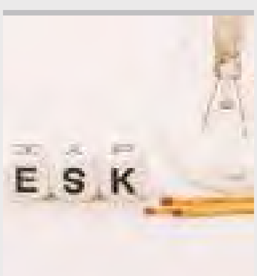


Image Credit: Adobe Stock

Eskom will be the centre of talks at African Utility Week.

Utility Week to focus on Eskom

"Utility transformation scenario planning for Eskom" is just one of the thought-provoking sessions announced for African Utility Week and POWERGEN Africa in Cape Town from 24-26 November. The programme is divided into five strategic focus areas: finance and investment and strategy, future cities, energy revolution Africa, water and smart energy - metering. It is one of the leading conferences for African power, energy and water professionals.

Image Credit: Adobe Stock

More work needs to be done to reap the benefits of Africa's natural resources, says Kenyan power expert.

Renewable sources underused, says Kenyan power expert

African's rich renewable sources are being underused, despite the continent aiming to connect 60 million households to the grid by 2030, said Wnaguli Charles Wainaina, the chief procurement officer of the Kenya Electricity Generating ahead of his visit to Middle East Energy on 3-5 March. The African Development Bank says the continent needs funds from US$29-39bn until 2025 for its 'New Deal - Energy for Africa'.

IEA appoints first programme manager to deepen engagement on continent

Maximilian Jarrett.

The International Energy Agency (IEA) has hired Maximilian Jarrett as its first Africa programme manager to help expand the agency's reach and coordinate its work as it deepens its engagement across the continent.

Jarrett brings 30 years of experience in the fields of international economic affairs, media production and strategic communications. He most recently served as the director-in-charge of the Geneva-based Africa Progress Panel, which was chaired by the late Kofi Annan, the Nobel Peace Prize laureate and former UN Secretary General.

The IEA has long focused on Africa's energy sector, including work on the continent's energy access issues since 2002. This work has since expanded significantly and will continue to do so in the coming years. Last year, Dr Kandeh Yumkella, a former United Nations under-secretary-general, became an advisor to the IEA on Africa and energy access issues.

In October, the IEA published Africa Energy Outlook 2019, its most comprehensive and in-depth work to date about the continent, with a particular emphasis on sub-Saharan Africa. The special report, part of the IEA's flagship World Energy Outlook, highlighted Africa's role in global energy affairs and included detailed energy profiles of 11 countries that represent three-quarters of the region's gross domestic product and energy demand, including Nigeria, South Africa, Ethiopia, Kenya and Ghana.

The IEA is also strengthening its relationships with African energy decision-makers. South Africa and Morocco are part of the IEA family as association countries. In May 2019, the IEA and the African Union Commission co-hosted their first joint ministerial summit at which the two organisations signed a Memorandum of Understanding to guide future collaboration. A second ministerial forum will be held in 2020, with South Africa offering to host the event in line with its 2020 presidency of the African Union.

Prior to his role with the Africa Progress Panel, Jarrett spent more than a decade working with the United Nations in Africa. He had started his career in 1990 as a programme presenter and senior producer with the BBC World Service. He worked on Focus on Africa and Network Africa, the BBC's daily current affairs programmes for its audience in Africa.

JDPS UNVEILS UPDATED GENERATOR DRIVE ENGINES

At Middle East Electricity in Dubai, John Deere Power Systems showcased various power nodes from its updated range of non-regulated generator drive engines. The range provides OEMs greater freedom in machine design and end-users reliable engines at an optimised total cost of ownership.

JDPS is a trusted partner for generator set OEMs worldwide, offering bare engines and power units for a range of applications. The updated range of non-certified engines covers all recognised power nodes from 30 to 500 kVA, with displacements of 2.9L through 13.6L. Features include dual frequency (50 Hz and 60 Hz), longer maintenance intervals and single-side service access.

"We revamped this range to meet our OEM customers' commercial requirements. As an engine manufacturer of diesel-driven power generation engines, JDPS offers OEMs unbiased engine expertise", said Sandrine Couasnon, EAME marketing support manager.

"The Stage V engines offer end-users a reliable operation even in the most extreme conditions, long engine life and exceptional fuel economy," said Patrick Thil, Manager OEM engine sales EAME, Asia and Australia.

AEF 2020 TO ADDRESS SUSTAINABLE DEVELOPMENT GOAL ON ENERGY

The 2020 Africa Energy Forum (aef) will welcome chairwoman Damilola Ogunbiyi, CEO and special representative of the UN Secretary-General for Sustainable Energy for All (SEforALL) and co-chair of UN-Energy, to officiate the opening sessions.

Ogunbiyi said, "Africa is a region full of promise and economic opportunity. Yet as we begin the final decade to achieve Sustainable Development Goal 7, more than 573 million people across Africa still do not have access to electricity which affects the region's economic potential, health outcomes and prosperity. Now is the time we must all come together to increase investment, make bold commitments and create new partnerships that can deliver affordable, reliable, modern and sustainable energy for all Africans."

The 2020 programme

Taking place in Barcelona, Spain from 30 June to 3 July, the 2020 agenda introduces dynamic sessions prioritising interactivity between panellists and delegates. Session formats include interactive Q&As, deep dives, roundtables and hard-hitting debates.

In line with the SDG7 goal of ensuring "access to affordable, reliable, sustainable and modern energy for all," aef will host a stream dedicated to unpacking Africa's role in achieving SDG7, debating how the continent can meet energy demands in light of global sustainability goals.

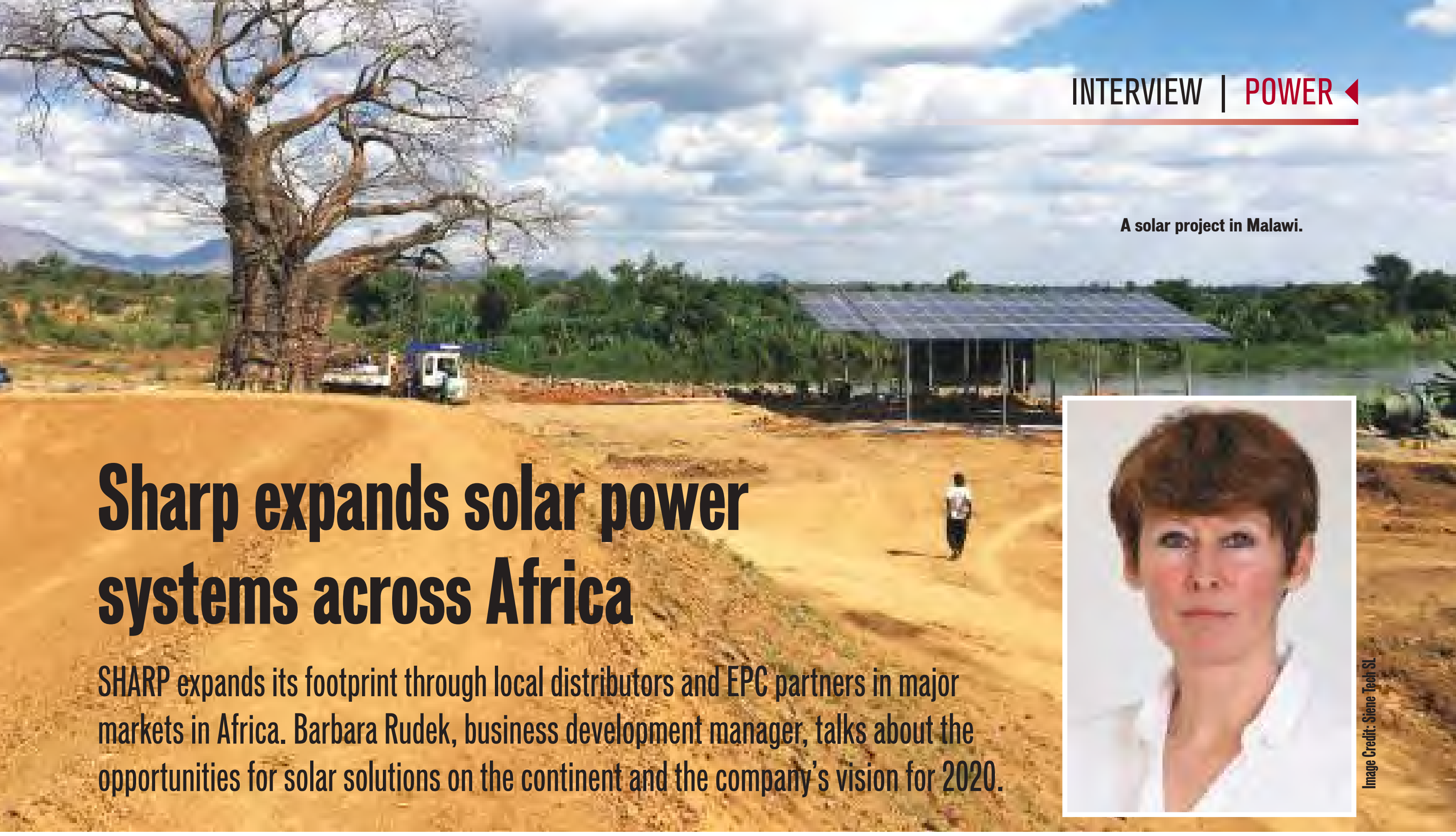
The Tech & Tools stream will examine how the 4th Industrial Revolution is set to play out for Africa, discussing the future of battery storage, disruptive technologies and artificial intelligence in 2020 and beyond.

aef will be a vital platform in June to discuss opportunities in the energy industry in Africa.

A special project signing session on the opening day will see partners and sponsors sign power projects with public and private sector partners in front of a live aef audience.

The EnergyNet Student Engagement Initiative returns to invite promising finance, law and engineering students from Africa and host country Spain to meet energy ministers, participate in workshops and learn about the opportunities for energy development in their respective countries.

More than 2,000 decision makers from the public and private sector are expected to attend the 22nd Africa Energy Forum this June.



A solar project in Malawi.

Image Credit: Siene Tech SL

Sharp expands solar power systems across Africa

SHARP expands its footprint through local distributors and EPC partners in major markets in Africa. Barbara Rudek, business development manager, talks about the opportunities for solar solutions on the continent and the company's vision for 2020.

Why is Africa ideally suited to implement solar energy solutions?

There are several reasons why we see promising business opportunities for solar in Africa. The potential in SHARP delivering high quality solar Photovoltaic (PV) is immense in Africa. There are few areas on earth that have such consistent and excellent solar irradiation all year round. Solar PV is an ideal solution for scaling-up power systems and meeting supply security as well as basic access to electricity for people without the grid. As solar is a modular system, it allows for on-grid and off-grid applications in commercial and rural settings.

Solar PV helps African countries to diversify their energy mix, especially those which are largely dependent on hydropower, which can fluctuate during drought season.

Another important push in favour of solar PV is the current grid connection charges in sub-Saharan Africa. They are among the highest in the world relative to an individual's income, making PV systems very attractive, even in areas connected to the grid.

Africa also offers a huge market for diesel/PV hybrid systems due to the immense number of diesel generators in use in many African countries. These can help to reduce diesel costs and an alternative to sometimes unreliable diesel supply.

Why should customers choose SHARP for their solar products?

Installing good quality performance products is extremely important for projects, especially those situated in remote areas with poor grid accessibility.

SHARP has the largest module range in the market and aims to have the best warranty in its class to support its growing distribution network on the continent. SHARP has a guaranteed positive power tolerance (0/+5 per cent) and a 25 year's linear power output guarantee. A SHARP customer can be assured we are a reliable partner with more than 100 years' history and 60 years' experience in solar solutions. SHARP has a solid financial background with a proven track record of 13 GW solar, with more than one million satisfied customers worldwide. Our experience in solar allows us to successfully serve the sometimes challenging African market. SHARP is always prepared to meet partners and customers' requirements in the best sustainable and reliable way.

Does SHARP sell B or C class modules to its African partners?

No, we deliver high-standard quality products according to our standard price list. Customers across the African continent will have access to SHARP's full range of reliable, efficient energy solutions and services suitable for residential, commercial and industrial use. SHARP's range of best-in-class PV modules covers polycrystalline, monocrystalline and back contact technology with modules ranging from 48, 60 to 72 cells.

Next to these modules Sharp announced at beginning of this year the availability of its new half-cut cell module portfolio, including three new monocrystalline silicon photovoltaic (PV) panels to the NU product family: NU-JC330, NU-BA385 and NU-JB395. The new half-cut cell PERC modules offer a 2-3 per cent higher module performance compared to standard full cell panels, providing customers with an efficient and reliable solution for every application, from residential projects up to large-scale commercial installations and free-field power plants. The 144 monocrystalline half-cell panels NU-BA385 and NU-JB395 are suitable for large scale rooftop or ground mounted facilities that demand highest yields. The NU-JB395 offers the highest power output of 395W, a module efficiency of 19.6 per cent and 1,500 V system voltage. With the addition of 1400mm cables that enable leapfrog wiring and reduce balance of system (BOS) costs, this module is the ideal choice for major industrial projects and power plants.

The 120 half-cell panel NU-JC330 offers a power output of 330W, achieving 19.5 per cent module efficiency, making it suitable for industrial and residential roof installations. All modules offer customers improved reliability, efficiency and reduced series resistance.

All our modules are also certified by leading international bodies and subject to a comprehensive SHARP testing procedure, which is up to five times stricter than required by the International Electrotechnical Commission, (IEC).

Who are SHARP's local partners?

We have business partners in Algeria, Egypt, Nigeria, Uganda, Kenya, South Africa and a Spanish partner, Seine Tech, which carried out a project in Malawi. We look for reliable distributors with a good reputation, a serious network and experience handling solar systems but also experienced project partners.

What's SHARP's strategy for 2020?

Growing partnerships and sales remains at the core of SHARP's strategy throughout 2020. Our target groups are local distributors with a good network to the local market to build on our steady and reliable growth but also EPC companies with projects from 1MW onwards. Our goal is to build a partnership with one to two local distributors in each markets. ■

For more information visit www.sharp.co.uk/energysolutions or www.sharp.co.uk/solar-panels, or alternatively contact Barbara directly at Barbara.Rudek@sharp.eu

Gensets market records good growth in 2019

In 2019, there was a healthy demand for gensets across Africa, especially in places where large power projects are happening in West Africa, but the outlook ahead for 2020 looks uncertain.

The C25G delivers superior fuel efficiency, designed to support any gas-power needs.

Image Credit: Cummins

The African market in generating sets has long provided good business for the big International brands, the likes of Caterpillar, Kohler-SDMO, Himoinsa, Perkins, and others. The good news is that the market is holding up pretty well in the face of an uncertain global economy, though 2020 looks to present ever greater challenges.

The African market for gensets overall recorded strong growth during 2019. After a slight recovery that started in 2018, the African market for diesel gensets had grown by 10 per cent during 2019 (reaching US$1.25bn), especially impressive in a context where the global gensets market has decreased by 2 per cent, according to a report by market and research company, Powergen-statistics.

A few critical countries, including Libya, Nigeria and Egypt, have driven the growth, whereas certain others, notably Algeria and Angola, have declined significantly.

However, this overall 2019 growth must be viewed with caution as it comes after many years of general decline. The rebound remains still fragile due to the low prices of oil and raw materials, which always has a knock-on effect throughout Africa's economy. Oil price volatility in March clearly points to a bumpy road ahead for all as 2020 plays out.

Growth of generators below 75 kVA

Oil prices must not detract from a robust performance in 2019, however. The latest report showed growth has been especially significant in the smaller range of products, and in some specific countries such as Libya in the north of Africa. Overall, across the continent, the market size for generators below 75 kVA increased by an impressive 25 per cent in 2019.

One of the best examples is Libya, which was a standout performer in this segment. Its import of diesel generators up to 75 kVA reached a record level with US$80mn in 2019, compared to US$52mn in 2018 and only US$16mn in 2017. Most of these generator sets are coming from Turkey (US$22mn) and China (US$20mn). It reflects an uptick in activity within Libya's battered economy.

Other countries, such as Ethiopia and South Africa, recorded significant growth in the small generators segment, with the need for reliable and affordable power still paramount.

In value terms, Ethiopia saw growth of US$4.5mn, while South Africa business in this segment increased by US$12mn.

Big projects in West Africa

At the other end of the spectrum, there were major contract wins driving the demand for larger gensets, providing good opportunities for some of the major suppliers, with Aggreko scoring big. Powergen-statistics stated that in 2019, some of the largest projects were delivered in West Africa. Three large-scale projects in this area delivered some 80MW of power collectively:

- 50MW power plant project in Burkina Faso, delivered by Aggreko in February 2019
- 16MW power project in Niger for the African State Summit, delivered by KOHLER-SDMO in June 2019
- 13MW power plant project in Mauritania, delivered by Aggreko in September 2019

Other big projects were delivered in the Democratic Republic of Congo and in Egypt, while more are anticipated early in 2020, including a 10MW genset plant in the Central African Republic. It highlights ongoing market opportunities across the continent and, of course, the ever-present need for reliable power in Africa.

Gas-to-power

Genset makers continue to push hard in delivering evermore powerful, reliable machines to clients and in introducing new innovations. For a gas-rich region such as West Africa this is an important development.

Cummins unveiled its latest C25G gas generator series, which is engineered to deliver superior fuel efficiency, with a power density of 500 kW and 580 kW from a 25-litre engine, while providing reduced maintenance costs per kWh.

"Following the launch of the HSK78G gas-generator series, Cummins is now extending its portfolio with the addition of the C25G gas series, offering a wider range of integrated solutions to better serve the needs of our customers across key power nodes," said Chris Downs, Cummins global energy management marketing leader.

This new series offers a total package of gas-generator capabilities for combined heat and power (CHP/CCHP), demand side management, and alternative fuel applications, and suitable for a diverse set of industries, from hospitals and manufacturing to commercial building and utilities requiring continuous operation, whether it is grid parallel or island mode.

Small is beautiful

The quest for improvement is alive and well in the smaller segment.

Volvo Penta recently launched a

new addition to its genset product portfolio, the D8 Stage II and Stage IIIA/Tier 3 engine. The eight-litre power generation engine offers industry-leading power density and a compact size, combined with low fuel consumption and noise levels.

"The proven D8 design is based on mature technology concepts that have undergone hundreds of thousands of testing hours and real-world use," said Kristian Vekas, product manager for generator engines at Volvo Penta. "With the D8, our customers will benefit from 100 per cent proven, reliable components. We have ensured our solution will function with the required performance and reliability levels in all the applications, climates and environments our customers operate in."

The industrial genset will mainly be used as a reliable source of back-up power, as well as cost-effective primary power generation in areas where energy is scarce. It can be used for both mobile and stationary power generation applications, depending on local emission regulations.

"The new, modern D8 engine has been built with a high power to weight ratio, giving it industry-leading power density and an extremely compact design for its power class," added Vekas. "It has been designed for quick, easy and economical installation as well as ease of operation and maintenance." such as West Africa this is an important development.

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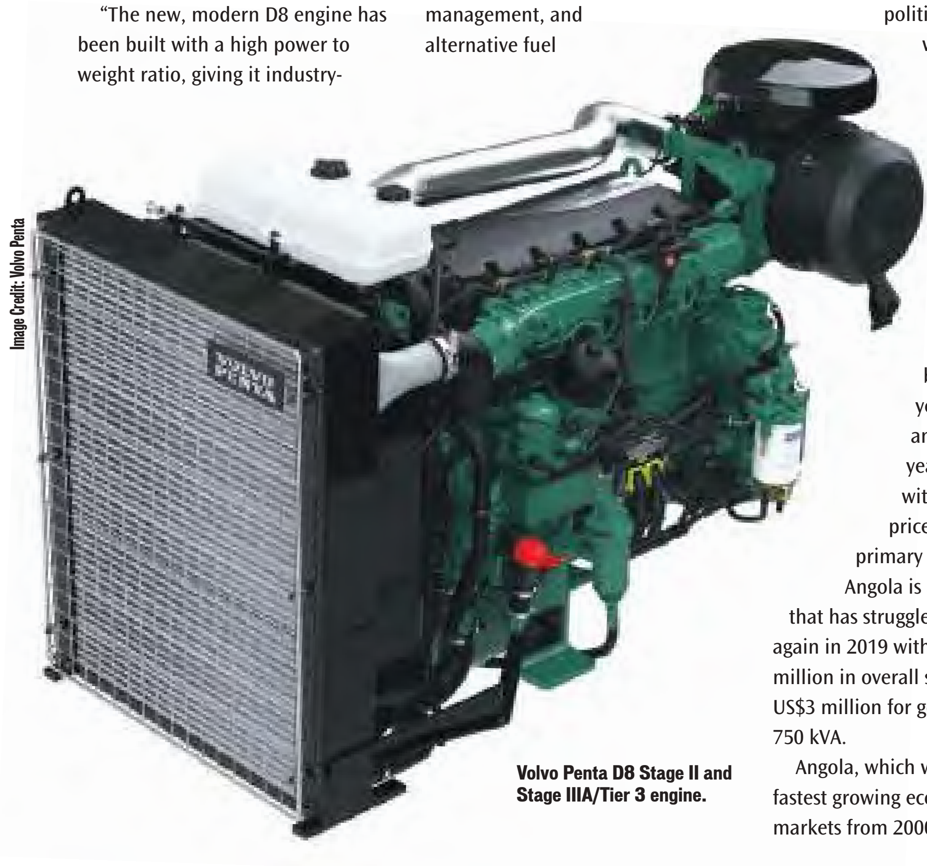
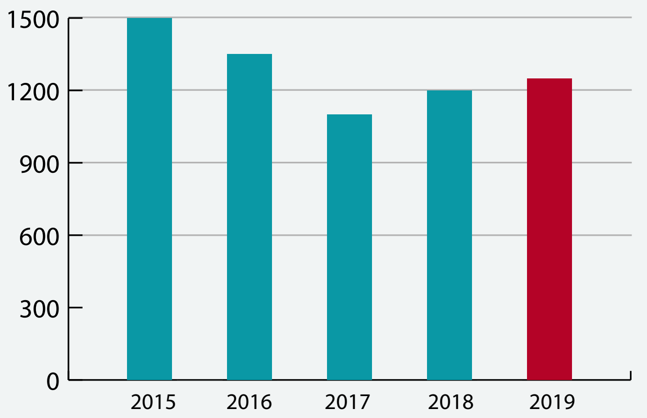


Image Credit: Volvo Penta

Volvo Penta D8 Stage II and Stage IIIA/Tier 3 engine.

African market of diesel generating sets (US$M)



Source: Powergen-statistics

applications, and suitable for a diverse set of industries, from hospitals and manufacturing to commercial building and utilities requiring continuous operation, whether it is grid parallel or island mode.

Algeria, Angola down

Not all markets fared quite so well last year, however. The Powergen-statistics report showed the Algerian market has been hit by the political crisis of 2019 with the market down by 22 per cent on the previous year, reaching US$72mn. Projects have been frozen and planned industrial expansion has been affected. This year may well be another challenging year for the country with oil and gas prices low, the nation's primary source of income.

Angola is another market that has struggled. It declined again in 2019 with less than US$20 million in overall sales and only US$3 million for generators above 750 kVA.

Angola, which was one of the fastest growing economies and markets from 2000 through to 2010, is now suffering from large fiscal deficits and high inflation. It too is expected to be affected by the drop in oil and gas prices in the current year.

2020 outlook

Despite the upward trend in 2019, with demand surprisingly bright across a number of major markets, the coming year is not expected to be an easy one for genset suppliers.

Weakened oil prices and an uncertain economy, one that is now grappling with all the unknowns arising from the coronavirus outbreak, makes for a challenging business climate.

Nonetheless, Africa's poor energy infrastructure virtually guarantees a significant level of ongoing interest and demand for gensets of all shapes and sizes.

Indeed, leading players close to the market have become accustomed to operating in such conditions.

While any major economic downturn could potentially derail big oil, mining and industrial projects, there are sufficient gaps in Africa's energy supply to underpin some level of demand.

In South Africa, the decision to allow mining firms to bring in their own power generation supplies in the face of state utility Eskom's woes, points to opportunity for astute genset makers. ■

By Martin Clark

Powering Africa's mining industry

Image Credit: Aggreko

The Syama gold mine in Mali.

More and more mining companies are shying away from investing in expensive grid infrastructure in favour of installing cheaper distributed energy systems to power their mines. Australia-based gold miner, Resolute, is no exception and has turned to Aggreko to build and operate a hybrid power plant – the biggest in the world – over the next 16 years at the Syama off-grid gold mine in Mali. John Lewis, managing director, Africa at Aggreko, tells us more.

Image Credit: Aggreko

John Lewis.

"In Africa, it doesn't make sense to invest in grid infrastructure to reach communities. It makes more sense to take the generation to the community and this is possible with hybrid plants," explained John Lewis, managing director, Africa at Aggreko.

Aggreko recently signed a deal with Resolute Mining to build a hybrid power plant at the Syama gold mine in Mali.

Already, the global temporary power company supplies a 28MW diesel power plant for the mine that augments the existing diesel power station. But, due to the mine's growing power requirements and sustainability goals, Resolute needed a lower cost power solution and approached Aggreko for its expertise to provide and operate a hybrid plant, (made up of thermal, solar and battery components), over the next 16 years.

This new power supply agreement with Resolute will be delivered in two stages. Stage one comprises three 10MW thermal Wärtsilä Modular Blocks and a 10MW battery storage system, which are expected to be completed in 2020 while the second stage will comprise the installation of an additional 10MW Wärtsilä Modular Block in 2022. The four medium-speed Wärtsilä 32 engines will replace the diesel generators, currently powering the mine. There will also be an addition of 20MW solar PV power in 2023 – the solar power plant element will be equivalent in size to 20 football pitches.

Reducing carbon footprint

When the solar power plant is integrated into the mine's energy mix, Resolute will be reducing its carbon emissions by as much as 20 per cent.

The hybrid power plant is estimated to deliver cost savings estimated at two million euros per month – a 40 per cent reduction from the current cost of energy.

Aggreko's OPEX model with Resolute has already impressed major mining companies which do not want to make significant upfront capital investment in power, so that they can concentrate on their mining operations.

"The OPEX model works for both parties in terms of returns on investment. Resolute say they will receive a much bigger return when they invest in digging for more gold than investing in a power plant. We are leveraging on that and doing different commercial models so they can receive benefits of improvements over time. People are now approaching us and asking if we can do the same for them, which fits right into Aggreko's strategy," said Lewis. "Historically, we have done a lot of utility work, which is still very important for us, but increasingly we are going to the main industry players, who need more reliability and, in some cases like Resolute, are completely off-grid.

"It's a good transition for Resolute from where they are today with a diesel plant that we provide, which is a medium-term solution, to a longer-term hybrid power solution that gives them multiple benefits."

Aggreko is supporting mining activities in 25 African countries, including the Democratic Republic of Congo, Tanzania, South Africa and Mali.

"We are seeing increasing

> "We are seeing increasing requirements in places like Sudan, Burkina Faso, Senegal and other countries"
>
> **JOHN LEWIS, MANAGING DIRECTOR, AFRICA, AGGREKO**

Burkina Faso, Senegal and other countries that are just starting to open up their mining industries. Last year, we deployed to a mining site for Manub in Sudan – our first one in the country – and one in Mauritania for the Kinross gold mine," said Lewis.

But it is not just mining where Aggreko works in. It continues to do a lot of work with utilities, oil & gas, mining and heavy industries such as manufacturing.

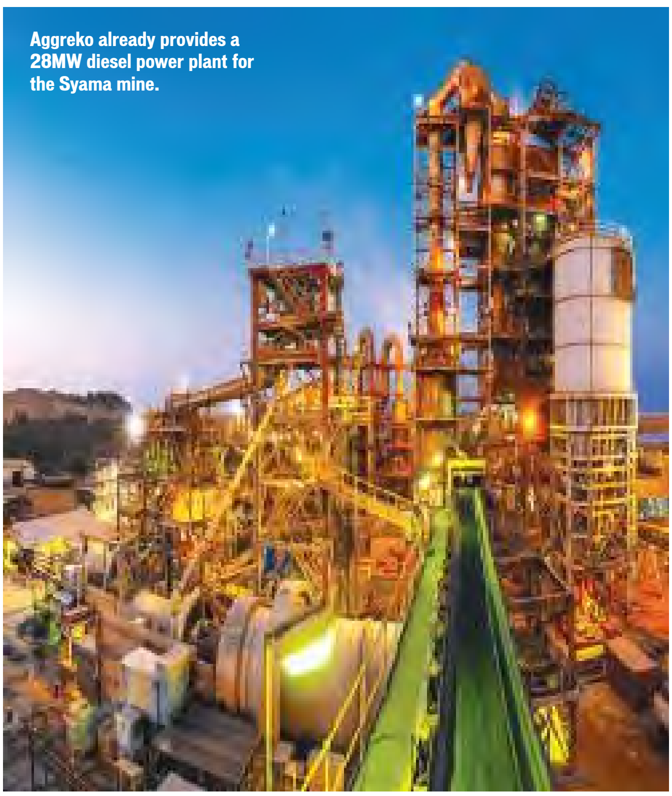
"It depends on the state of the grid infrastructure in a country and its reliability. In Nigeria, we do lots of things because the grid is unreliable for industrial applications such as manufacturing plants, cement factories, and data centres for mobile companies."

Training communities is at the core of Aggreko's business with six out of 25 of Aggreko's depot operations in Africa, run by local employees.

"In Burkina Faso, where we deployed a 50MW plant last year, there are 40 people, of which 30 were recruited locally. It is a good example of where we are trying to increase the skills of the local workforce, and where necessary, sponsor university education to bring the grassroot skills through to effective employment," added Lewis.

"We are helping the economy by generating power, but we want to give something back in terms of local projects as well, which we are doing at Syama where we are implementing irrigation systems for the local farming community."

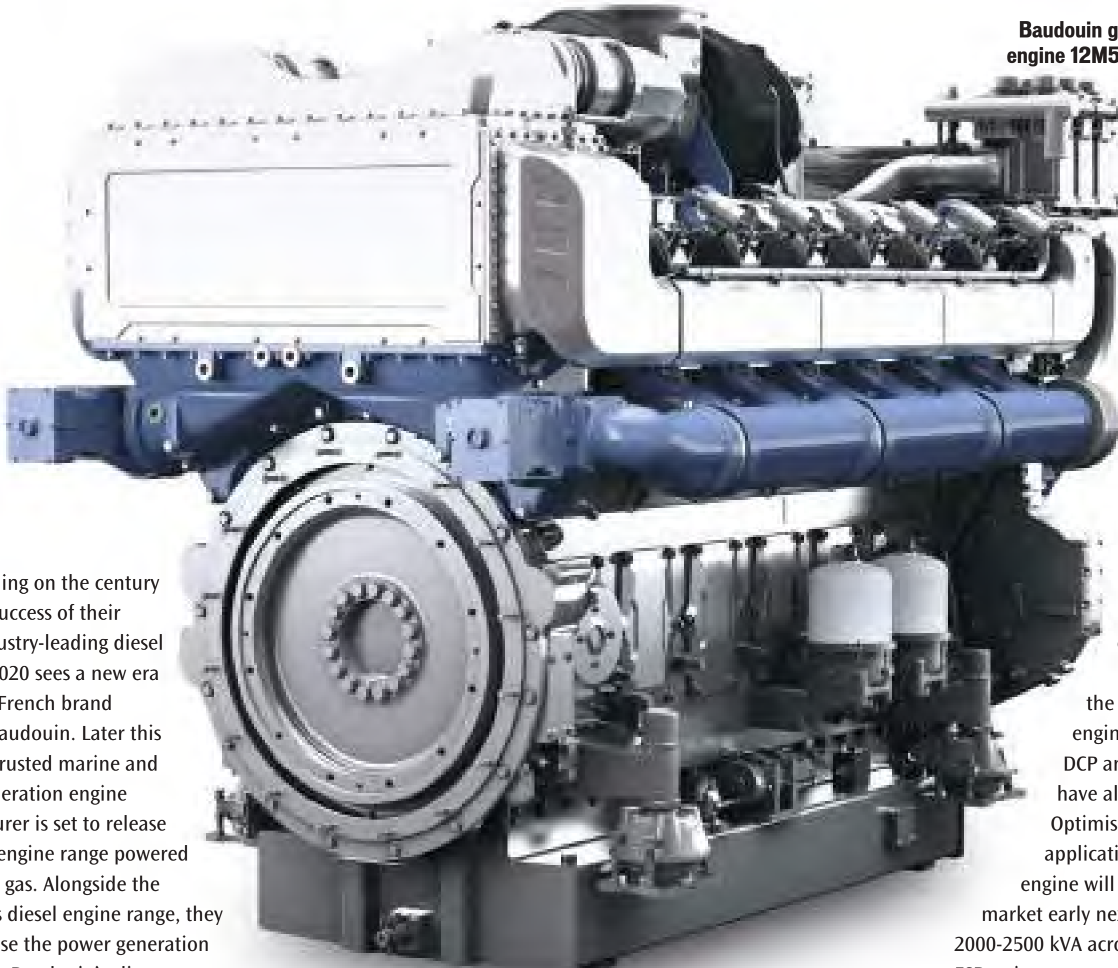
Aggreko is much more than a power provider, with its CSR goals ingrained within its strategy. The future of its business looks nothing but positive. ■



Aggreko already provides a 28MW diesel power plant for the Syama mine.

Image Credit: Aggreko

Baudouin unveils new range of natural gas engines



Baudouin gas engine 12M55.

Building on the century of success of their industry-leading diesel engines, 2020 sees a new era for iconic French brand Moteurs Baudouin. Later this year, the trusted marine and power generation engine manufacturer is set to release their first engine range powered by natural gas. Alongside the company's diesel engine range, they will increase the power generation options for Baudouin's clients around the world.

Using this clean, cost-effective and readily available fuel, the new PowerKit Gas series is available across a range of engine models. All are electronically controlled and CHP ready, with power outputs available between 63-1750 kVA 50Hz and 63-1400 kVA 60Hz.

The average efficiency of the gas engines is also impressive, up to 38 per cent for the low kVA range and between 40-45 per cent for the HHP 16M33 and 12M55 engines. Their innovative lean burn technology gives lower NOx emissions too, a hugely important factor in today's environmentally-conscious world.

The engines are also able to re-use gas created by industrial or agricultural processes, adding to their green credentials. Other features include ratings suitable for a range of applications, with highly-competitive transient performance and block load acceptance.

Entering the gas-powered market is an exciting new development for Baudouin in 2020. Also launched is the company's new 4M06 diesel engine, developed specifically for telecom applications. This 2.4L, four-cylinder engine delivers 18-35 kVA ESP @ 50Hz, along with low fuel consumption and easy maintenance due to Baudouin's simple mechanical design. It is designed with the specific needs of telecom customers in mind, optimising service intervals with a larger oil sump and extra filtration.

Next, the 8M21 diesel engine is being launched, offering 450-660 kVA 50Hz, followed by a 50/60Hz switchable model later in 2020. This new V8 engine provides compact power with a small displacement, best in class fuel consumption, and a low total cost of ownership offering an efficient solution compared to electronic engines. Customers can also take advantage of dual starter options for increased redundancy, along with dependable load step and load following capability.

Finally, details of the 20M33 diesel engine and all new DCP and COP ratings have also been released. Optimised for data centre applications, the 20M33 engine will be released to market early next year delivering 2000-2500 kVA across PRP, DCP and ESP ratings.

The M33 platform is a proven, reliable engine delivering secure power provision, supplemented by dual starter options, easy maintenance and common parts across 6/12/16/20 cylinder engines. The platform provides economies of scale to be cost competitive for OEMs and is backed by Baudouin's market-leading warranty terms.

With the launch of the new gas range, telecom products, 50/60 Hz switchable engines, new DCP and COP ratings, and a trio of exciting new diesel engines, the company says it is clear that 2020 is set to be a game changer for Baudouin and its customers. ■

Celebrating the 100th anniversary of Kohler Power

One hundred years ago, the first Kohler modern-day generators hit the market, providing electricity to homes, boats and businesses in rural America, and setting the stage for a century of growth around the world.

Image Credit: KOHLER-SDMO

Kohler and SDMO has been a global force in power solutions since 1920, Kohler is committed to reliable, innovative products, advanced engineering and responsive after-sales support. Over the years, they have extended their global reach, acquiring SDMO Industries in 2005, a worldwide leader known for its high quality generating sets.

Together, they have built on the legacy of two leading brands to create one of the largest generating set manufacturer in the world, setting the standards for power generation with an unwavering focus on reliable power systems and innovation.

Today, all KOHLER-SDMO entities in Europe, Middle East and Africa come together under the same name Kohler Power EMEA alongside Kohler Power China, India, SEA and Kohler Power Americas. They win as one: Kohler Power Group.

KD4500: the new line of KD Series

4MW of power, only from Kohler


Image Credit: KOHLER-SDMO

KD series, the most powerful choice for large diesel power generation, was launched in October 2016, utilising Kohler's diesel engines ranging from 800kVA/800kW to 3500kVA (@50Hz)/ 3250 kWe (@60Hz).

Based on a strong worldwide market response and an increasing demand on power in mission critical applications, KOHLER-SDMO is officially expanding the KD Series with the rollout of four new models ranging up to 4500kVA (@50Hz)/ 4000 kWe (@60Hz).

Their global team of engineers developed two sophisticated engine blocks – K135 and K175 – that deliver a large range of power. And the largest engine of the KD SERIES range, the KD103V20 is now ready to power your needs.

User benefits:

- Low fuel & oil consumptions
- High power density, compact design
- Power quality in accordance to G3 performance class
- (ISO8528-5) and transient response • Designed to run in high ambient conditions
- Available in both fuel optimised and emission optimised versions compliant with EPA Tier2
- Long maintenance interval to optimise your total cost of ownership.

New J130 - industrial range

The engine technology and the ability of KOHLER design office to develop solutions that maintain efficiency levels in ever more compact generators.

Thanks to the engine performance and the development of the new industrial range, KOHLER presents a 130 kVA generator in the same enclosure as the 88 and 110 kVA generators.

User benefits:

- Low fuel consumptions
- Very clean and compact design
- High power quality in accordance to G3 performance class
- Designed to run in high ambient conditions
- More compact and sound-attenuated canopied solution in the market
- Base frame with retention to protect the environment
- Long maintenance interval

New value range

From 900 to 1500 kVA, in open and soundproofed versions

KOHLER is the only genset manufacturer in the market to offer such a flexibility: a premium range powered by technologically advanced KOHLER engines, and a value range powered by robust and reliable traditional engines.

While, their premium product range meets the most complex requirements, our competitive value range, offers a high quality alternative, easy to serve on the field.

The new KOHLER range of generating sets powered by Baudouin engines offer five models from 900 kVA up to 1500kVA in open or enclosed versions. ■


Image Credit: KOHLER-SDMO

GENSET Buyers' Guide

Section One: Suppliers
Section Two: Agents & Subsidiaries in Africa

Please mention African Review when contacting your supplier

Section One: Listings by Suppliers

ABZ-Aggregate-Bau GmbH & Co. KG

Gutenbergstrasse 11
Henstedt-Ulzburg
24558
Germany
Tel: +49 4193 90360
Fax: +49 4193 93473
Web: www.abz-power.com
E-mail: info@abz-power.com

ABZ manufactures, installs and services custom-built diesel gensets of 50kVA to 5000kVA capacity for continuous, stand by or peak load operation for all possible applications as stationary, mobile, containerized or canopied units. A wide range of control systems and switchboards for all kinds of operations is available.

Advanced Diesel Engineering

14 Langthwaite Business Park
South Kirby
Pontefract
WF9 3AP
United Kingdom
Tel: +44 1977 658100
Web: www.adeltd.co.uk
E-mail: enquiries@adeltd.co.uk

Advanced supply everything from small, canopied life safety gensets to primary and back-up power supplies. For some of the quietest, most reliable and most cost-efficient generators and accessories visit Advanced! We also produce weatherproof and climate controlled modular housings for switchgear, fuel tanks, acoustic enclosures, UPS containers & much more.

Aggreko International Projects

Unit 2 Poplar Place
16B Axle Drive
Clayville
1666
South Africa
Tel: +27 11 3578900
Web: www.aggreko.com
E-mail:
philip.duplessis@aggreko.co.za

With the largest fleet of diesel and gas generators, we provide complete power packages including design, installation, operation and maintenance. Aggreko can offer rental generators from 20kVA of multi-megawatt power packages.

AJ Power Ltd.

1 Charlestown Drive
Craigavon
Northern Ireland
BT63 5GA
United Kingdom
Tel: +44 28 38361000
Fax: +44 28 38361010
Web: www.ajpower.net
E-mail: sales@ajpower.net

AJ Power specialises in the volume manufacture and design of diesel generating sets from 10kVA to 4000kVA, associated equipment and HV solutions up to 13.8kV. The companies' strength lies in engineering excellence built on experience. Drawing on these skills and utilising the latest technology we provide a cost effective, reliable source of power with suitable solutions to cover a wide range of industries.

All products are designed, manufactured and tested, in our UK factory using European components, fully supported by our dedicated engineering and aftersales team in partnership with our distribution network.

Altaaqa Global Energy Services

Dubai World Central
Dubai
United Arab Emirates
Tel: +971 4 880 8006
Web: www.altaaqaglobal.com
E-mail: info@altaaqaglobal.com

Altaaqa Global Energy Services is a pioneering international energy services business providing cost-effective integrated power solutions, expert project consultancy and advisory services, and flexible contractual and project financing arrangements (including Build-Own-Operate-Transfer) to a diverse range of industry sectors, including mining, oil & gas, manufacturing, cement, utilities and process industries.

Agents:
South Africa - Altaaqa Global Energy Services

Ansaldo Energia Group

Via Nicola Lorenzi, 8
Genova
16152
Italy
Tel: +39 010 6551
Web: www.ansaldoenergia.com
E-mail: info@ansaldoenergia.com

Agents:
Algeria - Ansaldo Energia ALGERIA
Nigeria - Ansaldo Energia Nigeria
South Africa - Ansaldo Energia South Africa
Tunisia - Ansaldo Energia TUNISIA

Atlas Copco Power and Flow Division

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Muel (Zaragoza)
50450
Spain
Tel: +34 976145432
Fax: +34 976145431
Web: www.atlascopco.com
E-mail: export@atlascopco.com

Atlas Copco Power and Flow Division designs, manufactures and markets a wide range of mobile and energy-efficient generators, light towers and pumps. The products are used in all range of industries including construction, industrial, mining and rental. Divisional headquarters are located in Spain. Product development and manufacturing units are located in Europe, Asia, South America and North America.

Ausonia S.r.l.

Via Favara 452, Z.I.
Marsala (TP)
91025
Italy
Tel: +39 0923 722311
Fax: +39 0923 721274
Web: www.ausonia.net
E-mail: ausonia@ausonia.net

Since 1932, we design, produce and offer a wide range of AC gensets up to 3000 kVA, available in different configurations (Open-sets, Soundproofed canopies or shelters, Mobile sets on trailers, No-Break Power Systems, Gas gensets, Cogeneration power plants, etc.). Within our power products portfolio, we also include customized solutions for very critical applications (Oil & Gas, Mining, Defense, Telecom), as well as Hybrid Gensets and High Efficiency DC Energy Solutions. OPEX model also available.

Ayerbe Industrial de Motores SA

c/ Oilamendi 8
Pol. Ind. Jundiz
Vitoria
01015
Spain
Tel: +34 94 5292297
Fax: +34 94 5292298
Web: www.ayerbe.net
E-mail: ayerbe@ayerbe.net

Ayerbe has been manufacturing generators since 1992 and nowadays is one of the leading manufacturers in Spain. The range goes from 2 to 250kVA.

Balton CP Ltd.

CP House
Otterspool Way
Watford
WD25 8HU
United Kingdom
Tel: +44 1923 650261
Fax: +44 1923 222929
Web: www.baltoncp.com
E-mail: tk@baltoncp.com

Balton CP Ltd. Group, through its local subsidiaries in Sub-Saharan Africa, supply, install and maintain a comprehensive range of power generators from 5kVA to 2000kVA with Perkins Engines. Also included in our range are lighting towers, UPS/Voltage regulators and hybrid power generation units for the telecom industry.Solar Energy solutions and off-grid power solutions.

Agents:
Ghana - Dizengoff Ghana Ltd.
Rwanda - Balton Rwanda Ltd.
Uganda - Balton (U) Ltd.

Baudouin

Technoparc du Bregadan
Cassis
13260
France
Tel: +33 (0)4 88 68 85 00
Web: www.baudouin.com
E-mail: contact@baudouin.com

For 100 years, Baudouin has manufactured the highest quality engines for power generation and marine applications. The Baudouin PowerKit diesel, gas and variable speed engines provide a seamless range of power solutions from 18-4000 kVA. Based in France, Baudouin's global network of service points is ready to support our customers.

C. Woermann GmbH & Co. KG

Afrikahaus
Grosse Reichenstrasse 27
Hamburg
20457
Germany
Tel: +49 40 3281110
Fax: +49 40 32811122
Web: www.c-woermann.com
E-mail: info@c-woermann.de

Technical supplier for industrial machinery, workshop equipment and services, handling equipment, construction machines and agricultural equipment, forestry equipment, generators, spare parts.

Agents:
Angola - C. Woermann Angola Lda.
Ghana - C. Woermann (Ghana) Ltd.
Nigeria - C. Woermann (Nigeria) Ltd.

C.G.M. Gruppi Elettrogeni S.r.l.

Via Decima Strada 3
Arzignano (VI)
36071
Italy
Tel: +39 0444 673712
Fax: +39 0444 675384
Web: www.cgmitalia.it
E-mail: info@cgmitalia.it

CGM Gruppi Elettrogeni was established in 1980 in Italy. We export to 124 countries in 5 continents through out 51 certified distributors. We manufacture 3 to 2500kVA generators, lighting towers, and motor welding sets and provide an efficient after-sales service, maintenance and hire contracts.

Caterpillar Electric Power

PO Box 6000
76 Route de Frontenex
Geneva 6
1211
Switzerland
Tel: +41 22 849 4444/4803
Fax: +41 22 849 4982/4908
Web: www.cat.com/demand_cat

Caterpillar® offers a complete line of diesel and gas generator sets, containerised power modules, gas fuelled generator sets for cogeneration, rental units, hybrid solar and battery storage solutions, used equipment and UPS. Cat® gas fuelled generator sets, ranging from 10 to 5,900eKW, utilise natural gas, landfill gas, biogas, associated gas and other speciality gases. Cat diesel generator sets range from 10 to 13,970 eKW. Diesel engines with ACERT® Technology are capable of meeting a wide array of current emission standards. The Cat dealer network provides unmatched service and parts support, service agreements and technical training. Financial and insurance products are also available. For additional information, visit www.cat.com/demand_cat

Clarke Energy

Senator Point
South Boundary Road
L33 7RR
United Kingdom
Tel: +44 151 5464446
Web: www.clarke-energy.com
E-mail:
alex-marshall@clarke-energy.com

Clarke Energy is a multinational specialist in the engineering, installation and maintenance of reciprocating engine based power plants and gas engine compression stations. Our offering ranges from supply of an engine, through to turn-key installation of a multi-engine power plant. Our installations deliver fuel efficiency and help reduce carbon emissions.

COELMO spa

Via delle Industrie, 278
Agglomerato Industriale ASI
80011 Acerra (NA)
Italy
Tel: +39 081 8039731
Fax: +39 081 8039724
Web: www.coelmo.it
E-mail: sales@coelmo.it

Coelmo is one of the oldest European manufacturers of industrial and marine generators from 3kVA up to 3000kVA. Based in Italy, with a large stock of Generating Sets available to be shipped overnight to any destination in the world. Company profile, products and models are available online at www.coelmo.it

Crestchic Loadbanks

Second Avenue, Centrum 100
Burton on Trent
DE14 2WF
United Kingdom
Tel: +44 1283 531645
Fax: +44 1283 510103
Web: www.crestchicloadbanks.com
E-mail: sales@crestchic.co.uk

Crestchic design and manufacture AC & DC loadbanks and transformers for safely and accurately commissioning and maintaining power systems; including diesel generators, gas turbines and UPS.

Our loadbanks are used for testing AC systems and are available in packages up to 150MW, at voltages from 380V to 36kV, 50/60Hz.

Cummins Generator Technologies

Fountain Court
Lynchwood Business Park
Peterborough
PE2 6FZ
United Kingdom
Tel: +44 1733 395300
Web: www.stamford-avk.com

Cummins Generator Technologies designs and manufactures premium quality alternators up to 11,000kVA under the STAMFORD and AvK brands. Internationally renowned for built-in quality, its alternators set the standard for ruggedness, reliability and versatility. The company has several manufacturing facilities with superior customer support across the world.

Agents:
South Africa - Cummins South Africa

Deep Sea Electronics Ltd

Highfield House, Hunmanby
Industrial Estate, Hunmanby
North Yorkshire
YO14 0PH
United Kingdom
Tel: +44 1723 890099
Web: www.deepseaelectronics.com
E-mail:
sales@deepseaelectronics.com

Industry leading UK manufacturer and supplier of genset controls, ATS controls, intelligent battery chargers and vehicle and off-highway programmable controllers & displays.

DEUTZ DIESELPOWER

5 Tunney Road, Elandsfontein, 1601
South Africa
Tel: +27 11 9230600
Fax: +27 11 9230611
Web: www.deutz.co.za
E-mail: info@deutz.co.za

DEUTZ DIESELPOWER, a member of the HUDACO Group is the Sole Distributor of DEUTZ products and services for South Africa and certain key Anglophone African countries. Long service life, reliability and cost effectiveness are synonymous with DEUTZ engines and it is characteristics that have made them world-famous.

Diesel Engines Online b.v

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Netherlands
Tel: +31 180 699273
Web: www.dieselenginesonline.com
E-mail:
cynthia@dieselenginesonline.com

We deliver genuine Cummins spare parts & engines. With over 40years experience we can provide technical advice and comprehensive solutions to complex technical solutions. Large stock and good prices. We also supply D-i Industrial hydraulic marine transmissions which are produced by one of the leading manufacturers in the world.

Doosan Portable Power (DPP)

PO Box 262688
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United Arab Emirates
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Fax: +971 4 2767204
Web: www.doosanportablepower.eu
E-mail: gaby.rhayem@doosan.com

DPP is a leading manufacturer of portable Compressors, Generators and Mobile Lighting Systems for the African market.

Endcape Ltd

Interpower House, Pickering
North Yorkshire
YO18 7JA
ENGLAND
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Web: www.endcape.com
E-mail: sales@endcape.com

Endcape is a British generating set manufacturer, with over 30 years experience in the design, supply and build of prime and backup power solutions.

All equipment is built in the UK, using only British & European component suppliers. Every generator carries a full international worldwide warranty.

Our range extends from 5kVA to 3000kVA.

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Fax: +44 28 28261111
Web: www.fgwilson.com
E-mail: web_editor@fgwilson.com

Over our 50 year history, FG Wilson generator sets have been installed in more than 150 countries. From 6.8 to 2,500 kVA, our products are built in modern facilities in Europe, Asia and Latin America, to designs which have been tried and tested in the toughest of environments

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Congo DR - Unicompex
Cote DIvoire - JMG
Egypt - Triangle Heavy Equipment
Ghana - JMG
Kenya - Blackwood Hodge
Liberia - H&A Corporation
Namibia - Master Power Technologies
Nigeria - JMG
South Africa - Master Power Technologies
Sudan - Prime Diesel
Tanzania - Merrywater
Uganda - Blackwood Hodge
Zambia - Master Power Technologies

Forest City Generators Ltd

Albion House, 163-167 King Street
Dukinfield, England, SK16 4LF
United Kingdom
Tel: +44 161 4490660 / 4490770
Web: www.forestcitygenerators.com
E-mail: forestcity@compuserve.com

Supplier of diesel generator sets from 7.5kVA to 2650kVA with Perkins, Volvo and Cummins engines coupled to Mecc-Alte, Stamford or Leroy Somer alternators, soundproof canopies, control panels and transfer switch (ATS) panels and all associated OEM spare parts.

Green Power Systems S.r.l.

Localita Maiano SN
Caprazzino di Sassocorvaro (PU)
61028
Italy
Tel: +39 0722 726411
Fax: +39 0722 720092
Web: www.greenpowergen.com
E-mail:
giovanni@greenpowergen.com

Manufacturer of generating sets up to 3000kVA, 50 and 60Hz.
Green Power Generators offers:

- Generating sets with different engine types: Perkins, Cummins, Deutz, Volvo, John Deere, Iveco, Lombardini, Yanmar, Mitsubishi, Honda and Baudouin
- Generating sets with different alternator types: Mecc Alte, Stamford, Leroy Somer and Marelli
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- Customised gensets
- Natural gas and LPG gensets
- Lighting towers
- Welding machines
- Irrigation systems (motorpumps)
- Certifications ISO:9001/2000 and ISO:14001/2004

Hatz Diesel (S.A.) Pty. Ltd.

52 Lake Road
Longmeadow Business Estate Ext. 7
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South Africa
Tel: +27 11 5 74 09 00
Fax: +27 11 5 74 09 39
Web: www.hatz.co.za/en/home/
Email: engines@hatz.co.za

Hatz manufacturer a range of quality engines and generators to a high European standard. Specialising in both air cooled and watercooled units we can manufacture to your specific requirements and can support the product world wide throughout our extensive network.

Huegli Tech Ltd.

Murgenthalstrasse 30
CH - 4900 Langenthal
Switzerland
Tel: +41 62 916 50 30
Fax: +41 62 916 50 35
Web: www.huegli-tech.com
E-mail: sales@huegli-tech.com

Huegli Tech is an engine and genset control company, a leading supplier and wholesaler of accessories for combustion engines, fueled by diesel and/or gas. Our core competences are generating set controls, engine governing systems, hydraulic starting system, gas engine management systems, ignition systems, engine protection devices, dual fuel conversions, etc.

Inmesol S.L.

Ctra. Fuente Álamo
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30153
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Fax: +34 968 380400
Web: www.inmesol.com
E-mail: inmesol@inmesol.com

INMESOL – Manufacturer of generator sets, lighting towers, parallel systems, and gensets for hybrid electric power generation systems. With more than 25 years in the market, INMESOL S.L. is a Spanish company that designs, manufactures, markets and provides technical support service for technologically leading gensets, in both open and soundproofed versions and from 2.5 to 2,500 kVA (PRP), lighting towers, and parallel systems. INMESOL's highly specialised technical team enables it to meet specific requirements from the most demanding markets, offering optimal solutions for each one of them. It is currently present in more than 80 countries around the world, with equipment installed in all types of applications and uses.

JCB Power Products

Hixon Airfield Industrial Estate
Hixon
Staffordshire
ST180PF
United Kingdom
Tel: +44 1889 272200
Web: www.jcb.com/en-gb/products/generators
E-mail: generator.sales@jcb.com

JCB specialises in supplying a range of reliable diesel generators from 8-2,750kVA. We are committed to selling the highest quality power solutions and focused on delivering outstanding service and support through our local distributors, to ensure your power stays switched-on!

John Deere Power Systems

Orléans-Saran Unit
BP 11013
Fleury Les Aubrais Cedex
45401
France
Tel: +33 2 38826119
Fax: +33 2 38846266
Web: www.johndeere.com
E-mail: jdengine@johndeere.com

John Deere Power systems develops, manufactures and markets diesel engines for a large variety of generator sets, compressors, industrial and agricultural applications. John Deere is one of the very few engine manufacturers that doesn't make gen-sets, this makes us unbiased partners with gen-set OEMs, offering them a robust power generation line-up from 30 to 500 kVA.

Jubaili Bros

Jebel Ali Free Zone
United Arab Emirates
Tel: +971 4 8832023
Fax: +971 4 8832053
Web: www.JubailiBros.com
E-mail: jbdubai@jubailibros.com

Jubaili Bros with over 40 years of experience, is a leading provider of Power Solutions in the Middle East, Africa and Asia. Jubaili Bros serves its customers by offering high quality diesel generating sets through 9 countries with 3 manufacturing plants and 28 branches & service centres that are dedicated to customer satisfaction.
Jubaili Bros is an official Perkins Engines Electric Power Self Service OEM.

Agents:

Ghana - Jubaili Bros (Ghana)
Nigeria - Jubaili Bros Engineering Ltd.
South Africa - Jubaili Bros Pty Ltd.
Uganda - Jubaili Bros (Uganda)

Linz Electric S.p.A

LINZ ELECTRIC®

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Linz Electric S.p.A is specialised in the production of alternators from 1.7kVA up to 1500kVA and rotating welders up to 500 amps. The main focus of Linz Electric is the customer's satisfaction through the top product quality, quick and complete service.

Lovato Electric S.p.A.

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World leader manufacturer of electrochemical and electronic components for genset control panels. Our range includes generator controllers, automatic transfer switch controllers, battery chargers, changeover contactors and switches and more!

MAN Energy Solutions SE

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MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the w ay in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.

Mantrac Group

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Mantrac Group is the authorized Caterpillar dealer, distributing and supporting Caterpillar construction machines, power systems and material-handling equipment in Egypt, Kenya, Tanzania, Uganda, Nigeria, Ghana, Sierra Leone, Iraq and Siberia- Russia. With over 3000 employees and decades of experience as a Caterpillar dealer, we provide customers with comprehensive solutions backed by technical know-how, experience and in-depth knowledge of their local markets.

We supply CAT diesel generators from 250 kVA up to 8000 kVA, olympian fully enclosed generators sets from 8 kVA - 220 kVA, automatic transfer switches, natural gas engines and gensets, CAT marine propulsion engines, marine gensets, power modules. More than a supplier of generator sets, we specialize in power plant turnkey installations and heat-recovery applications. Our extensive work scope includes engineering, design, testing, installation, on-site commissioning, and training as well as long term service and support.

MARGEN S.p.A.

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Margen SPA, since 1963.
Manufacturing range single unit: up to 5000 kVA, including automatic and parallel control boards.

Skills: customised design. Independent energy stations, integrating power generation and storage by all the energy sources.

Cogeneration and Trigeneration. Activities: sales, production, spare parts, after-sale.

Certifications:

ISO9001, UL, EAC, MTU, GAZPROM, ENI

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Mecc Alte develops high performing alternator solutions within low to high voltage power classes for stand-by and prime power applications. Combining independent thinking with agile supply and committed service, it delivers next generation products with intelligent capabilities for OEMS looking for greater efficiency and reliability.

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MTU is a Rolls-Royce solutions brand. World-renowned for its diesel and gas engines, MTU systems provide energy for the world's most important mission-critical applications. Fulfilling customer requirements for maximum availability, MTU integrated solutions strongly focus on emissions reduction, digitalization and a range of environmentally friendly future technologies.

Agents:

South Africa - MTU Africa (Pty) Ltd

Nidec Leroy-Somer - Electric Power Generation

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Nidec Leroy-Somer Electric Power Generation, a business unit of the Nidec Group, is a leader in industrial alternators with power ranging from 10kW to 25MW. With its two leading brand, Leroy-Somer and Kato Engineering, EPG works with generator set manufacturers and electric power producers in these areas to help the industry provide reliable and efficient power solutions.

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Perkins is a world leading supplier of off-highway diesel engines, offering power up to 2500 kVA. Our cost effective solutions, from competitive fuel consumption to ease of maintenance, whatever the power requirement, add real value to our customers' equipment.

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PHENIX Technologies designs and manufactures high voltage, high current, high power electrical testing equipment for testing cables, circuit breakers, generators, GIS/switchgear, insulation materials, motors, reclosers, transformers, utility worker's rubber protective gear. PHENIX Technologies offers a wide range of testing solutions, 40+ years of experience, and is ISO9001 quality compliant.

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Power Solutions has grown from a temporary power provider based out of Belgium to a business now serving customers to all over Europe, Africa, South America and the Middle East. With a custom build fleet we can react quickly to any temporary power demand across a large variety of industrial sectors.

SAB, Standard Aggregatebau Evers GmbH & Co. KG

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Reputable German manufacturer of diesel-driven generating sets from 50 to 4000 kVA in stationary, transportable or mobile executions for standby, peak load or base load applications world-wide. Main competencies are the planning, designing, manufacturing, installation and servicing of global plant constructions under consideration of individual customer and project requirements.

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SDMO Industries is one of the world's leading generating sets manufacturers. A wide range of standard products from 1 kVA to several Megawatts through an efficient engineering department meets non-standard requirements. Present in over 150 countries through a dense network, SDMO Industries devotes its energy to supporting you in the successful completion of each of your projects world wide.

Agents:
Algeria - SDMO Alger
Egypt - SDMO Cairo
South Africa - SDMO South Africa
Togo - SDMO West Africa

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Siemens develops engines in its Power and Gas division business, Siemens Engine Business and is a leading international technology provider in both liquid and gas fuel engines for a wide range of applications and sectors of activity. The range of power offered by the SEB portfolio ranges from 150 to 2065 kW for gas

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Stodec Trading Ltd specialise iin the design and installation of storage and materials handling equipment including mezzanine floors, pallet racking, shelving, industrial partioning, and general industrial equipment supply worldwide. We are the franchised design and supply distributor for Dexion products which have been the leading storage products throughout the world for more than 60 years. Stodec Trading Ltd can provide layout designs and structural calculations for warehouse interiors based on over 50 years of experience. We specialise in keeping your products and parts protected, readily available, accessible, secure and contained in the best effective space. Our customers include oil & gas, mining, retail, pharmaceutical, aerospace, logistics, agriculture and general manufacturing.

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Teksan Generator, a leading Turkish engineering and technology company established in 1994, manufactures tailor-made uninterrupted power solutions that efficiently operate under the most challenging conditions for major international projects such as construction, telecommunication, data centers, shopping malls, hotels, residences, stadiums, mines, hospitals and industrial plants in more than 130 countries.

Agents:
Egypt - Mohamed Ahmed Ahmed El Tawil and Partners - RICH UNI
Kenya - Famiar Generating Systems Limited
Libya - BELHAJ INTERNATIONAL COMPANY
South Africa - M Squared Facilities Management
Sudan - MTWA International Investment Co. Ltd.

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Visa SpA is one of the world's leading gensets suppliers, based in Italy, designing and manufacturing diesel generators, from 9 to 3000kVA, in standard or customized versions to meet your every need in a large variety of applications. With Its network currently present in more than 90 countries worldwide, it provides versatile, high-tech energy solutions, guaranteeing a highly operational flexibility and qualitative standards for which it has become a leader in the market for 60 years.

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Volvo Penta is a world leading and global manufacturer of engines and complete power systems for both marine and industrial applications. The Volvo Penta Industrial engine range covers diesel engines for electrical power generation and industrial diesel engines for different stationary and mobile off-road applications. Our engines meet both the most stringent exhaust emission levels, Tier 4/Stage 4, but are also available in lower Tier versions. Volvo Penta has a global coverage with around 4000 dealers in 130 countries.
Volvo Penta is a part of the Volvo Group, one of the world's leading manufacturers of trucks, buses and construction equipment.

Agents:
Congo Brazzaville - SMT Congo (Brazzaville)
Congo Brazzaville - SMT Congo (Pointe Noire)
Congo DR - SMT RD Congo (Kinshasa)
Congo DR - SMT RD Congo (Lubumbashi)
Egypt - Orascom Trading Co.
Nigeria - Marine and Land Logistics Ltd.
Nigeria - SMT Nigeria (Abuja)
Nigeria - SMT Nigeria (Lagos)
Nigeria - SMT Nigeria (Port Harcourt)

WIRTGEN Group Branch of John Deere GmbH & Co.KG

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The WIRTGEN GROUP is an internationally active group of companies in the construction equipment industry, comprising the brands WIRTGEN, VÖGELE, HAMM, KLEEMANN, BENNINGHOVEN and CIBER. Products include cold milling machines, recyclers, slipform pavers, surface miners, asphalt pavers, rollers, crushers, screens and asphalt mixing plants.

Agents:
Algeria - T.P.S. SARL Tractor Parts Services
Angola - Movicortes Angola – Equipamentos & Serviços
Burundi - Panafrican Equipment Ltd.
Cameroon - Kanu Equipment Cameroun Sàr
Cape Verde - MOVITER – Equipamentos, Lda
Comoro Islands - UMCL Ltd.
Congo DR - DEM D.R. CONGO
Cote DIvoire - DEM Côte d'Ivoire
Djibouti - Moenco
Egypt - ACE Arabian Company for Engineering
Ethiopia - Moenco
Ghana - DEM Ghana
Kenya - Panafrican Equipment Ltd.
Lesotho - WIRTGEN South Africa (Pty) Ltd.
Liberia - Kanu Equipment Libéria Ltd.
Libya - WIRTGEN Libya J. C.
Madagascar - UMCL Ltd.
Malawi - DEM Group SA
Mali - DEM Senegal
Mauritius - UMCL Ltd.
Morocco - SMDM – Société Marocaine de Distribution de Matériel
Mozambique - Movicortes Mocambique, Lda.
Namibia - WIRTGEN South Africa (Pty) Ltd.
Rwanda - Panafrican Equipment Ltd.
Senegal - DEM Senegal
Sierra Leone - Kanu Equipment Sierra Leone Ltd.
South Africa - Wirtgen South Africa
South Sudan - Machine Afrik Co. Ltd.
Sudan - Machine Afrik Co. Ltd.
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Reliable prime, standby or continuous power diesel generators that guarantee optimum uptime of any operation are readily available from Zest WEG. Generator sets are available as standard off the shelf units or as custom built, application specific units ranging from 10kVA up to 3350kVA.

Agents:
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Section Two: Agents & Subsidiaries in Africa

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DRC and GE sign a MOU to supply power for infrastructure projects

Image Credit: GE

George Njenga, CEO for GE Renewable Energy SSA with Minister of Hydraulic Resources and Electricity, Hon. Eustache Muhanzi Mubembe and the Minister of Health, Hon. Dr Eteni Longondo during the signing ceremony.

The Government of the Democratic Republic of the Congo (DRC) and General Electric have announced signing of a Memorandum of Understanding (MoU) in regard to infrastructure projects enabling the increase in the supply of electric energy and health modernisation programmes. The three-year MoU seeks to accelerate the economic and social development of the country.

Under the MoU, GE will work with the government to explore power solutions that will increase electricity to the country's grid to benefit thousands of households. GE will also work with the Ministry of Health for the modernisation of the country's health system at the primary, secondary and tertiary levels as well as the infrastructures and equipment for maternal and child health, cardiology, and oncology. The partnership will also focus on training and capacity-building of local talent for the sustainability of the initiatives.

Speaking about the signing, GE Africa President and CEO Farid Fezoua said, "Partnership with governments and local companies form a very important part of GE's growth in Africa, and we are honoured to collaborate with the government of the DRC as a key strategic partner for the country's long-term development agenda. This gives us the opportunity to deliver innovative solutions to meet the unmet demand for the millions of citizens without electricity and those without access to quality healthcare."

GE is currently involved in the rehabilitation of Inga IIB power plant and of Nseke Power Plant in the DRC and has successfully implemented renovation projects with the first interventional cardiology and CT Scanner with 128 systems installed at the HJ Hospital and a new imaging centre of Camp Kokolo. In the past, GE Healthcare also led the installation of the Scanner 16 slices at Panzi Hospital, giving thousands of citizens access to the latest diagnostic solutions.

GE first started operating in sub-Saharan Africa more than 120 years ago.

WASTE FACILITY WORK GETS UNDERWAY

Construction work has begun on a new regional waste disposal facility in Mossel Bay, Cape Town, according to MEC Anton Bredell, Minister of Local Government, Environmental Affairs and Development in the Western Cape. It will be one of nine facilities in the province aimed at tackling the growing waste problem.

The 115-hectare waste site, divided into domestic and hazardous waste, will serve Bitou, Knysna, George and Mossel Bay.

"South Africa has a serious waste problem. We are running out of landfill space everywhere and the increased cost and growing environmental issues is a problem that we must tackle head-on before it is too late," said Bredell.

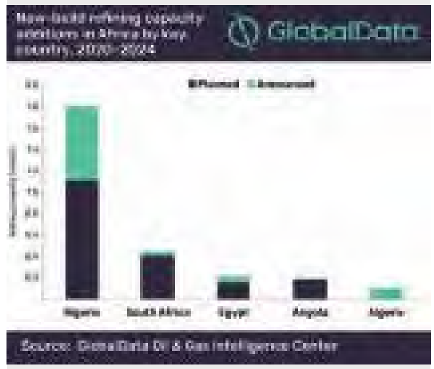
Additionally, bulk waste transport services will be available to George Municipality to transport waste from Uniondale and George Waste Transfer Stations.

REFINING CAPACITY SET TO GROW BY 2024

Nigeria is set to lead refining capacity additions from planned and announced new-build projects in Africa by 2024, according GlobalData, a leading data and analytics company.

The Global Refining Industry Outlook to 2024 report reveals that Nigeria would add 1.8 million barrels per day (mmbd) of planned and announced crude oil refining capacity by 2024. Of this, 1.1mmbd comes from the planned refineries, while the early-stage announced projects contribute the remaining 0.7mmbd by 2024.

Adithya Rekha, Oil and Gas Analyst at GlobalData, said, "Out of 64 upcoming refineries in Africa, a total of 43 planned and announced refineries are expected to start operations in Nigeria during the period 2020–2024."



GlobalData expects South Africa to be the second largest country in Africa in terms of planned and announced refining capacity additions. It is likely to add 445mbd of refining capacity by 2024. The Coega refinery accounts for most of the capacity additions in the country with 400 mbd.

Egypt occupies third place in Africa with planned refining capacity of 209mbd by 2024. The Soukhna refinery is the largest upcoming refinery in the country with an expected refining capacity of 155mbd.

BRIEFS

Deal brokered over Ethiopia dam

Image Credit: Salini Impregilo

Ethiopia's Renaissance Dam will be the biggest in Africa.

Egypt, Ethiopia and Sudan have reportedly reached a preliminary agreement on the filling and operation of the Ethiopia Renaissance Dam – Africa's biggest hydro-electric dam.
The US treasury secretary and the World Bank president brokered the deal, the BBC reported. The dam's progress was halted due to a breakdown in negotiations between Ethiopia and Egypt, which fears the dam will disrupt water supplies. No deadline was set in the agreement.

CHRYSO helps secure future of Kariba Dam

Image Credit: CHRYSO Southern Africa

The first concrete pier set to float, which has a total length five metres.

The multi-million euro project to reshape the plunge pool at the Kariba Dam wall has CHRYSO's concrete admixtures to ensure optimal results. Working closely with main contractor Razel-Bec is Mart Solutions, the Zambian distributor for CHRYSO Southern Africa. Martie Coulson, Mart Solutions director, said, "Teamwork is vital between Mart Solutions, CHRYSO and Razel-Bec to ensure the specified concrete mixes are achieved to the consultants' exacting standards. "

EAC hosts 30th partnership for Africa's development facility

The new Partnership for Africa's Development Infrastructure Project Preparation Facility (NEPAD-IPPF) held its 30th Oversight Committee meeting for the special fund at the headquarters of the East African Community, in Arusha, Tanzania.

Image Credit: AfDB

The 30th new partnership underway for Africa's Development Infrastructure Project Preparation Facility.

The meeting, which took place from 13-14 February, convened more than 30 participants, including donors providing financial support to the NEPAD-IPPF Special Fund, representatives of the African Development Bank, African Union Commission, African Union Development Agency (AUDA-NEPAD), Regional Economic Communities, Regional Power Pools, Corridors Authorities and Transboundary River basin organizations.

Members agreed to implement recommendations of NEPAD-IPPF's independent evaluation held in 2019, and approved operational reforms and the 2020 work program.

EAC Deputy Secretary General in charge of planning and infrastructure, Steven Mlote, thanked the bank for its generous support over the past 20 years, which he said had resulted in numerous achievements in various sectors including transport, energy, one stop border posts, ICT and Trans-Boundary Water Projects.

He said the Arusha-Tengeru dual carriageway and the Arusha by-pass had substantially improved traffic flow in the Arusha region while the counterpart section in Kenya – the Taveta-Mwatate road, has opened up a shorter trade route for Rwanda and Burundi from Mombasa Port.

"Along the Coast of East Africa, the transport corridor from Malindi in Kenya to Bagamoyo in Tanzania is due for upgrading with funds from the Bank. It is gratifying to note that its preparation was funded by the NEPAD-IPPF. This road will close the missing surface transport link between the EAC and SADC regions which traverses Kenya, Tanzania and Mozambique," he added.

The successes of initial bank-funded multinational projects between Kenya and Tanzania provided the impetus to widen the geographical spread to other EAC partner states with projects underway to link Tanzania to the three landlocked states of Rwanda, Burundi and Uganda.

"To date, NEPAD-IPPF has extended support to the EAC to the tune of almost $15 million for road and rail soft infrastructure projects over a period of 13 years," said Mlote.

Also represented at the meeting were development partners KfW, and the Spanish Ministry of Economy and Business which both acknowledged the pivotal role NEPAD-IPPF continues to play in the infrastructure space on the continent. They equally recognised the need for more resources to enable the fund to achieve more.

Laura González Villarejo representing the Ministry of Economy, Spain said in her statement that Africa is a priority region for Spain. She added that the Spanish Council of Ministers' long term strategic plan for Africa demonstrated the interest of Spain in Africa.

Michael Andres from KfW, the Oversight Committee Chairman, reiterated the support of Germany for the Fund. He thanked the NEPAD-IPPF team led by Mike Salawou, Bank Division Manager Infrastructure & Partnerships, for the good performance of the fund during 2019, for a well-organised meeting and the East African Community Secretariat for hosting the event.

The Parc Eolien Taiba N'Diaye farm in Senegal.

Image Credit: Lekela

Two major milestones for Lekela in Senegal and Egypt

Senegal has switched on West Africa's first-ever wind farm with the official opening of 158.7MW Parc Eolien Taiba N'Diaye, while Egypt marks the start of constructing the 250MW West Bakr Wind farm.

Lekela, a renewable power generation company which delivers utility-scale projects across Africa, celebrated two major milestones at the end of February: the inauguration of its flagship Parc Eolien Taiba N'Diaye (PETN) project in Senegal, which provides the first ever utility-scale wind power in West Africa; and its groundbreaking 250MW West Bakr Wind Project in Egypt.

The inauguration of PETN marked the official opening of a wind farm that will provide power for more than two million people. As West Africa's first utility-scale wind farm, PETN consists of 46 Vestas wind turbines producing 158.7MW. The first phase is now producing electricity, with 16 wind turbines generating up to 50MW. Once fully completed later in 2020, PETN will provide a 15 per cent uplift to Senegal's generation capacity. The project will generate electricity for Senegal for 20 years.

PETN was officially inaugurated by the President of Senegal, Macky Sall. Also attending the ceremony were Minister of Petroleum and Energy, Mouhamadou Makhtar Cissé; Her Excellency Tulinabo S. Mushingi and Her Excellency Victoria Billing, ambassadors for the USA and UK respectively; Papa Mademba Biteye, CEO of Senelec, and a delegation from the World Bank.

To celebrate Egypt's West Bakr Wind Project, an event was held at Cairo's new Administrative Capital, which was attended by Lekela stakeholders and partners, including the Minister of Electricity and Renewable Energy, the Minister of Environment and the Minister of Planning. Senior government executives from the Egyptian Electricity Transmission Company, the Egyptian Electricity Holding Company and the New and Renewable Energy Authority were present as well.

Located 30km north-west of Ras Ghareb, West Bakr Wind is part of the government's Build-Own-Operate (BOO) scheme. It will provide an additional 250 MW of clean energy to the grid, increasing Egypt's wind energy capacity as the country strives to meet its target of generating 20 per cent of its electricity from renewable sources by 2022. The project will prevent more than 550,000 tonnes of carbon dioxide emissions per year.

Construction works being carried out at Egypt's West Bakr wind project.

Image Credit: Lekela

Both West Bakr Wind and PETN are deploying 20-year community investment plans in their respective local areas. These are designed to address pressing socio-economic development challenges and ensure sustained improvements for communities, even after the end of wind farm operations in the future.

At West Bakr Wind, for example, migrating birds will be protected through the development of a "shut down on demand" programme. At PETN, two new marketplaces have been constructed and a new IT centre has been built for local schoolchildren. The programme of socio-economic investments at PETN is estimated to contribute up to US$20mn over the lifetime of the wind farm.

Chris Antonopoulos, CEO at Lekela said, "We have been working towards this day for several years now. It's a big moment for Lekela and proof that clean energy can be built right across the African continent, quickly and cheaply. In just four years, we have become one of the largest pure renewable energy providers on the continent, with more than 1,000MW now in construction or operation.

"To be able to open the first ever large-scale wind farm in West Africa is a historic moment for Senegal. This clean, cheap source of energy will be used by millions of people and hopefully sets a template for other countries to follow.

"We are also thrilled to begin construction at West Bakr which marks our first project with the Egyptian Government. We look forward to opening this project in less than two years' time and working with the government on more opportunities in the future." ■

Green machines

A new breed of excavator machines built for power and performance, but with a focus on fuel-efficiency for the environmental era.

HITACHI 120-T EX1200-7 EXCAVATOR

A new arrival in Africa, Hitachi's 120-t EX1200-7 excavator is a member of the EX-7 series line-up, following the earlier launch of the EX2600-7 and EX5600-7. It provides increased efficiency, reliability and durability for customers. Available in a backhoe or shovel configuration, the EX1200-7 is the smallest mining excavator in the series and also serves as a crossover machine for construction customers. Highly versatile, it delivers a combination of power and the latest technologies to get the job done, whether its large-scale excavation or mining.

Hitachi's Fuel Consumption Optimisation (FCO) technology means the EX1200-7 improves total fuel economy by 6 per cent as compared to the previous model (the EX1200-6) through engine and hydraulic system improvements, and a 4.5 per cent increase in bucket capacity. Equipped with optimised swing control, the new machine has an improved hydraulic system with a flow regeneration valve to reduce power requirements from the hydraulic system and engine, lowering fuel consumption and improving pump life. At the end of last year, upon its arrival in South Africa, Marius Weber, Hitachi Construction Machinery Africa's marketing & business development manager, told local press that it was a step forward for improving environmental performance.

He said,"Fuel efficiency was a major factor in the design of the EX-7 Series because we recognised the importance of caring for the environment while remaining profitable. These machines make this easier than ever before."

LIEBHERR R 920 EXCAVATOR

One of the familiar names in Africa's construction and mining sectors, Liebherr excavators are built to last, with exclusive Liebherr sub-assemblies and robust cast steel components that stand up to the toughest environments.

The R 920 concept is based on the standard European models with high levels of reliability and increased productivity combined with low fuel consumption. Launched onto the market at bauma 2016, the R 920 is accompanied by a revamp of the range of 20- to 25-tonne crawler excavators. In addition to the R 920 are the R 922 and R 924. The R 922 weighs 22 tonnes and has an output of 110 kW/150 HP and the R 924 weighs 24 tonnes and has an output of 125 kW/170 HP. These machines are aimed at less regulated markets like South Africa, South East Asia, Russia, China and India.

BOBCAT MINI-EXCAVATORS

Taking performance and innovation to new levels, Bobcat's R-Series range of mini-excavators from 2-4 tonne comprises five models – the E26, E27z, E27, E34 and E35z – offering a best-in-class mix of high digging forces, superb stability and smooth controllability of working functions, complemented by low weights for easy transportation.

The excavators introduce many state-of-the-art features and offer enhanced levels of quality and robustness. They utilise newly developed flexible machine platforms that allow different configurations of models and specifications to suit a wide range of applications and customer needs. In addition, the new machines offer greatly enhanced operator comfort and functionality and the best fit for vital operations.

CAT 306.5 NEXT GENERATION MINI-EXCAVATOR

The new Cat 306.5 Mini Hydraulic Excavator marks Caterpillar's entry within the 6-tonne class offering in Africa, Middle East and Eurasia. Designed with an improved customer experience in mind, the 306.5 mini excavator is built to exceed customer expectations with strong performance, enhanced operator experience and simplified maintenance with extended service intervals. With standard exclusive features like Stick Steer and a new Next Generation LCD monitor, it provides value for customers and boasts versatility with industry leading performance.

The new mini-excavator features heavy-duty main structures, a fuel-efficient engine, load-sensing hydraulics, a spacious sealed and pressurised cab, and exclusive Cat Stick Steer system. It shares a similar controls layout and common components with the full line of Cat Next Generation mini excavators to simplify training, offer quick adaptation for operation, and lower owning/operating costs.

The 306.5 delivers a maximum dig depth of 3,902 mm (153.6 in) and 6,175 kg (13,614 lb) operating weight. Built with a fixed boom, this Next Generation mini-excavator has a standard radius 1 585mm (62.4 in) tail swing with counterweight to provide stability.

Sand scramble

A building boom in Africa has generated massive demand for cement, sand and gravel – but the industry faces a volatile supply situation. Barry Mansfield finds out more.

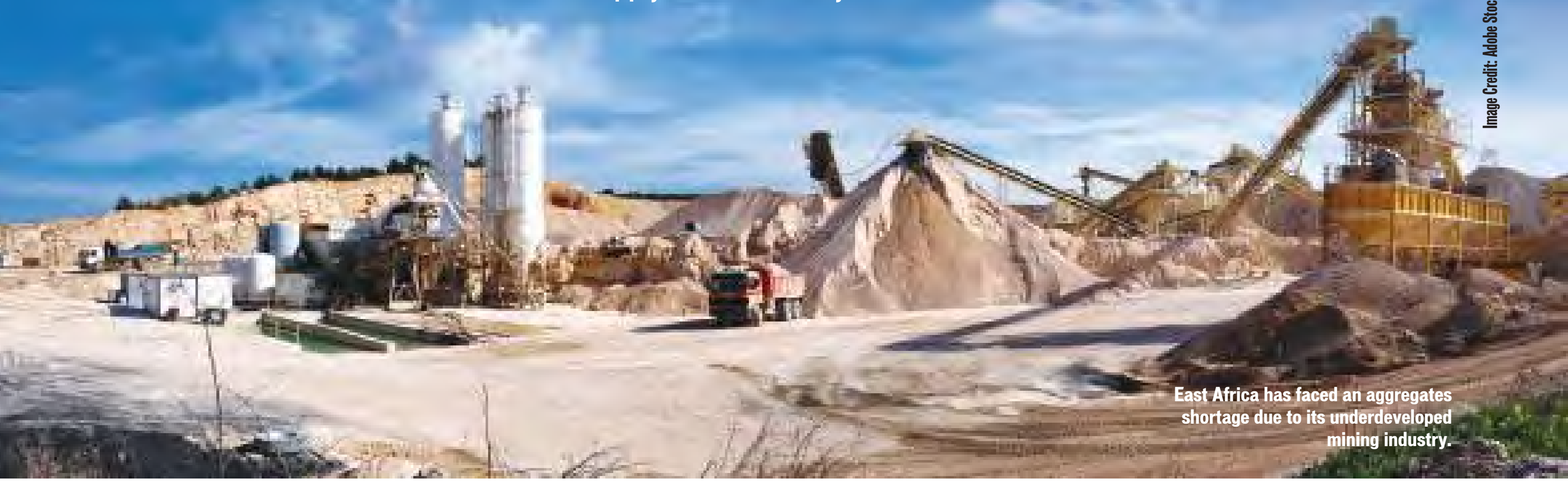


Image Credit: Adobe Stock

East Africa has faced an aggregates shortage due to its underdeveloped mining industry.

An impressive increase in purchasing power, intensified demand for housing (brought about by a rapidly expanding urban population) and ramped up investment in infrastructure projects continent-wide, have led to a huge need for construction materials across Africa – especially sand, gravel, crushed stones and cement. Gambia and Nigeria have increased sand production, considerably in the last decade (Nigeria, Senegal and Ghana are the largest cement markets and analysts expect this to remain the case as international investors continue to bet on Africa).

Africa's leading cement maker, Dangote, has invested in a Cameroon grinding plant with a view to supply markets in Chad, the Central African Republic and Gabon. In early March, the firm announced that it would begin shipping cement from its 1.5mt/yr Mfila plant in Bouenza, Congo, to nearby nations. Developments like the Calabar-Katsina-Ala superhighway, Lagos Free Trade Zone port, Onne Port Complex, Eko Atlantic City, Olokola deepwater port and myriad mining projects mean that West Africa now occupies pole position in terms of the greatest value of projects underway.

The other two large players in West Africa's cement industry are France's LafargeHolcim and Germany's HeidelbergCement, with the latter running a grinding plant in Burkino Faso and a clinker plant in Togo (in early January it announced a US$30mn investment in Cimtogo's Lomé factory with the goal of raising grinding capacity by a million tons per annum, while adding to the existing 4,000 local positions and planning additional investments of US$220mn over the next decade). LafargeHolcim is expecting to meet demand by doubling its Unicem plant and expanding capacity at Ashaka Cement.

Meanwhile, East Africa has faced an aggregates shortage because of its relatively underdeveloped mining industry. Kenya recently completed the five-year construction of 10,000km of roads to bitumen standard; however, only around 10 per cent of the entire classified road network in East Africa is paved and governments are looking to change that with EAC Vision 2050. The African Development Bank warns that Tanzania's urbanisation trend has resulted in a shortfall of three million housing units, while Kenya and Uganda are struggling with a shortfall of two million and one and half million units respectively.

The growth of Rwanda's aggregates market, like those of Kenya and Uganda, is expected to be powered by a strong construction project portfolio especially the housing sub-sector, with current demand increasing by more than 20,000 units annually according to the country's mining ministry. Lack of affordable materials is recognised as a structural weakness for the building sector – a problem that inspired the government to invest US$15mn in quarrying and granite processing, with its formation of the East African Granite Industries (EAGI).

The US$3.6bn Standard Gauge Railway (SGR) connecting Mombasa to the Kenyan capital Nairobi is the latest mega project to push up demand for sand and gravel, bringing huge controversy in its wake. Contractors needed the material to make concrete rail sleepers and T-beams for reinforcement of 30km of bridges along the 600km modern railway corridor. It has been suggested the construction of just one new port terminal at Mombasa required five million tonnes of sand dredged from the seabed near Diani beach, causing anger among local leaders and NGOs.

Environmental challenges

The ecological implications of this soaring demand for cement have been highlighted by the United Nations Environment Programme (UNEP), which suggests that each tonne of cement used in construction requires seven times more tonnes of sand and gravel. The second and third terminals at Mombasa will demand more sand and stones to create a larger dry space along the Indian Ocean. Although the dredging at Diani has been abandoned, campaigners have warned of topographical and hydrological changes, sandless rocky beaches and damage to the coral and marine life.

However, Kenya's massive limestone deposits have also attracted cement manufacturers, including Dangote. Despite nagging land acquisition obstacles and legal battles between the mining investors and local communities, progress has been made in the monetisation of the region's limestone resources. Dangote, with an estimated market capitalisation of more than US$25bn, scrapped its initial plans for a US$400mn cement plant in Kitui County, but eventually signed a US$1.5bn deal with China's Sinoma International Engineering Co for plants in Kanziku-Simisi and Tanzania.

The owner of Dangote Group, Africa's wealthiest man Aliko Dangote, has described the investment as part of a plan to ramp up the company's total output of cement by 30 per cent to more than 60 million tonnes. As for Dangote's success within Nigeria, this is attributed to the company's use of local coal to improve fuel security, stabilise production uptime and minimise reliance on foreign currency. Using Nigerian suppliers helped to phase out expensive low pour fuel oil in the kilns, while also reducing coal imports. There is a ban on imports of foreign-made cement into the country.

Dangote's expansion plans

The billionaire plans to add six million tons in Nigeria next year, taking volume in the company's home market to 35 million tons, with the rest of the expansion planned mostly for Niger and Côte d'Ivoire. Dangote eventually wants to invest 60 per cent of company profits outside Africa. Despite the company's incredible success, it has faced severe disruption within Nigeria due to local political events – its exports dived by an astonishing 40 per cent last year when the Nigerian border was closed in an effort to tackle rice smuggling and the illegal weapons trade.

In the race for minerals across Africa, public concern over environmental damage persists – and limestone extraction is no exception. Kenya's National Cement, which sells the Simba brand, has secured 2,000 acres in Kajiado County for limestone mining to feed the planned local clinker plant. An Environmental Impact Assessment (EIA) report confirms that the site will be an open mine; blasting will be used for hard limestone, but shale and sand can be removed using mechanical excavators. Limestone will be removed in sections to minimise long-term effects on the terrain. ■


Shale and sand are removed by excavators in mining operations.

Image Credit: Adobe Stock

Dressta unveils new TD-16N dozers

Dressta's new dozer made its eagerly anticipated debut at construction machinery show, Conexpo-Con/Agg. The TD-16N is a revolutionary dozer that sets a new benchmark for visibility.

Right from day one, the LiuGong Dressta design team's brief was simple – create the best all-round dozer for the customer. The Red Dot award-winning team headed by Edward Wagner (executive director of New Technology) and Gary Major (executive director of Industrial Design) knew that listening to the operator was critical to designing something truly unique.

Wagner recalls, "We literally started with the operator, the blade and the tracks and then built everything around them without compromise." The result is a dozer with unrivalled all-round visibility encompassing 309 degrees. According to Major, "We set out to create the best visibility in class – I think we've achieved that, but the real test is to put a seasoned operator in a cab and ask him."

To test the "theory" the Dressta team invited a select group of operators to preview and test the machine prior to the Conexpo-Con/Agg show in Las Vegas on 10-14 March. Irish operator Neil John Mckeown was clearly impressed, "It's like sitting without a cab – you have the visibility right round you."

These sentiments were echoed by American equipment owner and dealer Rob Winmill, "The visibility is second to none. Floor to ceiling glass, no obstructions, you can't do better than that."

French operator Ignace Hoareau was more economic with his words but equally enthusiastic for the new design, his first impression was simply "Wow!"

The dozer features a mid-cab design over a mid-mounted automatic, dual path hydrostatic drive train. It comes with a standard 6-way angle blade and it is compatible with 2D and 3D grade control systems. Controls are easily accessible intuitive, and easy to use thanks to the electro-hydraulic joysticks. With an operating weight of 19,090 kg (42,090 lb) and net horsepower of 170 hp (127kW), it has the power and performance Dressta is well known for.

This next generation dozer is a game changer when it comes to versatility thanks to its unique undercarriage design, which utilises a single-track gauge for all track shoe widths. This allows the dozer to be reconfigured at any point in its life, from standard to LGP undercarriage, by simply just changing the track shoes and the blade. This feature increases versatility and will improve resale values by allowing future owners to reconfigure the machine to perfectly match their needs.

Whilst visibility and performance were high on the design team's agenda it was not the only consideration; operator safety was also a priority. According to Major, "Every operator out there has a story about falling off the tracks… this is the first machine where you don't have to get onto the tracks." Firstly, the team designed non-slip steps at the rear of the machine totally negating the need to step onto the tracks. Complete with safety handrails, these steps allow easy access to and from the cab with three points of contact maintained at all times. The TD16N is the only dozer in its size class with this type of "no tracks" access. Secondly, they ensured that all access points for daily checks, maintenance and fuelling were reachable from ground level. Irish operator Neil John Mckeown was clearly impressed. "The steps up the back give really easy access – good idea! Daily checks are perfect, you don't have to go on to the tracks, it's all done from the ground."

With the new TD-16N, Dressta are convinced that they have set the new benchmark for visibility and in so doing, have created a safer and more productive machine.

According to Dressta Chairman, Howard Dale, "Everything we do, we do to make our machines deliver more. The superior visibility of this machine will certainly help operators be more productive and do a better job in less time. We also know that this machine will make the worksite safer for everyone. The easy access for daily checks and maintenance is going to reduce downtime and ensure that this machine keeps working and delivering."

Clearly Dressta are very proud of this new dozer but actions always speak louder than words. Howard Dale in typically bullish form is clear that the only way to prove Dressta's claims is to get operators into the cab. "What we unveiled at ConExpo is truly a unique machine that sets the new benchmark for the industry. My challenge to professional operators is to come and see it for yourselves, climb into the cab, take your seat, only then will you see what you've been missing!" ■

For more information visit www.td-16n.dressta.com

MORE PRODUCTS FROM CONEXPO-CON/AGG

CARMIX 3500 TC

The Carmix 3500 TC: the off-road mobile batching plant speaks the language of design, innovation and advanced technology, without forgetting quality and reliability.

The search for a new design comes from the company's will to offer machines with a careful aesthetic look that can provide top-level performance and great reliability on the worksite. This "clever" design has been developed to offer superior comfort to users, with improved ergonomic controls, all-round visibility and air-conditioned cabin. Greater operator comfort means more satisfaction and safety, therefore productivity.

Consistently with the whole Carmix range, the 3500 TC model has advanced technology and good design to create powerful and versatile working tools.

Its features include a batching unit with a material yield of 3.5 m^3 with double mixing screws; mixing and discharge speed, independent from rpm of the diesel engine, and discharge by reversing drum; a Joymix-controlled 600-litre loader with a hydraulic door discharging sand or gravel directly into the drum; and finally the ability to travel on slopes higher than 30 per cent, even under full load. Each of these elements is a precise response to the needs of construction operators: a commitment Carmix has kept for more than 40 years on five continents.

For more information visit www.carmix.com

LIUGONG MACHINE SPECS, FEATURES AND BENEFITS

With a new push into the rental market LiuGong displayed three mini excavators at Conexpo-Con/Agg, suited for the tight spaces that come with utility and landscape work.

Both the 9018F and the 9027FZTS (zero tail swing) compact excavators are part of LiuGong's sixth generation of excavators. They are equipped with load sensing hydraulics ensuring smooth and precise operations, and are powered by Yanmar engines ensuring both reliability and efficiency. The engine is equipped with auto-idle and auto-shutdown, combined with variable flow proportional auxiliary hydraulics, making the excavators powerful whilst energy-saving. The 9018F is a standard configuration length HEX with retractable undercarriage for a minimum width of 980 mm (39 in) to maximum width 1290 mm (51 in) and a foldable dozer blade, enabling the machine to pass through narrow space. It is easy for operators to load and unload from trailers. It is equipped with standard boom and dozer cylinder guards.

All three are available with open TOPS cab or closed ROPS cab with heat. They feature two speed travel functions and can be easily shifted by the switch in the dozer blade joystick. The attachment flow can be adapted via the operator monitor and the boom swing, controlled through a thumb switch. The arm is thumb ready to accept a thumb cylinder auxiliary hose.

For more information visit www.liugong.com

CDE LAUNCHES NEW 500TPH COMBO X900 AT CONEXPO-CON/AGG

CDE, the industry-leading manufacturer of wet processing equipment for materials processors, has unveiled its new 500 tonnes per hour (tph) Combo X900 at Conexpo-Con/Agg in Las Vegas.

The X900 is the latest in CDE's range of revolutionary Combo all-in-one wet processing and water management solutions. The Combo was first launched in Europe at bauma in April 2019.

With an increased capacity of 500tph, the new Combo X900 is the largest in the series to date, as Kevin Vallelly, director of Engineering at CDE, explains.

"With our new Combo X900, we've doubled its capacity and created a next-gen solution for materials processors. The Combo X900 can process 500tph of feed material, including natural sand and crushed rock, containing unwanted clay, silt and other organic contaminants to extract quality in-spec washed and graded sand products that are market-ready straight from the belts."

As well as its increased capacity, the Control Cabin of the new Combo X900 has been repositioned to sit on top of the water tank.

"Plant and machinery are subject to major temperature extremes and fluctuations across different regions," he says.

"By positioning the Control Cabin on top of the water tank we're able to better protect the operational heart of the plant and offer a solution that can be adopted across all of the markets we operate in and where high and low temperature extremes are recorded."

Furthermore, where traditional washing systems typically have a separate standalone water tank, the new Combo X900 has integrated this into the design of the AquaCycle thickener tank resulting in a peripheral wall for water storage, which has significantly reduced the overall footprint.

It provides customers with almost total independence of water supply and minimises the requirements for costly site engineering due to its significantly smaller footprint which is, on average, 30 per cent smaller than other traditional wash plant setups.

Vallelly says, "Traditional washing systems would typically consume up to 15 times more water than that required for the Combo X900.

"Our best-in-class water management and on-board water recycling minimises costly water consumption and ensures up to 90 per cent of process water is recycled for immediate recirculation through the closed-circuit system."

He adds, "The Combo X900 enables materials processors to wash more than 500tph with only 800gpm (gallons per minute), about the same amount of water that would be required to wash a truck."

With its single chassis design, the Combo X900 incorporates all essential processes – washing, dewatering, water recycling, and stockpiling – onto one single, interconnected and pre-assembled unit.

A plug-and-play system, it arrives on site pre-wired and pre-tested, ready to process material within just five days as a standalone plant or as part of a larger turnkey solution.

Its single chassis design means the Combo X900 is portable and can be rapidly deployed or relocated to remote locations with minimal foundations and pipework. Coupled with its significantly reduced footprint, the Combo X900 is also ideal for compact quarries in urban settings.

For more information about CDE and the Combo X900, visit cdeglobal.com

Volvo EC55D: more muscle, more hustle

Built to last, the 5.5 tonne EC55D compact excavator from Volvo Construction Equipment is designed to work harder, for longer – delivering faster, smoother responses, high fuel efficiency and superior performance.

EC55D compact excavator.

Image Credit: Volvo CE

Do more in less time with the market-leading power, outstanding digging efforts and faster digging equipment speed of the 5.5 tonne EC55D tracked excavator. Delivering breakout force of 42 kN, as well as superior traction, swing force and lifting capacity, the durably designed compact excavator can take on challenging jobs with ease. And, for the ultimate combination of power and productivity, improved cooling ensures optimised performance for any climate.

Increased controllability

Achieve a smooth and comfortable operating experience with the EC55D. Operators can dig to a maximum depth of 4m, and load and lift an industry-leading 2,920 kg at ground level with increased controllability, enhancing productivity and reducing fatigue. The robust compact excavator does exactly what the operator intends, thanks to responsive controls and an optimised hydraulic system, designed to achieve precise grading results for a high quality finish.

Additionally, the highly efficient EC55D reduces fuel costs, ensuring a more profitable operation. With an arm tear-out force of 29 kN, the state-of-the-art hydraulic system is perfectly matched to Volvo's premium Tier 3/Stage III 36.5 kW diesel engine, providing high performance and superior fuel efficiency.

Proven reliability and versatility

The strong and durable EC55D is rigorously tested and proven to increase uptime and ensure a highly competitive residual value. Even in extreme conditions, the robust compact excavator enables a sturdy operation, thanks to its unique design, heavy-duty arm and X-shaped undercarriage for greater stability. The wrap-around shape of the counterweight shields the engine compartment and protects the back of the machine perfectly, enabling operators to work more safely in narrow jobsites.

Well-engineered to withstand tough applications, Volvo's robust buckets are reinforced with Volvo teeth and wear parts for a longer lifetime. Additionally, Volvo has developed the range of breaker tools to break a wide range of materials.

Easy and comfortable operation

For a comfortable operation and reduced operator fatigue, the EC55D's spacious cab features all-round visibility and a quiet working environment. Built for maximum convenience, the cab features ergonomically positioned monitor and controls, a fully adjustable seat, and a semi-long joystick for a more comfortable and productive work environment.

The low-noise cab offers superior vibration insulation and is equipped with a large door and three-point-access for safe ingress and egress. Meanwhile, the performance of the air conditioning has increased by 10 per cent to ensure comfortable operation in all climates.

Maximum uptime is preserved thanks to simple-access maintenance points, and the new, easy-to-clean single layer cooling system, which reduces costs and maximises uptime. Daily service points can be worked on from ground level, while the wide-opening lockable engine hood provides easy access to checkpoints, grouped together for added convenience. ■

Key specifications

Engine	D2.6A
Rated output at	2 000 r/min
SAE J1995 gross	36.5 kW / 50 hp
Width overall	1 920 mm
Max reach, Standard/Long arm	6 110 mm, 1.5m arm
Dump height, Standard/Long arm	4 090 mm, 1.5m arm
Digging depth Standard/Long arm	4 000 mm
Tear out force	29 kN (ISO), 29 kN (SAE)
Breakout force	42 kN (ISO), 36 kN (SAE)
Operating weight – Canopy version	No canopy
Operating weight – Cab version	5 400 ~ 5 700 kg

Terex Finlay 883+ (triple shaft) heavy duty screener.

Image Credit: Terex Finlay

Crushing and screening solutions that matter

The global crushing, screening and mineral processing equipment market is continuing to play a significant role in the mining industry thanks to demand in technological solutions.

The global crushing, screening, and mineral processing equipment market is projected to reach US$33.11 billion by 2025, growing at a CAGR of 6.8 per cent, according to the latest report by Allied Market Research.

The rise in government investment for development of infrastructure and mining activities as well as increased demand for metals and minerals are fuelling the growth of this market in Latin America, Middle East and Africa and Asia-Pacific regions.

Crushing & screening equipment play a vital role in the construction industry as they provide vital aggregates required for concrete production as well as road construction.

The market in the mining segment is even higher, with a CAGR of 8.3 per cent from 2018 to 2025, "driven by the increase in mining activities and rise in demand for technologically advanced solutions".

Leading market players analysed in the research include Terex Corporation, Sanvik AB, Astec Industries, Kleemann GMBH, McCloskey International, Metso Corporation, Screen Machine Industries, Eagle Crusher and Rubble Master, to name a few.

Metso Corporation, Kleemann and Terex Finlay – one of the brands under the umbrella of Terex Corporation, showcased their latest crushing and screening equipment at Conexpo-Con/Agg in Las Vegas last month.

> "Operators no longer need to stand right next to the machine to pull levers to unfold the conveyors"
>
> **MIKE NEWBY, SALES ENGINEER, MINERAL TECHNOLOGIES, WIRTGEN SOUTH AFRICA**

Speaking ahead of the show, Simon Pelletier said, "In the world of construction, dependability matters. At Metso we've turned over 150 years of experience in crushing and screening into solutions that aggregate producers and contractors all over the world depend on to increase their production and profitability, year in and year out."

They featured the new MX3 crusher and a special Lokotrack mobile crushing plant equipped with a MX4 crusher. MX Multi-Action cone crushing technology was previously welcomed by quarry operators around the world when it was launched in 2017. Brazilian company Britagem e Pavimentadora Barraco said it achieved a 30 per cent increase in the production of crushed stone after buying two Metso MX4 crushers, increasing its monthly production capacity of 150,000 tons and a 30 per cent boost in revenues "as a result of high market demand", stated Metso's Solutions for Sand Manufacturing report.

Mining accounts for half of Metso's customer base, followed by aggregates at 26 per cent, process industries at 19 per cent and recycling at four per cent. Their largest markets are Europe and Asia-Pacific with sales representing around 27 per cent in each region, followed by North America and South and Central America at 19 per cent. Africa and Middle East is at the lower end of the scale representing just eight per cent.

The new Lokotrack ST4.10 mobile screen, which is ideal for large-scale aggregates production, was also on display at the Conexpo-Con/Agg show. The wide feeding box and adjustable discharge height on 10m conveyors "makes it a powerful screener in closed circuit crushing processes".

Kwatani has customised contracts in place to service more than 500 of its machines in the Northern Cape alone.

Image Credit: Kwantani

Kleemann, the specialist for mobile crushing and screening plants, that comes under the Wirtgen Group, showcased the MOBICAT MC 120 Z PRO jaw crusher and the Mobiscreen MS 952 EVO mobile screening plant, equipped with a 9.5 m2 screen box and is used as a doubledeck classifying screen. The plant impresses with a feed capacity of up to 500 t/h. Wirtgen South Africa successfully introduced the MS 953 EVO triple-deck mobile classifying screen to its south African customers two years ago. Both screening plants can be operated remotely.

"Operators no longer need to stand right next to the machine to pull levers to unfold the conveyors. All folding and lowering functions can be viewed and performed

Manufactured for screening: this screen is being tested at Kwantani.

remotely, enhancing safety for the plant operator," said Mike Newby, sales engineer, Mineral Technologies at Wirtgen South Africa.

The fourth generation Terex Finlay 883+ (triple shaft) mobile heavy duty screener on display at Conexpo-Con/AGG features a triple shaft screenbox that is ideal for working in primary and secondary screening applications including quarry, mining, sand, gravel, construction and demolition debris and recycling applications. The plant has a capacity to process at 600t/hr "fed by a tracked mobile crusher, shovel or an excavator".

Maintenance contracts

"Vibrating screens are critical to a mine's material flow, which is its life blood," says Kwatani CEO Kim Schoepflin. "This requires OEMs to be experts, not just in design and manufacture, but in service support and maintenance."

As a leading local OEM, Kwatani has seen mines gradually embrace the value of maintenance contracts to avoid costly downtime. One of its contracts covers around 400 screens on a single mining operation. The range of its contracts extends to various commodities, from hard materials like iron ore and manganese to soft material such as coal. In one coal operation in Limpopo, Kwatani has contracted to service 160 of its machines.

> "Vibrating screens are critical to a mine's material flow, which is its lifeblood"
>
> **KIM SCHOEPFLIN, CEO OF KWATANI**

Schoepflin highlights how regular, expert maintenance is vital for mines to achieve the lowest cost per ton in their production process. However, she warns that these contracts can only be conducted responsibly and effectively with the right level of knowledge and experience.

"With our depth of know-how gathered over more than 40 years, we understand exactly what inspections and critical replacement need to be done and when," she says. "As importantly, we know how to conduct this work cost effectively."

Kwatani is supplying four heavy duty vibrating screens and 10 feeders to help boost throughput at a manganese mine in the Northern Cape.

According to Schoepflin, this large-scale equipment is custom-designed and engineered for tonnage to meet the mine's challenging operational requirements.

"Manganese ore is very demanding on vibrating screens, as it has a high specific gravity and is also very abrasive," says Schoepflin. "Our machines are engineered to perform the application's duty requirement while being robust enough to deliver maximum uptime."

The units being supplied include a 3.6m double-deck scalping screen, a 3m double-deck screen, a 2.4m screen and a 1.8m dewatering screen.

"Customers choose us for our engineering track record – developing technology that can manage the tonnages they require," she says. "This means understanding each mine's specific conditions, and then building a design to meet a range of complex mechanical and metallurgical factors."

The order to the mine is being rolled out on time and on specification to the customer's satisfaction, says COO Kenny Mayhew-Ridgers. He highlights that on-time delivery of a fit-for-purpose product is as vital as its reliable operation.

"The efficiency and quality of our work process allows us to design, manufacture and deliver custom-designed screens in the same timeframes that other OEMs deliver standard models," says Mayhew-Ridgers.

This is demanding as custom-designed equipment undergo an intensive design process after being verified by rigorous finite element analysis in-house. Prior to dispatch, all units endure testing before being commissioned on a customer's site. For this reason, Kwatani boasts its in-house advanced testing facilities at its Kempton Park facility. Aligned to ISO 9001 standards, the testing protocols have been developed in-house. This allows full testing similar to cold commissioning, even before delivery to site. ■

VIBRATORY FEEDER LABORETTE 24 IS SUITABLE FOR AUTOMATIC FREE-FLOWING MATERIALS

Image Credit: Fritsch

LABORETTE 24 V-shaped channel with control unit.

Image Credit: Fritsch

U-shaped stainless steel channel.

The Vibratory Feeder LABORETTE 24 from FRITSCH is ideal for automatic, uniform feeding of free-flowing materials into sample dividers, mills or mixers in a laboratory. The vibration, which is controlled by a microprocessor, conveys the sample material out of the funnel over the V or U-shaped stainless steel channel into the respective equipment.

The flow rate can be individually adjusted; the vibration amplitude is precisely controlled – for absolute uniform feed of even smallest quantities, and is safe and reliable.

Suitable for coarse and fine materials which can be conveyed reproducibly with a material feed between 1 g/min up to 2.500 g/min.

Advantages with the control unit include setting of the maximum feed quantity in the setup mode by the user; adjustment of the feed intensity and time via display; fine adjustment of the material flow even of smallest quantities; reproducible setting of the feed rate, when changing the material; digital display of the set feed rate in per cent and digital and RS232 interface.

For more information on the FRITSCH Vibratory Feeders LABORETTE 24 visit www.fritsch-international.com/l-24.

SKID-MOUNTED DRY-TYPE TRANSFORMER DOES DUTY ON COAL MINE

In a specialised application on a coal mine, Trafo Power Solutions supplied a dry-type transformer mounted on a mobile skid.

"The harsh environment of a coal mine required us to specially design a fit-for-purpose solution," David Claassen, managing director at Trafo Power Solutions, says.

"The cast-resin dry-type transformer is ideal for the mobile arrangement as it is cooled without oil," he explains. The absence of oil makes it a safer option in terms of fire hazards, especially on a coal mine.

It is more environmentally-friendly, as there is no chance of an oil spill. The 1250 kVA dual-MV configuration supplied to this mine allows the unit to be linked up to a 11 kV or 6,6 kV supply.


Image Credit: Trafo Power Solutions

Cast resin transformer in fully enclosed mini-sub configuration.

"The unit was designed for a compact enclosure, while still allowing for sufficient air movement for cooling," Claassen says. "We provided a unique solution of a cast-resin transformer with Class H insulation rating for the medium voltage and the low voltage windings."

This insulation standard ensures that the transformer can withstand temperatures of up to 180°C. He notes that the enclosure design had to accommodate these heat factors while preventing the ingress of dust or water.

Special engineering was also applied to building a high level of mechanical rigidity into the transformer itself, as demanded by the regular relocation of the mobile skid. This movement means considering that vibration and other forces must be borne by the equipment without affecting its performance.

Claassen emphasises that Trafo Power Solutions is experienced in providing dry-type transformers in a range of enclosed formats to suit customers' needs. The inherent safety of these transformers also allows them to be installed in underground mining locations.

MB CRUSHER PROVIDES THE RIGHT SOLUTION

Work was required at the Augustusbrücke bridge over the Elbe river in Dresden, for the removal of the concrete which filled the arches and had caused structural damage. The customer wanted a solution that would be suitable for the machine already in use at the site – a Liebherr 918 excavator – and that would not cause any damage to the 18th-century structure. MB Crusher provided the solution by recommending the use of an MB-R800 drum cutter (suitable for excavators between 10 and 22 tons).
The MB drum cutter was used on the diagonal cement lines on the bridge to free up the expansion joints. This was the most challenging phase. However, the MB drum cutter was used without causing any damage to the structure.

Hydrocyclone solution solves TSF challenge

An innovative hydrocyclone solution from Multotec is allowing a large Zambian copper mine to develop a safe and cost effective tailings storage facility (TSF).

The TSF faced a number of specific challenges, according to Frikkie Enslin, senior applications engineer responsible for cyclones at Multotec, including its extensive planned capacity and the area's flat topography. The mine's process plant pumps some 10,000 m3 per hour of tailings to the TSF, requiring its final circumference to reach about 19km.


Image Credit: Multotec

The Multotec GV cyclones are designed specifically for tailings dam applications.

"The flat area around the mine meant there was no suitable topography to provide a natural dam," Enslin says. "It was therefore vital to create strong walls to retain the slurry from the plant, so that the integrity of the TSF could be assured."

Multotec's 250 mm GV hydrocyclones were able to deliver an underflow discharge that could be walked on in just two days. After a week, the material could withstand the weight of an excavator.

Advertiser's Index

MBE MINERALS SCREEN FOOTPRINT GROWS ACROSS COMMODITIES

MBE Minerals has been strengthening its footprint of vibrating screens across a range of commodities.

Sales manager Graham Standers says the company has recently supplied 15 new screens to mining customers in coal, diamonds, iron ore and manganese. These operations are based in South Africa, Botswana and Australia. MBE Minerals has also fully refurbished a further four screens to 'as new' condition as they approached the end of their planned lifecycle.

"We place high priority on design capacity, to ensure that every screen suits the application and material it must screen," says Standers. "Five of the screens supplied were newly designed to suit changing customer needs and processes."

Each screen is designed by the company's design office, and the design is then confirmed by finite element analysis (FEA) through highly specialised software using data from the drawing model.

"We have also introduced a range of screens designed specifically for fine coal dewatering, using a design which has proven to be cost-effective, efficient and reliable," he says. "Focus was placed on the design of the screen deck support system and screen drive, with a view to reducing downtime by minimising maintenance and enhancing reliability."

The design is efficient in terms of the required spares stockholding, further reducing the screen's overall lifecycle costs.

"Our unique T-Lock pinless panel fastening system for polyurethane screen panels also significantly reduces the need to hold spares in stock, while reducing the changeout time for screen panels," he says.

Technical and sales staff conduct regular on-site visits to customers to carry out inspections of equipment in operation. The teams report on equipment condition and performance, and provide customers with value-adding feedback and advice.

MBE Minerals – previously known as Humboldt Wedag – has been designing, manufacturing, installing and servicing vibrating screens in southern Africa for over 40 years.

"Our record for reliability is well known, with some of our units having been in service for over 20 years," says Standers.

Final assembly of an MBE Minerals dewatering screen.

Image Credit: MBE Minerals

Image Credit: MBE Minerals

Test run on an MBE Minerals dewatering screen.

Emerging mining trends in resource nationalisation in South Africa

By Farai Nyabereka, partner, DLA Piper Africa, Zimbabwe.

Africa is still a frontier market, and this has often presented a unique opportunity for governments in African countries to create legal frameworks that attract sustainable investment. But Africa has always written its own rules. This has never been more apparent than in the governance structures of Africa's major pulling factor – natural resources.

Mining legislation in Southern Africa

In 2008, Zimbabwe introduced an indigenisation policy that required all foreign-owned mining companies to "cede" – on a free carry (which meant that locals did not have to pay for these shares) – a 51 per cent shareholding in their companies to employees, local communities and designated state-owned entities. While the law was well intentioned (in the sense that investors were in effect being required to empower locals through an equity participation) the law was badly crafted, and gave rise to a multitude of negative effects, particularly encouraging rent seeking, which drove away investors. It is not surprising that the new Zimbabwean regime prioritised abolition of the indigenisation laws as a way to attract foreign direct investment.

Similarly, a decade later in 2018, the Tanzanian government introduced changes to its mining legislation. The mining reforms were aimed at increasing Tanzanian nationals' and entities' participation in the mining sector, requiring local companies to own 51 per cent in mining companies and for multinational companies to partner with local companies and financial institutions. However, this was followed by new mining regulations; the Mining (Local Content) (Amendments) Regulations, 2019, which reduced ownership restriction for local mining firms to a minimum 20 per cent equity.

Comparatively, the Democratic Republic of Congo's Mining Code also underwent revisions in 2018, with the result that 10 per cent share capital must be held by Congolese citizens and there has been an increase in the state's free carry, non-dilutable stake from 5 per cent to 10 per cent, which is increased by a further 5 per cent upon renewal of the mining license.

While these cases can be cited as extreme examples of local protectionist mining regimes, conversely, South Africa has adopted a moderate and structured approach under the Mining and Minerals Industry, 2018 (Mining Charter III), which came into force on March 1, 2019. This is perhaps owing to its stronger democratic and legislative structures. The Mining Charter III largely impacted mining entities' Black Economic Empowerment (BEE) threshold requirements in respect of ownership. While existing mining rightsholders who have a minimum of 26 per cent BEE shareholding are recognized as compliant, applicants for new mining rights are required to have a minimum of 30 per cent BEE shareholding which must in turn include a minimum of 5 per cent non-transferable carried interest to each of the following: qualifying employees; local communities; and a 20 per cent effective ownership to BEE entrepreneurs.

Farai Nyabereka.

Image Credit: DLA Piper

Changing investment landscape

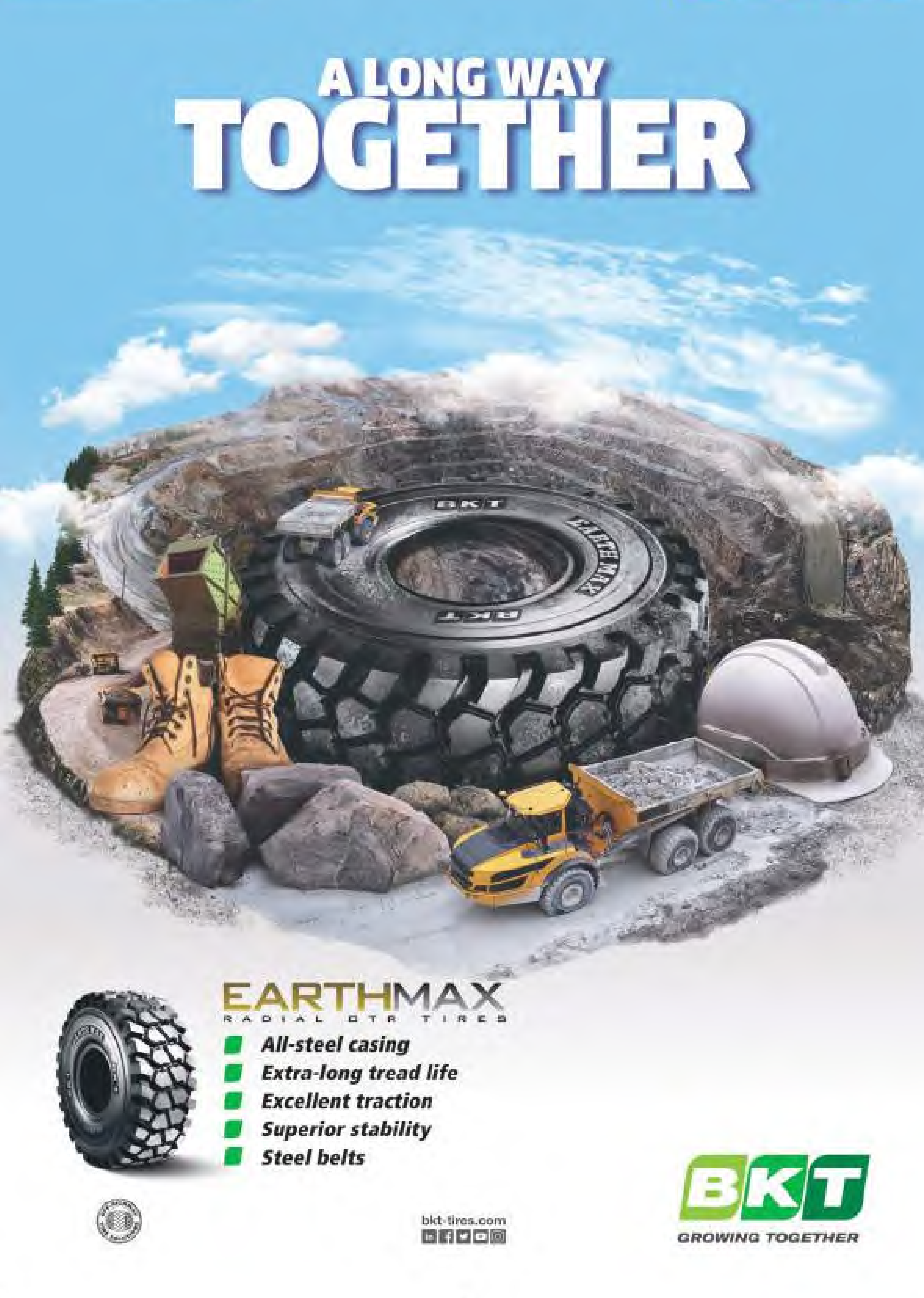
A pattern begins to emerge. Without being overly comparative – as there are always distinctions that can be drawn – African governments are seemingly pursuing greater state and local participation in the mining industry, mostly brought about by: fluctuations in global price/demand factors, geo-political and social factors particularly around a sovereign nation's right to resource revenue, new emergent investors (such as China and Russia), internal civil society pressure groups, as well as country-specific economic pressures. For the most part, unfortunately this is linked in most cases to the national or quasi-political agenda of the country at any given time.

The question then becomes: can this be viewed through the lens of investors as an opportunity or is it classified as sovereign and political risk?

According to Verisk's 2019 Q1 dataset, out of the top ten highest-risk ranked countries on its Maplecroft's Resource Nationalism Index (RNI), Africa has four ''extreme risk'' entries: the DRC is ranked 1st, Tanzania 3rd, Zimbabwe 5th, Swaziland 7th and Papa New Guinea 8th. Notably, these are all Southern African countries with low-performing economies. This presents an opportunity for these governments to create properly crafted legislation that cannot be viewed as anti-investment.

It must be emphasised that most of these mining codes are outdated, having been drafted in the colonial era. And as governments become more commercially aware on the back of lucrative commodity prices, the state will demand a greater stake from foreign multinationals in the interests not only of a political agenda, but also on principles of equity. Hence, the recent trend of amending legislation. The wording of most mining codes is telling and is based on the premise that minerals belong to or are vested in the state on behalf of its people. Mining companies will simply have to adapt to and factor in this reality. Governments will impose higher profit taxes and royalties.

Nevertheless, governments are keen to engage foreign multinationals on commercial terms, and in most countries, negotiated concessions and investment incentives outweigh the perceived negative of giving away equity. The basic and palpable fact remains that large-scale investment leading to the rapid development of most African nations requires significant and sizeable capital. Hence, it is a matter of perception; where investment is implemented in a more aggressive and accelerated manner, it is viewed as resource nationalisation and quasi-expropriation. But where a more measured and judicious approach is adopted, it can be interpreted as simply resource participation, making it more palatable and, therefore, messaging becomes imperative. ■



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