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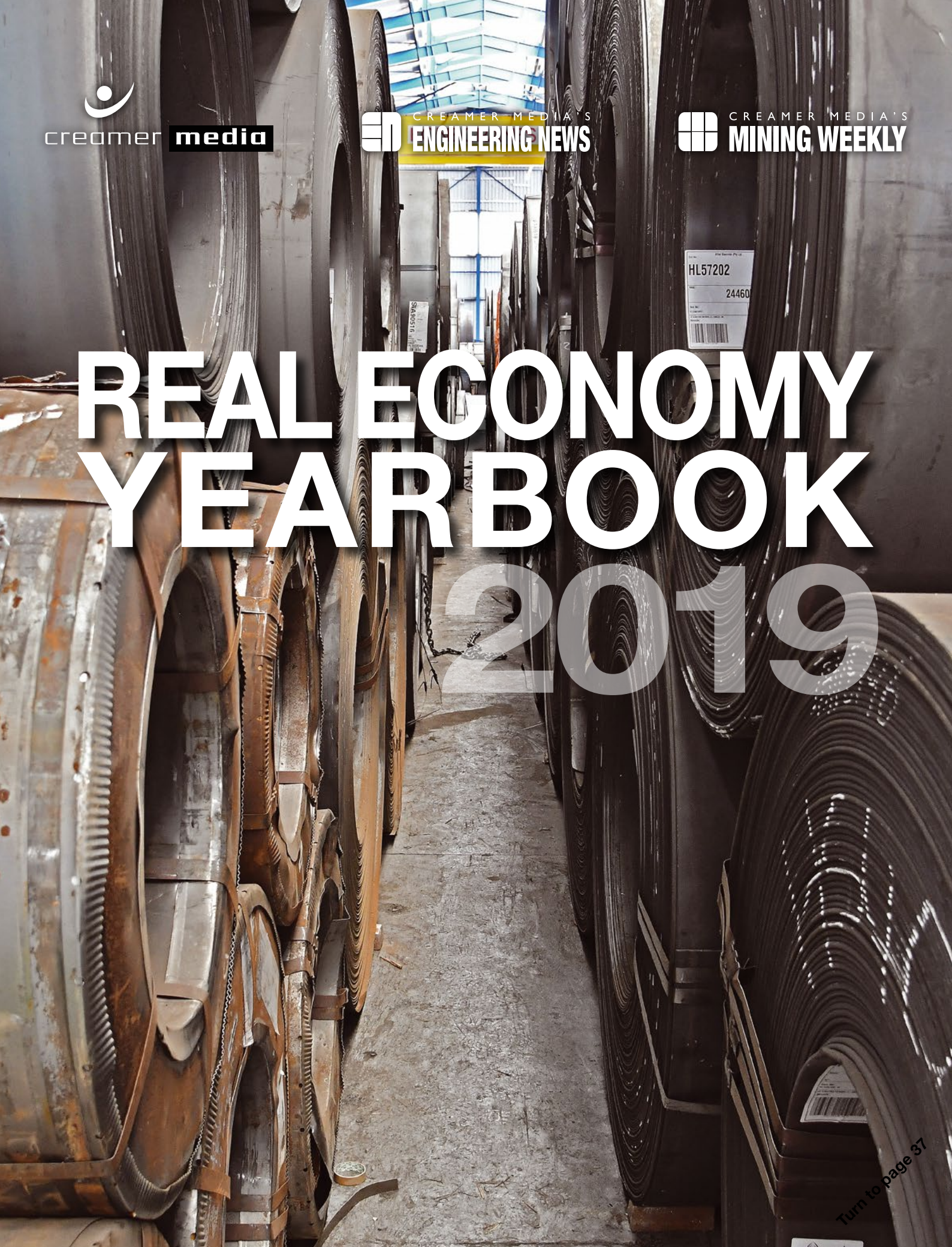
CREAMER MEDIA'S MINING WEEKLY



REAL ECONOMY YEARBOOK 2019

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REAL ECONOMY YEARBOOK 2019

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Units of measurement:
The distinction between tonne (1 000 kg) and ton (1 016.047 kg) is maintained in this report according to the information that is reported in the public domain by each company.

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CREAMER MEDIA'S ENGINEERING NEWS
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No time to give up

It has been a difficult time to be a South African over the past few years and doubly so if you happen to be a South African businessperson.

Social cohesion has weakened, government has underperformed across all three spheres, unemployment and poverty remain at extreme levels, crime and violence are constant threats, the nation's finances have become increasingly fragile, business confidence has all but flatlined and load-shedding has remained a real and present danger.

The labour climate often turns hostile, several large State-owned companies are on the brink of bankruptcy, serious corporate fraud and malfeasance have led to some high-profile failures, while the prosecution of politicians and politically connected individuals have not occurred, despite mounting evidence of serious fraud and corruption.

The ongoing civil war within the governing African National Congress has continued and even our national sports teams seem to have lost some of their previous winning momentum.

What has worried business people the most, however, has been the poor performance of the economy, which, at best, has put a squeeze on profits and, at worst, resulted in confidence-sapping business failures. This weakness was epitomised by South Africa's alarming 3.2% economic contraction in the first quarter and is also reflected in this year's edition of the *Real Economy Yearbook*.

Amid this backdrop, it is unsurprising that business remains reticent to invest and that South Africa is losing vital talent to other countries.

Nevertheless, there are a few weak signals that reforms are under way, which, if strengthened, could improve the outlook materially and lift the mood.

Firstly, there is little question that reform is on the agenda of President **Cyril Ramaphosa**'s new administration. Although many of the usual suspects will again serve in Cabinet, investment and growth have been set as the North Star. In other words, the unequivocal message is to either help the cause, or step aside, which is, naturally, easier said than done.

Secondly, the weak fiscal position of government means that collaboration with the private sector is no longer a choice, but a necessity. That should translate into ideology making way for pragmatism.

Thirdly, institutional resilience, which was so critical in stabilising the country during the disastrous State capture years, is now being nurtured rather than eroded.

South Africa is on the cusp of a positive new era. Such an era will only be realised, however, if we as citizens, especially corporate citizens, resist the temptation to give up!

Martin Creamer

Industrial Contents

Source: Chief Photographer Dylan Slater

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Automotive

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The weak macroeconomic conditions battering the South African economy have slowed demand for new vehicles, as consumers' disposable income is under pressure and business confidence has fallen to worrying lows.

With the exception of 2017, new-vehicle sales have been on a downward slope for the past five years and declined to 552 190 units in 2018 (2017: 557 703). Sales continued to fall in each of the first three months of 2019, with January sales decreasing by 7.40%, February sales by 6.50% and March sales by 3.10%. The declining trend came to a halt in April, when the market surprised on the upside, aided by exceptional growth in the export market.

Domestic sales increased by 0.70% year-on-year to 36 794 units in April, while export sales numbers gained by a significant 53.80% to 33 090 vehicles.

Last year, 351 139 South African-made left- and right-hand-drive vehicles were shipped worldwide, an improvement of 13 058, or a gain of 3.86%.

South Africa-based automakers have now set their sights on export sales of 384 150 units in 2019 and 400 200 units in 2020.

Europe is the dominant region for South African vehicle exports, accounting for two-thirds of all exported vehicles, followed by Asia and the African market. In 2018, export sales to Africa increased by 9.79% to 23 988, which the National Association of Automobile Manufacturers of South Africa (Naamsa) says suggests that demand from the rest of Africa has stabilised and is starting to recover.

Africa is considered vital to the South African industry's aim of growing production volumes. Naamsa expects the African market to expand from the current 1.20-million new cars and commercial vehicles to two-million vehicles in five to ten years.

"If we do not get Africa right as a combined market, we can say goodbye to the South African [automotive assembly] industry in the next ten years," says African Association of Automotive Manufacturers CEO **Thomas Schaefer**, who is also the CEO of Volkswagen South Africa (VWSA).

Manufacturing and Components

South Africa manufactured an estimated 610 854 units in 2018. This is forecast to increase by 6.18% to 648 650 vehicles in 2019. The country contributed 0.64% of global new-vehicle production in 2018 and was ranked fifteenth in the world with regard to light commercial vehicle production – largely bakkies – with a market share of 1.24%.

Government has an aspirational target of capturing 1% of global output, resulting in production of between 1.30-million and 1.50-million units by 2035.

Seven original-equipment manufacturers (OEMs) – BMW Group South Africa, Ford Motor Company of Southern Africa (FMCSA), Isuzu Motors South Africa, Mercedes-Benz South Africa (MBSA), Nissan South Africa, Toyota South Africa Motors (TSAM) and VWSA – have light-vehicle assembly plants in South Africa.

The major local vehicle manufacturers invested a record R8.17-billion in the sector in 2017, and followed this up with a R7.24-billion investment in 2018. These figures reflect projects by the major vehicle manufacturers in terms of the Automotive Production and Development Programme (APDP) and projected higher levels of production for export markets.

The CEOs of the seven automotive OEMs pledged in October 2018 to invest a combined R40-billion over the coming five years, as part of President **Cyril Ramaphosa**'s $100-billion investment drive.

Some of the recent major investment announcements include R3-billion by Japanese vehicle manufacturer Nissan to prepare its Rosslyn plant, in Pretoria, for production of the Navara pick-up. Last year, MBSA announced that it would invest €600-million, or about R10-billion, to expand its manufacturing plant, in East London.

The large South African OEMs – all subsidiaries of global automakers – are manufacturing under the newly approved and revised APDP, which provides guidance and stability for the industry up to 2035.

The APDP consists of interrelated mechanisms to incentivise local manufacture, including the Automotive Investment Scheme, which is a cash grant for qualifying capital investment in plant and equipment. The APDP was intended to come to an end in 2020, but Cabinet has approved its extension from 2021 to 2035. The extension includes amendments to support the South African Automotive Masterplan (SAAM).

The SAAM is the newly developed strategic plan for the long-term development of the automotive industry and the APDP will now operate within the framework of this masterplan.

The SAAM aims to double employment in the sector to 224 000 jobs by 2035, from 112 000 currently, and position South Africa to account for 1% of global vehicle production by that date. To achieve the 2035 target, the domestic market will have to increase at a compound annual growth rate of at least 4.50% for passenger vehicles, 3.50% for light-commercial vehicles and 3% for medium- and heavy-commercial vehicles.

The new industry framework has a strong focus on local content, with a target of raising local content from less than 40% currently to 60% by 2035. Currently, VWSA has the highest local content of all vehicle manufacturers in South Africa, at about 45%. Without high-value-added-type component projects, however, such as engine production, it is unlikely that OEMs will reach the 60% target. The APDP allows automakers to build extra parts and export them to earn additional benefits; therefore, manufacturers do not need to use all the parts in their vehicles. South Africa-based manufacturers can create suppliers to produce large numbers of parts for their parent companies abroad, which will benefit the country's component supplier industry. South Africa is already a strategic supplier of catalytic converters to the world and, by value, this component category is the dominant component export each year.

Construction

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South Africa's construction industry is under severe strain and a number of the country's largest construction companies have been unable to continue operating in a constrained environment characterised by the slow roll-out of contracts by the public sector.

Market intelligence firm Industry Insight has reported that tender activity in the construction industry decreased by 20% year-on-year in the fourth quarter of 2018, while tender award postponements increased by 24% year-on-year.

Meanwhile, as a result of government's efforts in recent years to transform the construction industry, more small and medium-sized enterprises (SMEs) have entered the industry. SMEs are estimated to have increased their market share from 16% in 2012 to about 40% by mid-2018, while the market share of the country's largest construction companies has decreased from about 60% in 2012 to about 45%.

This has, along with the slow pace of new contract awards, placed greater pressure on margins and resulted in more lossmaking contracts. Smaller contractors are, however, also feeling the pinch of the slow contract roll-out, with fewer subcontracting opportunities available as a result of the struggles facing the large construction companies. This is also having a knock-on effect on construction materials providers.

With all segments of the industry under pressure, many large and small companies have had to retrench employees as they restructure their operations.

Further exacerbating the challenges is the emergence of a "construction mafia", which involves certain business interest groups using threats of violence and intimidation to try to force contractors into awarding them subcontracts without participating in a tender process.

Company Performance

Among the eight largest construction companies operating in South Africa, three – Basil Read, Esor and Group Five – have entered into business rescue in recent months.

Basil Read's management started efforts to restructure the group in 2015, but the company still incurred losses for the 2016 and 2017 financial years. Cash flow constraints, particularly within the construction division, and the group's inability to raise further bridging financing, forced the group to file for voluntary business rescue in June 2018.

The appointed business rescue practitioners (BRPs) **Siviwe Dongwana** and **John Lightfoot** presented a business rescue plan, which focused on completing construction projects that had been in progress, and selling certain assets, to creditors in September 2018. Creditors approved the plan, which set out targets to sell the assets between January 2019 and February 2020, but the BRPs reported in February 2019 that, although there had been some interest from buyers, there had been few committed buyers.

Eventually, one asset was sold – Basil Read Mining Botswana's 28% interest in the Majwe Joint Venture for R110.50-million. Efforts continue to complete profitable contracts, cancel onerous contracts, sell noncore assets and reduce costs as part of the business plan.

Esor, meanwhile, filed for business rescue of its construction division in August 2018. The company has, in recent years, shifted its focus away from civil- and building-related construction towards the water infrastructure market and, although there is great need for more water-related infrastructure in South Africa, delays in the awarding of contracts by the national, provincial and municipal governments took their toll on the business, resulting in a lower order book and contributing to lower revenues and higher financial losses. The BRPs appointed to oversee the business rescue of Esor's construction division said in February 2019 that there was potential to implement a business rescue plan.

Group Five was forced into business rescue in March 2019 after experiencing difficulties with a nearly complete energy project in Ghana.

The group reported a R1.43-billion operating loss for the 2018 financial year, compared with a loss of R718-million in the prior financial year. As a result of the muted growth in the domestic construction industry, Group Five decided during the financial year to become an infrastructure solutions company and move away from the construction and engineering, procurement and construction (EPC) businesses.

The Kpone oil- and gas-fired combined-cycle power project, in Ghana, for which it was the EPC contractor, was also particularly problematic, with the group having incurred a R1.30-billion loss on the project during the 2018 financial year. The project was meant to have been completed in 2017, but had been delayed several times. While the project was near completion in November 2018, fuel contamination problems led to a dispute between Group Five and Kpone's owner Cenpower Generation.

Cenpower had, by late 2018, instituted a claim of $62.70-million against Group Five for earlier project delays and, in December 2018, moved to terminate the contract with Group Five as a result of the latest delay in the completion of the project. Group Five, meanwhile, said the termination of the contract was wrongful, claiming that the contaminated fuel that had contributed to the latest project delay had been provided by Cenpower and that Group Five was, therefore, not responsible for the delay.

Cenpower also instituted a further claim of $60.50-million against Group Five to cover the costs of completing the project. Group Five, however, did not believe it was liable for the claim.

Meanwhile, the BRPs appointed to oversee the business rescue of Group Five estimated in May 2019 that more than R700-million in proceeds could be raised from the sale of the plant, assets and property as part of the business rescue. While a business rescue plan was still being finalised ahead of its expected release in late June 2019, the BRPs said they had concluded agreements for the sale of Group Five's 40.10% interest in Intertoll Capital Partners, its 50% interest in Barnes Reinforcing Industries and its 28.90% interest in Jozi Power.

Among the other big construction companies, Aveng has also, in recent years, restructured its business, including the sale of certain assets and businesses. The company has decided to retain its focus on its Australian subsidiary McConnell

Dowell and its contract mining business Moolmans. During 2018 and early 2019, it sold several noncore assets and businesses, including its rail business, its Aveng Water and Aveng Namibia Water businesses and its Aveng Infraset businesses.

It has also resolved not to sell its Grinaker-LTA business as a single going concern, but will instead follow a piecemeal sales process. The group plans to sell all its noncore businesses by the end of June 2019.

Murray & Roberts (M&R) has, meanwhile, successfully restructured into a multinational engineering and construction group with three business platforms – oil and gas, metals and minerals, and power and water. During 2018, there was a noticeable decline in large project opportunities in the Australian liquefied natural gas market, impacting negatively on the group's oil and gas platform. To offset that, the group sought new opportunities in the Australian metals and minerals and infrastructure markets and secured contracts from some of the world's biggest mining companies, including BHP, Alcoa and Rio Tinto.

With the Medupi and Kusile coal-fired power station projects in South Africa nearing completion, M&R's power and water segment has also been seeking new opportunities for growth. This prompted it to acquire South African company Optipower in early 2019, subsequently providing M&R with access to the transmission, distribution and substation sectors of the energy industry.

M&R became a takeover target in 2018, when one of its biggest shareholders, ATON, making an offer to shareholders to acquire their shares in M&R at R15 apiece. While M&R had encouraged shareholders not to accept the offer, or a revised offer of R17 a share, stating that it undervalued the company, ATON eventually succeeded in acquiring a 44% interest in M&R, triggering a mandatory offer to shareholders who had not accepted its offer. The takeover by ATON, however, remains subject to approval by South African and Canadian competition authorities.

During its battle to acquire M&R, ATON also acquired a 25.40% interest in Aveng, with which M&R had been planning a merger. The merger plans were, however, scuppered by ATON's acquisition of this interest, forcing M&R to withdraw its buyout offer to Aveng.

Also among the country's largest construction companies is Raubex. As a result of a low volume of work in the road construction sector in the first half of Raubex's 2019 financial year, the company had to rightsize its asphalt and bitumen supply operations, resulting in the retrenchment of 280 employees. Raubex's road construction and earthworks subdivision was also negatively impacted on by the low volume of work in the road construction sector, but the company's infrastructure division was able to expand its affordable housing and commercial building operations, as well as take advantage of new opportunities in the renewable-energy sector.

For the full financial year, ended February 28, 2019, the group reported continued pressure on its roads and earthworks division, with the materials business having been the main contributor to its operating profit for the year.

Stefanutti Stocks also warned in May 2019 that it was experiencing short-term liquidity pressures amid a difficult trading environment and delayed payments from clients. As a result, it was considering raising funding through a combination of ring-fenced project financing, a number of alternative funding solutions and possibly also a fresh issue of shares. The company said it expected the contraction in construction activity to continue putting pressure on its turnover and operating profit margins.

Wilson Bayly Holmes-Ovcon (WBHO), meanwhile, is optimistic about growth opportunities outside South Africa, particularly in Australia, but one contract nearly had a devastating impact on the group during the six months ended December 31, 2018. *Engineering News* reported in February 2019 that the Western Roads Upgrade road design and build project in Melbourne, Australia, had resulted in the group's operating profit for the six months decreasing to R2.72-million, from the R509.60-million in the first half of the prior financial year. This was as a result of the incorrect interpretation of the project's technical specifications, which led to the underestimation of the physical work required to meet those specifications.

Outlook

The continuing weakness in South Africa's economy is expected to continue weighing on business confidence and investment sentiment, with few of the large construction firms expecting a significant turnaround in the industry anytime soon.

Raubex said in May 2019 that the domestic construction industry faced an uncertain future, owing to the slow pace at which tenders were being awarded, especially in the public sector, and the disruption of various large-scale projects by the so-called "construction mafia".

Industry Insight has, meanwhile, warned that South Africa's struggling State-owned enterprises (SOEs) pose a major risk to the construction industry's future. Some of the country's largest SOEs, including power utility Eskom, are facing severe financial challenges while having to deal with the aftermath of years of State capture, which has not only impacted negatively on the finances of the SOEs but also undermined the public's and investors' trust in those entities.

While some of the smaller emerging firms in the industry have benefited from government's efforts to transform the construction industry, the difficulties facing the country's largest contractors are also having a negative effect on subcontractors, which are finding it difficult to secure work from main contractors.

Amid the slowdown in construction work in South Africa, construction firms continue to seek opportunities for growth abroad, but these too can result in difficulties and financial losses.

On a more positive note, there is some optimism that the infrastructure fund, launched by President **Cyril Ramaphosa** in September 2018, could provide some support for the construction sector. The infrastructure fund is being led by an executive team within The Presidency that will coordinate infrastructure initiatives across all spheres of government. Government expects the fund to invest R400-billion in public infrastructure over a three-year period.

Energy

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South Africa's electricity industry is in dire straits. The country, at the start of 2019, suffered one of its worst series of power cuts in a decade, conjuring up memories of the 2008 crisis when the grid nearly collapsed.

State-owned power utility Eskom is operationally weak, financially broke and despite being overstaffed, lacks people with critical skills. Its eleventh CEO in a decade – **Phakamani Hadebe** – has recently resigned and will vacate the job in July.

President **Cyril Ramaphosa** has made Eskom a top priority, declaring that the organisation, which "holds the fortunes of the country in its hands", is "too big, and too important to fail". National Treasury is propping up the cash-strapped Eskom with a R69-billion-a-year bail-out over the next three years and plans have been tabled to split it into three units, despite opposition from labour unions.

Operational and Financial Difficulties

Eskom is also marked by deteriorating plant performance propelled by a lack of maintenance and old generation infrastructure.

Electricity supply was severely compromised in March this year, when the power supplier was forced to shed 594 GWh of load over ten consecutive days. At the time, unplanned breakdowns increased to more than 12 000 MW, while Cyclone Idai destroyed transmission infrastructure carrying electricity from Mozambique to South Africa, and Eskom ran short of diesel and water reserves at its open-cycle gas turbines and its pumped-hydro schemes respectively. At the height of the March crisis, Stage 4 load-shedding was instituted, resulting in nationwide cuts of between 4 000 MW and 5 000 MW.

To mitigate load-shedding, the organisation has been burning diesel at a great cost and, at times, fuel consumption amounted to R100-million a day.

Eskom has since reported an improvement in its plant performance, but COO **Jan Oberholzer** has warned that the risk of rotational power cuts remain for the next six to 12 months, during which a nine-point recovery plan to improve the energy availability factor of its underperforming coal fleet will be implemented.

Eskom intends to avoid load-shedding during the colder winter months and should cuts be required, it has said that they will be limited to between 1 000 MW and 2 000 MW.

Despite Eskom's pricey investment in new, mega coal-fired power stations, weak operational performance continues. A decade after construction started, the 4 764 MW Medupi power station, in Limpopo, and the 4 800 MW Kusile power station, in Mpumalanga, are still unfinished and the units that are operational are fraught with design flaws and are not performing to design specifications. However, Eskom has reported encouraging signs for the next boilers coming on line. A new unit at Kusile – Unit 3 – was synchronised to the grid on April 14.

The cost of the new power station projects has risen sharply to more than R300-billion and fixing the defects will add an estimated R2-billion. The cost overruns and delays in completing Medupi and Kusile have left Eskom with ballooning debt, putting the utility under severe financial strain.

The organisation has amassed debt of about R450-billion and this could rise to more than R600-billion, while its sales have flatlined, owing to a combination of weak economic conditions and price elasticity of demand amid a sixfold tariff increase in the past 12 years.

The most recent tariff increase was approved in March, creating revenue for Eskom of R206.38-billion, R221.84-billion and R233.08-billion for the years 2019/20, 2020/21 and 2021/22. This translates to increases of 9.41%, 8.10% and 5.22% for the respective three years. The increase is in addition to the 4.41% already sanctioned during the 2018 regulatory clearing account (RCA) recovery for 2014/15 to 2016/17. On the RCA application for 2017/18, the National Energy Regulator of South Africa (Nersa) in March approved an amount of R3.87-billion.

Eskom had requested allowable revenue of R219-billion for 2019/20, rising to R252-billion in 2020/21 and R291-billion in 2021/22, which, if granted, would have translated to increases of 17.10% for 2019/20, 15.40% for 2020/21 and 15.50% for 2021/22. Together with the 4.41% RCA increase, the increase for 2019/20 would have been 21.50% had Nersa acceded to the full request.

Eskom hiked tariffs for direct clients by 13.82% on April 1, while increases for municipal clients will follow on July 1.

However, neither the recent tariff increase nor the R23-billion-a-year commitment by government is enough to ease Eskom's financial woes. The organisation faces a R250-billion hole in its finances, as it is not generating enough cash to cover its operational expenses and meet its debt-servicing obligations. Eskom's precarious financial position was highlighted by the early cash injection of R5-billion that Finance Minister **Tito Mboweni** authorised in April. The first tranche of Eskom's bail-out was reportedly expected only for August or October this year.

Eskom sought to draw down R7-billion of a R35-billion facility in April that it has with the China Development Bank (CBD), but the funds were not released, leading to speculation that the delay may have been because of concern from the Chinese about whether Kusile will, indeed, be completed. The CBD loan agreement stipulates that it can be used only for capital expenditure and not operational expenses. Eskom has emphasised that the CBD loan facility remains binding and that the delay was the result of Chinese exchange control requirements.

Under the current scenario, the utility appears to be trapped in a permanent lossmaking position. Eskom is forecasting a loss of R20-billion for 2018/19 and about R19.70-billion the following year. The Eskom Sustainability Task Team expects the 2018/19 loss to be a record of R25-billion and is warning that capital and interest payments for new debt will overwhelm cash from operations.

Eskom's debt has become expensive, following credit rating agency downgrades of ten notches over the past decade. The organisation previously had an investment-grade credit rating above the sovereign, but is currently deep in junk territory.

Eskom Interventions

Ramaphosa appointed the Eskom Sustainability Task Team, comprising **Anton Eberhard**, **Tsakani Mthombeni**, **Grové Steyn**, **Frans Baleni**, **Mick Davis** and **Busisiwe Vilakazi**, in December last year to advise government on actions to resolve the organisation's challenges. The task team's report helped to inform the announcement in the February State of the Nation address that Eskom will be separated into three independent companies: generation, transmission and distribution.

Trade unions are opposing the plan, which they perceive as a precursor to retrenchments and privatisation, but government insists that it is necessary to stabilise Eskom's finances and operations. Government says the unbundling will also position the electricity sector to embrace clean technology, diversify the mix across a multitude of power producers and provide a platform for contracting least-cost and secure power.

The first step in the separation process will be to transfer a portion of Eskom's assets to a new transmission company, which will invite the participation of strategic equity partners that will provide capital for the business and strengthen oversight. Government insists that the inclusion of a strategic equity partner in the national grid company does not amount to privatisation.

An independent board will be appointed by midyear and the company will remain a subsidiary of Eskom Holdings. A yet-to-be-appointed chief reorganisation officer will work with the board and management to implement the Eskom Sustainability Task Team recommendations.

Following the acceptance of its proposal to unbundle the utility, the task team is now working on an updated report for Ramaphosa, which will include a financial recovery plan for the State-owned entity.

Eberhard has revealed that a suite of interventions is under consideration, which will carry "a degree of pain" for all stakeholders, including users and taxpayers. In addition to tariff support and a substantial intervention around debt relief, financial modelling undertaken by the task team shows that it is important to also reduce the cost of Eskom's debt. He says there is an opportunity to bring some climate-related money into Eskom. "If we are committed to even a modest acceleration of carbon reduction below what we have already promised, there could be, in exchange, the opportunity for concessionary climate-related money, blended with development finance and even some institutional money."

The task team has modelled a possible injection of R150-billion from a blended finance facility, which would be the largest deal of its type in the world. Together with an upward revision to the Nersa-approved tariffs for 2020/21 and 2021/22, and financial restructuring to deal with Eskom's debt burden, the task team believes the utility's financial ratios could be turned around and placed on a more sustainable trajectory.

Accelerating Private Generation

With Eskom's balance sheet no longer able to fund new power-generation projects, plans are afoot to enable South Africans to contribute towards keeping the lights on by freeing up the market for self-generation and distributed energy resources.

In a significant development, former Energy Minister **Jeff Radebe** opened the way for businesses to generate their own electricity and feed this into the grid in May this year, unblocking the stalled licensing process for small-scale embedded generation (SSEG). Nersa has been given approval to proceed with licensing 500 MW of SSEG projects of between 1 MW and 10 MW, without the developer having to seek permission from the Minister for a deviation from the Integrated Resource Plan (IRP).

The announcement has been widely praised, as SSEG plants are seen as the quickest and cheapest way for the country to address its electricity supply deficit. The South African Photovoltaic Association reports that an estimated 500 projects are in the pipeline and that it could bring 1 000 MW onto the grid in the next 12 months.

The South African Wind Energy Association (SAWEA) contends that the SSEG market has the potential to support the industrialisation efforts stimulated by the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) and contribute to job creation. A SAWEA study estimates that between 40 MW and 75 MW a year could be added from behind-the-meter grid-tied wind energy projects, while 135 MW a year could be added from projects wheeling electricity from remote wind energy sites. The study also estimates the job creation potential for wind energy SSEG projects at 207 jobs during one year of construction and 127 permanent jobs during operations, for wind projects with a combined capacity of 50 MW.

South Africa allows private generators to produce electricity and sell that to Eskom through the REIPPPP, which was introduced in 2011. Under the programme, 6 422 MW of electricity has been procured from 112 renewable-energy independent power producers (IPPs) in several bid rounds. By the end of last year, 3 876 MW of electricity generation capacity from 63 IPP projects had been connected to the national grid and more than 32 700 GWh of energy has been generated under the REIPPPP.

After a period of rapid growth, renewable-energy additions stalled when Eskom blocked Round 4 of the REIPPPP for three years. Round 5 was expected to have been launched in 2018, but this will progress only once the updated IRP has been promulgated. Radebe said in May that government was still engaging with its social partners at the National Economic Development and Labour Council, but emphasised that Cabinet approval of the IRP update was imminent. The draft IRP 2018 states that the lowest-cost, new-generation scenario for South Africa is one based on solar photovoltaic, wind and gas, or other flexible generation technologies.

Renewable energy has played a key role in mitigating load-shedding during the tight supply periods. Analysis by the Council for Scientific and Industrial Research shows that the fleet of utility-scale variable renewable-energy (VRE) plants has contributed to limiting the extent of load-shedding by 46% in the first quarter of the year. Without the 2.30 GW contributions from the VRE fleet during periods when rotational cuts were made, Eskom would have been forced to raise the level of load-shedding instituted from Stage 4 to Stage 5, or even Stage 6. The utility-scale VRE fleet contributed 2 975 GWh, or 5.30% of the power system, during the first quarter.

Nevertheless, private producers have become a big political issue, with some stakeholders singling out the REIPPPP as a major financial risk to Eskom.

Road & Rail

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South Africa's transport sector is in need of billions of rands of investment to ensure that there is adequate infrastructure in place to meet the country's needs and help grow the economy through the efficient movement of goods and people.

The South African National Roads Agency Limited (Sanral) is responsible for improving, maintaining and managing 94% of the country's 22 214 km national road network and plans are for the network under its management to eventually increase to 35 000 km. The agency has, however, warned that available public-sector funding for the development and maintenance of roads is insufficient to keep pace with the growth of the national road network.

Currently, allocations from the National Treasury are used to fund the development, upgrade, repair and maintenance of about 87% of the national road network, with the remainder funded from toll revenues. The National Treasury has allocated R36.50-billion for the upgrade, strengthening and maintenance of the nontolled national road network over the three years to 2021/22.

While funding for the nontolled national road network is already under pressure, the nonpayment of toll fees by many users of roads upgraded as part of Phase 1 of the Gauteng Freeway Improvement Project is further exacerbating the problem. During the 2017/18 financial year, Sanral had, for the first time in its history, been forced to transfer R1.67-billion from its nontoll to its toll portfolio. This was followed by the transfer of another R5.70-billion from the nontoll to the toll portfolio in March 2019 to ensure that the roads agency did not default on debt repayments to investors.

Public Transport

Many commuters in South Africa use minibus taxis as their main form of transport, owing to its affordability; however, concerns remain about the roadworthiness of some of the vehicles, and safety, as a result of violence between rival taxi organisations.

To improve vehicle safety, the Department of Transport launched a programme in 2006 to incentivise about 135 000 taxi owners to have their unroadworthy vehicles scrapped and buy new vehicles. Only about half of the targeted vehicles had been scrapped by 2017 and government has now launched a Revised Taxi Recapitalisation Programme to ensure that the remainder of the targeted vehicles are scrapped and to help transform the industry. Under the revised programme, the scrapping allowance has been increased to R124 000, compared with the previous allowance of R91 100 per vehicle.

The revised programme will also be used to change the way in which the taxi industry operates. Minibus taxis are individually owned and routes are managed through taxi association and councils, but government believes this contributes to violence among competing taxi industry members. Government is instead advocating for a collaborative ownership operating model through cooperatives and the corporatisation of the industry, which it hopes will eliminate competition among taxi drivers and owners and, thus, also improve commuter safety.

The Passenger Rail Agency of South Africa (PRASA), meanwhile, is responsible for providing commuter rail services across the country, but years of underinvestment has contributed to unreliable service delivery, higher operating costs and a weak operating model. Its operating costs are said to be increasing at a faster rate than its income, which includes the revenue it generates and the subsidies it receives from government. The State-owned company expects to have a cash shortfall of R6.70-billion by the end of 2019/20 and that this will increase to about R12.80-billion by the end of 2021/22.

PRASA has embarked on a rescue plan to improve its operational and financial performance. As part of this, it expects it will need to invest about R6.60-billion to improve the reliability and availability of rolling stock and other infrastructure over a five-year period. The rescue plan is aimed at improving its subsidiary Metrorail's service levels, which are currently below 50% of that achieved in 2008/9, to 65% of that achieved in 2008/9 during 2019/20, and to 80% of service levels achieved in 2008/9 by 2021/22.

The entity also continues to progress its R173-million modernisation programme, which includes a rolling stock fleet-renewal programme, perway improvements and a signalling programme, as well as depot and station modernisation projects. As part of the rolling stock fleet-renewal programme, Gibela Rail Transport Consortium is delivering 600 new X'trapolis Mega trains manufactured at a purpose-built factory in Dunnotar, Gauteng, to PRASA for use in the Metrorail business over a 15-year period.

In Gauteng, the Gautrain Management Agency (GMA), which manages the Gautrain, is working with the Gauteng provincial government on the proposed expansion of the rail service, but ridership figures are not meeting expectations.

Ridership figures, however, affect the patronage guarantee, or grant, payable by the provincial government to the GMA for operating the system, as it is used to cover the remaining operating costs of the system that could not be funded from passenger fees.

The GMA is seeking ways of increasing its ridership numbers, including increasing the frequency of trains and the length of trainsets during peak periods, reconfiguring the seating in train carriages to provide more room for standing passengers, promoting off-peak use and extending the Gautrain's operating hours.

The GMA has, however, decided not to reissue a previous tender for the procurement of 12 new four-car trains for the Gautrain system. A previous tender for the procurement of the trains failed to attract a compliant bid. The GMA and system operator, Bombela, are preparing a business case to acquire a smaller number of train sets, while the larger procurement is deferred to 2026, when there is an opportunity to combine this with a larger recapitalising of the system.

A proposed expansion of the Gautrain system by a further 150 km is also expected to result in greater integration with existing public transport services in the province, particularly with PRASA's Metrorail. The Gauteng provincial government has approved legislation for the establishment of the Gauteng Transport Authority, which will be responsible for the planning, integration and enforcement of public

transport operations across the province, including the Metrorail system, the Gautrain, bus-rapid transit systems and taxi operations. A decision on the proposed Gautrain expansion is expected to be made in the second half of 2019, subject to the approval of the National Treasury.

Freight Transport

The majority of freight in South Africa is transported by road rather than rail, and government is promoting the shift to transfer more rail-friendly cargo off the country's roads. It states in its draft Roads Policy, published for public comment in March 2018, that there needs to be a better balance between road and rail freight transport to improve freight efficiencies, and reduce damage to the country's road infrastructure. Government plans to strengthen logistics corridors to promote intermodalism.

Transnet, whose Transnet Freight Rail (TFR) subsidiary operates the country's long-distance freight rail network, has, through its Market Demand Strategy, aimed to support government's efforts to transfer more rail-friendly cargo back onto the rail system.

One of the biggest investments for TFR in recent years has been the procurement of 1 064 new locomotives for its general freight business (GFB). TFR had awarded contracts to original-equipment manufacturers (OEMs) GE, China North Rail, China South Rail and Bombardier Transportation for the supply of 599 electric and 465 diesel locomotives for the GFB, but allegations of tender regularities have emerged.

As a result of the allegations, Transnet is reviewing its contracts with three of the four OEMs (GE has already delivered all 233 diesel locomotives it had been contracted to deliver) and is seeking to reduce the number of locomotives to be procured to 953 by 2025, instead of the initially planned 1 064. Transnet had planned to meet with the three OEMs in April and May to negotiate potential settlement agreements. At this stage, it is unclear what the outcome of such a process may have been.

Source: Creamer Media

Steel

MARTIN ZHUWAKINYU
CREAMER MEDIA SENIOR DEPUTY EDITOR

Despite plant closures and limited capacity growth in recent years, the installed capacity in the $900-billion-a-year global steelmaking industry – which totalled 2.23-billion tonnes in 2018 – continues to be significantly above demand, putting many producers of the alloy under pressure.

Worryingly, steel demand, estimated by the Organisation for Economic Cooperation and Development (OECD) to have reached 1.66-billion tonnes in 2018, is set to remain subdued, with the World Steel Association (worldsteel) forecasting average yearly growth of 1.10% from 2017 to 2035. A compounding factor, according to the Global Forum on Steel Excess Capacity (GFSEC), is the decline in steel intensity – the amount of steel required to generate one unit of gross domestic product (GDP) – which is expected to continue, owing to trends such as the move towards more efficient use of materials.

The GFSEC, whose 33 member countries account for about 90% of steel production, forecasts that the world's ageing population and the increasing degree of digitalisation will also weigh on steel demand, although there will be regional variations.

While China, the largest steel producer, reduced its steel production capacity by 120-million tonnes from 2014 to 2017 and by 30-million tonnes in 2018, with other countries also eliminating part of their capacity, this was somewhat offset by capacity increases in some countries. During the three years to 2017, South Africa, the second-largest producer in Africa, after Egypt, eliminated 700 000 t – or 6.80% – of its capacity.

Should planned steel plants be built, global steelmaking capacity could increase by 4% to 5% from 2019 to 2021, unless some of the existing capacity is eliminated, according to the OECD.

Global Production

The 64 countries that report to worldsteel and account for 99% of global steel output produced 1.81-billion tonnes in 2018 as all regions except the European Union (EU) posted increases. Asian production totalled 1.27-billion tonnes, representing a 5.60% increase on 2017. The contribution from China, the world's largest producer of the alloy, was 928.30-million tonnes. The Australian government's Department of Industry, Innovation and Science (DIIS) believes that Chinese production has peaked, forecasting declines to 861-million tonnes and 842-million tonnes in 2019 and 2020 respectively as the country's government enforces stricter environmental regulations and supply-side reforms reduce some lossmaking capacity. The implementation of measures to cut debt is also expected to contribute to the decline. However, BHP, the world's third-largest supplier of iron-ore, a key ingredient in the steelmaking process, disagrees with the DIIS's forecast, insisting that Chinese steel production will trend upwards until the middle of the next decade.

In India, steel output increased by 4.90% year-on-year to 106.50-million tonnes in 2018, resulting in the country displacing Japan as the number two producer. Responding to growing demand from the construction, automotive, consumer durables and capital goods sectors, the Indian steelmaking industry has invested heavily in expansion and new projects over the past few years and continues to do so. The industry has been boosted by the Indian government's National Steel Policy of 2017, in terms of which preference is given to locally manufactured steel and iron products for government projects, while importers of intermediate steel products or raw materials can claim benefits from government if they add 15% value to the imported product. The Indian government projects that, owing to this policy, steelmaking capacity in the country will increase to 150-million tonnes a year by 2020 and 300-million tonnes a year by 2030.

Elsewhere in Asia, Japan produced 104.30-million tonnes in 2018, 0.30% lower year-on-year and the lowest in nine years. The decline was attributed to natural disasters and technical challenges at steel mills. However, the Japan Iron and Steel Federation expects 2019 production to be higher, buoyed partly by strong demand from the local construction sector ahead of the 2020 Olympics, which the country will host. South Korea produced 72.50-million tonnes in 2018, a 2% increase on 2017.

North American production totalled 120.50-million tonnes in 2018 – 4.10% higher than in 2017 – with the US's contribution increasing by 6.20% year-on-year to 86.70-million tonnes. South American countries produced 44.30-million tonnes, 1.30% higher than in 2017, with Brazil, the region's largest producer, accounting for 34.70-million tonnes.

Production in the Commonwealth of Independent States increased marginally – by 0.30%. The Russian Federation's contribution of 71.70-million tonnes represented a year-on-year decline of 0.30%. Ukraine produced 21.10-million tonnes, 1.10% lower than in 2017.

Middle Eastern countries produced 38.50-million tonnes in 2018, up 11.70% year-on-year, while steelmakers in Africa increased their output by 7.20% year-on-year to 16.10-million tonnes. South Africa's share increased by 0.40% to 6.33-million tonnes, while Egypt contributed 7.80-million tonnes, compared with 6.90-million tonnes in 2017.

The EU, the only region to have posted a decline in 2018, contributed 168.10-million tonnes to the world's crude steel production, which was 0.30% lower than the bloc's 2017 volumes. The main contributor to the decline was Germany, whose 42.20-million-tonne output was 2% lower than in 2017. France's 15.40-million tonnes and Spain's 14.30-million tonnes represented declines of 0.70% and 0.10% respectively. Italy, however, increased its output by 1.70% to 24.50-million tonnes.

Of the other European steel-producing countries, Turkey posted an output decline – of 0.60% – to 37.30-million tonnes. The decline could have been deliberate, according to worldsteel, which believes that the country could have calculated that this level of production was ideal, given the political challenges in the region, while the tariffs imposed on the country by the US could also have played a role.

Global Consumption

Global steel demand totalled 1.71-billion tonnes in 2018. The largest contributor to this figure was China, which consumed 835-million tonnes, followed by the US (100.20-million tonnes), India (96-million tonnes), Japan (65.40-million tonnes), South Korea (53.60-million tonnes), Russia (41.20-million tonnes), Germany (40.80-million tonnes), Turkey (30.60-million tonnes) Italy (26.40-million tonnes) and Mexico (25.40-million tonnes). Four of these top ten steel-producing countries – South Korea, Germany, Turkey and Mexico – posted declines. Of the remaining countries, India posted the largest year-on-year growth of 8.30%.

The Indian steel-consuming sector has become one of the few bright spots for the world steel industry in what is forecast to be a lower growth era. Per capita steel use in the country has grown in recent years to about 66.20 kg. Although this is significantly above its historical level, it is about one-third of the world average of 212.30 kg.

The Indian government has in recent years spurred on steel demand through measures such as reforms to clear institutional bottlenecks and an infrastructure programme that include the ongoing $100-billion, 1 500 km-long Delhi-Mumbai Industrial Corridor (DMIC) project.

Other factors behind India's accelerated steel demand growth include the continued growth of the construction sector on the back of strong housing demand; initiatives to connect states through waterways to reduce logistics and transport costs; the Made in India scheme, which aims to transform India into a global design and manufacturing hub; and the drive by some of the country's states to develop small-vehicle manufacturing industries targeting the export market.

Owing to the surging steel demand in the country, the Indian Steel Association forecasts that consumption will increase by 7.10% to 100-million tonnes in 2019, thereby displacing the US as the second-largest steel consumer. The association forecasts further demand growth of 7.20% in 2020.

Source: Creamer Media

US Steel and Aluminium Import Tariffs

US President **Donald Trump** imposed import duties of 25% on steel products and 10% on aluminium products respectively in March 2018 to protect US jobs as he pursued his America First policy. The move was widely condemned and prompted retaliatory measures by some countries, as well as complaints to the World Trade Organisation and the North American Free Trade dispute resolution panels.

However, in May 2019, the US announced that Canada and Mexico – both of which had imposed retaliatory tariffs on US agricultural and other products – would be exempted from the steel and aluminium tariffs. The decision was viewed by commentators as paving the way for the approval of US-Mexico-Canada Agreement trade deal, which was signed in 2018 to replace the North American Free Trade Agreement but has yet to be ratified by the legislatures of the three countries.

Meanwhile, concerned that steel volumes diverted from the US would flood the European market, the European Commission, the governing body of the EU, decided in January 2019 to cap countries' steel exports to the regional bloc at historical trade volumes, above which a 25% tariff would apply from February 2019 to July 2021.

South African Steel Market

Steelmaking is fundamental to the South African economy, where the top consumers of the alloy – construction, automotive and cable and structural steel manufacture – account for R600-billion of GDP and employ eight-million people directly and indirectly. The primary steel industry is also a major user of electricity and logistics services.

Over the past 15 years, South Africa's primary steel industry has comprised ArcelorMittal South Africa (AMSA), Evraz Highveld Steel and Vanadium, Cape Gate, Columbus Stainless and Scaw Metals Group, with mini mills Agni Steel, Fortune Steel, SA Steel Mills, Cape Town Iron and Steel Works and Veer Steel Mills starting operations in recent years.

The industry has been in decline since 2004, when it produced 9.40-million tonnes of liquid steel, owing to weak demand and a surge in cheap imports, mostly from China, aged plants and high electricity tariffs, besides other factors. The country produced 6.30-million tonnes in 2018.

The country's largest primary steel producer, AMSA, which posted its first full-year profit in seven years in 2018, warned in February 2019 that high electricity prices posed a risk to its nascent recovery and long-term competitiveness. The company has announced it intends petitioning the National Energy Regular of South Africa (Nersa) for tariff relief for its operations in Gauteng, KwaZulu-Natal and the Western Cape. Nersa granted State-owned electricity utility Eskom permission to increase tariffs by 13.82% from April 2019.

AMSA's full-year profit of R968-million in 2018 – when its revenue increased by 16% year-on-year – came on the back of a 12% increase in average realised prices and a 5% increase in sales volumes, supported by a 21% increase in exports.

In 2018, AMSA's flat steel division produced 3.56-million tonnes of liquid steel and the long steel products division 1.53-million tonnes. The reopening, in January 2019, of an electric arc furnace at its Vereeniging mill, in Gauteng, which had not been operational since 2015, is set to increase long steel production volumes.

AMSA has announced that it does not intend reopening the electric arc furnace facilities at its Vanderbijlpark works, also in Gauteng, which were closed for cost, logistics and environmental reasons. Instead, it has initiated a feasibility study into a new electric arc furnace that will increase the mill's nameplate capacity from 3.20-million tonnes a year to more than four-million tonnes. The new furnace, expected to come on line in three to four years, will give AMSA the flexibility to use iron-ore or scrap.

South Africa's second-largest steel producer, Evraz Highveld Steel and Vanadium, was forced to go into business rescue in 2015 by the prolonged downturn in the domestic steel industry. However, the structural mill at the complex, in Mpumalanga, was relaunched in June 2017, after AMSA had signed an agreement to supply blooms and slabs that the mill would process into heavy structural steel. The contract was for an initial two years, with an option for renewal or to acquire the mill.

The other business strategies for Evraz Highveld Steel and Vanadium involved converting the complex into a lettable

Source: Creamer Media

industrial park and selling the two iron plants and plate mill at the site. The business rescue practitioners reported in February 2019 that they were reviewing several proposals for the plate mill and Iron Plant 2, and that the scrapping of redundant portions of Iron Plant 1 had started, with the process expected to be completed in six months.

Also on the corporate activity front, in February 2018, South African competition authorities approved the acquisition by black-owned investment holding company Barnes Southern Palace of the wire rod and rolled-products division of Scaw Metals Group from the Industrial Development Corporation, which, until that time, held 74% of Scaw. A month later, permission was granted for US-based company Amsted Rail to acquire Scaw's cast products division and, in May 2018, Chilean company Magotteau announced that it was engaged in negotiations to become a strategic equity partner for Scaw's grinding media division.

Meanwhile, while initial efforts to secure exemptions from the import tariffs of 25% and 10% imposed by the US administration in March 2018 on steel and aluminium products respectively were unsuccessful, 161 aluminium products and 36 steel products were exempted in October 2018.

This was partly due to lobbying by some US senators, who were concerned that South Africa could impose reciprocal tariffs on US chicken imports. When the steel and aluminium import tariffs were imposed, the Steel and Engineering Industries Federation of Southern Africa (Seifsa) calculated that the measures would cost local steel exporters about R3-billion in lost revenue and aluminium exporters about R474-million each year.

The South African government has encouraged domestic steel producers to continue engaging with US buyers of their products to consider requesting the US administration to exempt all South African steel and aluminium products from tariffs. In 2017, South Africa exported 330 000 t of steel products to the US, representing less than 1% of the latter's total imports, while aluminium product imports were equivalent to about 1.60% of the US's aluminium imports.

Meanwhile, South Africa has not been immune from the steel dumping that has taken place in many countries as global overcapacity persists. In response to local manufacturers' concerns about increasing volumes of cheap steel imports amid declining domestic demand, government, through the International Trade Administration Commission of South Africa (Itac), has imposed import protection against a range of upstream and downstream steel products since September 2015.

This included 10% import duties on galvanised/coated and painted steel, as well as a range of products, including wire rod, reinforcing bar, semifinished steel, steel plates, cold- and hot-rolled steel, steel sections, structural steel and other bars, rods and forges. In August 2017, Itac introduced a 12% safeguard duty on hot-rolled steel. The rate decreased to 10% in August 2018 and is set to decrease further to 8% in August 2019, before being scrapped 12 months later.

Owing to the import protection measures, flat steel product imports declined from 316 255 t between April 2016 and March 2017 to 155 146 t between April 2017 and March 2018, Itac chief commissioner **Meluleki Nzimande** told the National Assembly's Portfolio Committee on Trade and Industry in September 2018. Imports of long steel products also declined during the same period – from 39 263 t to 27 844 t. However, imports of some coated steel products continued to increase, raising speculation that duty circumvention could be taking place.

The import protection measures have not been universally supported, however. Critics contend that the protection granted to AMSA – a monopoly whose products they deem to be of a poor quality and whose on-time-delivery record they say is lamentable – is having a detrimental effect on the downstream industry.

Steel Prices

Owing to high global steel prices for much of 2018, AMSA achieved a 12% increase in average net realised steel prices from R8 338/t in 2017 to R9 301/t in 2018, with the higher prices being partially responsible for the steelmaker posting its first full-year profit in seven years. However, some role-players in the downstream industry have expressed concern about the limited price protection they are accorded.

In an article published in the July–December 2018 edition of The Export Directory: African Markets, steel supplier and processor Allied Steelrode executive director **Warne Rippon** also stated that steel pricing in South Africa was extremely volatile. In such an environment, he added, it was difficult to accurately quote customers in advance.

Rippon cautioned that, if steel pricing in South Africa was not addressed, Allied Steelrode, along with other companies in the downstream industry, would be forced to increasingly turn to imports.

Outlook

worldsteel expects global steel demand to increase by 1.30% year-on-year to 1.74-billion tonnes in 2019 and by a further 1% to 1.75-billion tonnes in 2020. However, in its latest Short Range Outlook (SRO), released in April 2019, the association states that uncertainty about the global trade environment and volatility in financial markets could pose downward risk to this forecast.

Demand in China, the largest steel-consuming nation, has been decelerating as a result of rebalancing and trade tensions between the Asian country and the US, but this trend was cushioned in 2018 by a mild economic stimulus programme. Demand in the country is expected to be further boosted in 2019 as the Chinese government heightens the level of the stimulus. However, worldsteel states in its SRO that a minor contraction will likely occur in 2020 as the effects of the stimulus programme begin to wane.

Elsewhere in the world, worldsteel forecasts contractions in demand in developed countries of 0.30% and 0.70% in 2019 and 2020 respectively, reflecting a deteriorating trade environment. It expects growth of 2.90% in developing countries, excluding China, during 2019, with further growth of 4.60% likely in 2020.

Water

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While the much-feared 'Day Zero' in South Africa's Western Cape province has been averted for the time being, owing to the public's abiding by water restrictions, among other efforts, the province and the country are not out of the woods.

In February this year, news agency GroundUp reported that, based on its extensive coverage of the water sector, a countrywide water shortage was but ten years away unless decisive action was taken to rehabilitate and preserve the country's rivers and catchment areas, repair and maintain existing infrastructure, and implement water reuse.

This was reiterated by the Department of Water and Sanitation (DWS) in a Ministerial interactive session on February 15. The department has said that if demand continues to escalate at current levels, the deficit between water supply and demand could be between 2.70-billion and 3.80-billion cubic litres a year by 2030 – a 17% water deficit.

The DWS, in its National Water and Sanitation Master Plan (NW&SMP) released in October 2018, says that South Africa requires a "new normal", a "significant paradigm shift" to achieve water security. This shift, it says, will recognise the limitations of water availability, ensure equitable access to limited water resources, deliver reliable water and sanitation services to all, focus on demand management and other sources of water and consider the impacts of climate change, as well as address deteriorating raw-water quality and the real value of water.

The Real Value of Water

Currently, the water sector is not financially viable.

This is owing to low tariffs, inadequate cost recovery, overconsumption, inefficient water use, wastage, leakage, inapt infrastructure choices – for example, water borne sanitation in a water-scarce country – inadequate planning and implementation, as well as population and economic growth. To remedy the situation, the DWS says that increases above existing inflationary targets will be required to address the historic undervaluation of water and sanitation services.

Investment in the water sector comprises capital for infrastructure development, operation and maintenance along the water supply chain, and funding for the governance and effective management of water and sanitation services delivery. The NW&SMP avers that the capital requirement of the sector totals an estimated R90-billion a year, encompassing about R70-billion for water supply infrastructure from source to end-user, and about R20-billion for sanitation and wastewater collection and treatment.

However, a funding gap of R33.30-billion a year exists, which must be reduced through focused interventions such as policy reviews, enhanced regulation, implementation of cost efficiency measures and proper management of user expectation and demand.

Through these measures, among others, the DWS believes that the current poor levels of maintenance and refurbishment in the sector, which are furthering the decline in the reliability of services and infrastructure, can be improved.

Voluntary coalition of South African and multinational companies the National Business Initiative (NBI) believes that a series of public–private partnerships (PPP) with municipalities could help ailing local water and sanitation departments, many of which are tackling challenges ranging from deteriorating infrastructure to declining water quality and poor governance.

According to NBI climate and water programme manager **Alex McNamara**, many municipalities are not running financially fit businesses, and are charging a quarter of what it costs to provide water.

The NBI contends that almost half of the local water and sanitation departments are in a "critical state" and need assistance from the private sector. The organisation has devised a project called Kopano ya Metsi, which examines how to strengthen municipal water management and enable PPPs to unlock water investment.

It proposes what it describes as a "virtuous cycle" to help municipalities deal with the litany of problems they are facing, starting with targeted subsidies for the poor, combined with cost-effective tariffs for other users. More accurate billing combined with increased tariffs will raise revenues. It suggests this will filter through to better staffing, which will improve customer service levels. Increased revenues will also allow for investment to improve infrastructure development and maintenance.

The NBI says that the main opportunities available to PPPs are involvement in the water value chain through desalination, groundwater extraction and wastewater treatment, and any form of water reuse.

A turnaround towards financial sustainability, however, will not succeed if another of the major challenges facing South Africa's water sector – nonrevenue water (NRW) – is not dealt with. NRW is costing municipalities about R9.90-billion of potential revenue a year.

NRW, which includes all water supplied that is not paid for, including physical water losses through leaks in the distribution system, illegal connections, unbilled consumption and billed, but unpaid for, water use, is currently estimated at 41%.

The high volume of water being lost by municipalities in the form of NRW, estimated at 1.66-billion cubic metres a year, is attributable to the state of the country's water infrastructure.

Water Infrastructure

The NW&SMP estimated the capital replacement value of South Africa's water and sanitation infrastructure at R1.36-trillion in 2017. However, the existing assets are also depreciating, resulting in a current book value of the infrastructure totalling an estimated R584-billion. This is because existing infrastructure has been extended beyond its life, owing to significant underinvestment in infrastructure maintenance, and delays in the renewal of aged infrastructure. This has resulted in

an accumulated backlog in refurbishment of about R59-billion.

According to the South African government's 2019 'Budget: Estimates of National Expenditure' report, which details its expenditure plans for the three-year medium-term expenditure framework (MTEF) from 2019/20 to 2021/22, 81.10%, or R42-billion, of the DWS's spending over the medium term is earmarked for water infrastructure.

Investment in bulk and reticulation infrastructure for water and sanitation as part of the Water Infrastructure Development programme, which is the largest spending area in the budget, is expected to lead to an increase in expenditure on transfers to municipalities at an average rate of 4.30% a year, from R5.70-billion in 2018/19 to R6.50-billion in 2021/22.

Through the regional bulk infrastructure grant and the water services infrastructure grant, four mega, 34 large and 295 small regional bulk water and sanitation projects are expected to be completed over the MTEF period.

An estimated R6.60-billion over the period will be made available to local governments through the regional bulk infrastructure grant and R11.80-billion to municipalities through the water services infrastructure grant. A further R11.90-billion will be made available over the MTEF through these grants for payments for capital assets.

Over the medium term, transfers to the Water Trading Entity, whose main functions include the development, operation and maintenance of specific water resource infrastructure and managing water resources in specific water management areas, are expected to fund short- and long-term interventions in:

- acid mine drainage (AMD) – mine water that is purified and used to augment the yield of the Vaal River system, in Gauteng, to ensure water security and environmental sustainability;
- the Olifants river water resources development project (Phase 2D);
- the Mokolo and Crocodile river water augmentation project (Phase 2A);
- the raising of Clanwilliam dam;
- the Groot Letaba river water development project;
- the raising of Tzaneen dam;
- the Mdloti river development project; and
- the raising of Hazelmere dam.

The entity will also subsidise the capital requirements, operations and maintenance of infrastructure for water resources. As a result, transfers to the entity are expected to increase at an average rate of 4% a year, from R2.10-billion in 2018/19 to R2.30-billion in 2021/22.

Water Supply and Demand

To balance demand and supply, South Africa will need to reduce water demand, as well as increase supply for a growing population and economy.

Average domestic water use in South Africa is about 237 ℓ/d per person – 64 ℓ/d per person more than the world average of 173 ℓ/d per person.

The NW&SMP recommends that average domestic consumption must be reduced to 175 ℓ/d per person by 2025.

South Africa needs to progress from a water supply strongly dominated by surface water to one that includes reuse of effluent from wastewater treatment plants, water reclamation, as well as desalination and treated acid mine drainage.

The NW&SMP contends that, by 2040, treated AMD and desalinated seawater will contribute significantly to the country's water mix.

Groundwater is also expected to feature more prominently. The total volume of groundwater that is potentially accessible is about 4.50-billion cubic metres a year, of which only two-billion cubic metres to three-billion cubic metres are being used.

In terms of demand, agriculture is the biggest water-consuming sector in South Africa, accounting for 61% of total withdrawals, according to the DWS, yet the sector pays the lowest tariffs. This places increased responsibility on not only the fiscus but also other water consumers.

The second-biggest user is the municipal sector, which supplies industrial, commercial and domestic consumers, while the mining and bulk industrial sectors are the third-biggest users.

Regardless of the volume of withdrawals by the sectors, the NW&SMP has emphasised that, to achieve water security, all water users in all sectors will have to use water more efficiently, and water use must be addressed in the plans of the municipal, energy, agriculture, forestry, mining and industrial sectors.

Outlook

Climate change impacts on South Africa will likely be felt primarily through impacts on water resources.

According to the Council for Scientific and Industrial Research, these will include longer droughts in the western parts of the country, and the arid interior and rainfall becoming more intense in the north and the eastern interior, resulting in flooding.

Many observers have forecast that the country will run out of water by 2030. Such a prediction will not eventuate, however, if there is a mindset change among consumers about the true value of water. A total of R899-billion is expected to be invested over the next decade to build new infrastructure and rehabilitate and upgrade existing facilities. This level of investment – about R89.90-billion a year – is about R33-billion more than what has been invested every year, which leaves a 37% funding gap.

The NW&SMP states that the mindset shift that must accompany an increase in water and sanitation infrastructure investment should occur not only among consumers but also at all levels of government, in the business sector and civil society.

Without demand management, currently planned infrastructure development and the broadening of the water mix will not be sufficient to balance supply and demand.

The NW&SMP contends that if the targets for reducing physical losses in municipal systems are reached, and there is a reduction in the per capita consumption of water to the global average of 173 ℓ/d, as well as a shift in the mix between the water-use types – surface water, groundwater supplies, desalination, reuse and treated AMD – there will be a slight surplus available in 2030.

Manufacturing

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Manufacturing is one of the key sectors that keep the economic engine of South Africa running, but the industry has been under severe strain in recent years. The contribution made by the sector to the economy has declined to only 14% of gross domestic product (GDP) in 2018, from an all-time high of about 25% in 1981.

Manufacturing not only plays an important role in the national economy but is also an important source of employment, providing work for one in every ten individuals in South Africa's workforce, employing about 1.78-million people.

In the past decade, the industry has faced the global financial crisis, the end of the commodity supercycle, a collapse of mining procurement and a global steel glut.

While other emerging markets have managed an accelerated recovery of their manufacturing sectors, South Africa has underperformed among its peers.

The reasons for the country's lacklustre performance in the post-2008-financial crisis era have been ascribed to a combination of external and internal factors. Policy missteps have made it more difficult for South African manufacturing companies to navigate global headwinds. When President **Cyril Ramaphosa** ascended to power at the beginning of 2018, he promised to revive the manufacturing industry through incentive programmes, targeting the automotive, agroprocessing, and clothing and textiles sectors. Incentives include tax benefits, infrastructure and support for companies investing in special economic zones.

The manufacturing industry staged a modest turnaround in 2018, recording its highest yearly growth rate in five years, albeit from a low base. The rebound was aided by increased export demand and a relatively competitive exchange rate.

Statistics South Africa (Stats SA) figures show that manufacturing production increased by 1.20% in 2018, following a 0.50% contraction in 2017 and a rise of 0.70% in 2016.

The food and beverages, and automotive divisions were the major drivers behind 2018's rise, while manufacturers in communication equipment, electrical machinery and clothing were the sectors that lagged.

In the first two months of 2019, manufacturing output barely grew, with an expansion of 0.80% in January and 0.50% in February.

Manufacturing production increased by 1.20% year-on-year in March, beating market expectations of a 1.10% contraction. The largest positive contributions were

Source: Creamer Media

made by energy-intensive industries, which commentators say is surprising, given the extensive load-shedding experienced during the month. South Africa was subjected to load-shedding in March at a scale and intensity similar to that of the 2008 electricity crisis. The economy was subjected to about two days of Stage 2 and seven days of Stage 4 load-shedding.

The largest positive contributions to the March expansion were made by petroleum, chemicals, rubber and plastic products (7% and contributing 1.50 percentage points to the total percentage change); basic iron and steel, nonferrous metal products and machinery (3.20% and contributing 0.70 of a percentage point); and food and beverages (1% and contributing 0.30 of a percentage point).

On a quarter-on-quarter basis, manufacturing output shrunk by a seasonally adjusted 2.40% in the first three months of the year.

The monthly changes in factory output measured by Stats SA tend to be foreshadowed by financial services provider Absa-sponsored purchasing managers index (PMI). The PMI is usually an indicator of where the production numbers will head in two months. A figure above 50 indicates expansion in the sector and below a contraction. In the first few months of this year, the seasonally adjusted Absa PMI lingered below the 50-neutral level. The PMI slipped from 50.70 points in December 2018, to 49.90 points in January, 46.20 points in February and 45 points in March, before rising to 47.20 index points in April.

The absence of load-shedding during April may have supported the slight improvement in PMI respondents' sentiment.

The Steel and Engineering Industries Federation of Southern Africa (Seifsa) has expressed its concern about the rate of contraction of the PMI, noting that factories are under extreme stress, owing to slacking economic activity and poor inventory turnover. Increasing fuel prices and rising energy costs are pushing up input costs, while irregular electricity supply is compounding the problem.

Amid weak domestic demand, the local factories have significant spare capacity. Large manufacturers – those with a turnover of more than R100-million a year – reported capacity utilisation of 83.10% in November 2018, decreasing to 80.30% in February 2019. The main reasons given for the underutilisation are insufficient demand (63%), shortage of raw materials (10%), shortage of labour (6.20%) and other reasons (20.80%).

The brakes that the limping South Africa economy is putting on demand for goods have dented business confidence among manufacturers. According to the Rand Merchant Bank/Bureau for Economic Research business confidence index (BCI), confidence among manufacturers hovered well below the neutral 50-point mark at about 34 index points in the first half of 2018 and then slumped to 26 points in the third quarter, before recovering to 30 in the fourth quarter. Business confidence relapsed to 25 index points in the first quarter of 2019, as an abrupt drop in export sales hit manufacturers on top of a faster deterioration in domestic sales.

Overall, the country's BCI fell 28 points in the first quarter of 2019 – the lowest level since the 27 index points recorded in the second quarter of 2017 and the deep recession of 2009.

Factories sold R2.32-trillion worth of goods in 2018, up from R2.18-trillion in 2017. In the first three months of 2019, sales amounted to R562.80-billion.

January's sales of R171.71-billion increased by 9.60% year-on-year, February's sales of R181.18-billion increased by 7.80% year-on-year and March's sales of R203.91-billion increased by 8.10% year-on-year.

Although manufacturing output recovered in 2018, formal employment losses were recorded in eight out of its ten broad subsectors. In the first three quarters of 2018, formal employment in the manufacturing sector declined by 1.20%, or 14 139 people.

The downward trend continued in the fourth quarter, with employment down 1.40% year-on-year to 1.77-million people. Employment levels remained largely unchanged in the January to March 2019 quarter, when compared with the preceding quarter, at 1.78-million people. On a year-on-year comparison, employment in the manufacturing sector decreased by 3.73% in the first quarter of the year.

Manufacturing Exports

Overall manufacturing exports expanded by 5.70% in nominal terms to R713.8-billion in 2018. The main contributors to the increase were motor vehicles, parts and accessories, nonelectrical machinery and equipment, nonferrous metal products, basic chemicals, and basic iron and steel.

The composition of the manufacturing export basket has changed over the years, with a substantial rise in the relative share claimed by the motor vehicles subsector. The export of motor vehicles, parts and accessories is the largest manufacturing export category, with an increase of 9.30% in value terms last year, representing 23.50% of total manufacturing exports.

The increase in the automotive industry's exports is an indication that parts of the manufacturing sector are internationally competitive, former Trade and Industry Minister **Rob Davies** has said. The automotive sector contributes 33% of the GDP of the manufacturing sector and produces about 600 000 vehicles a year.

On an individual country level, the US and Germany are the main markets for South African-manufactured goods, but as a whole, the African continent is the biggest export market. The key markets are Namibia, Botswana, Zambia and Zimbabwe, which are all members of the Southern African Customs Union (SACU).

The Industrial Development Corporation (IDC) reports that the potential outside SACU countries remains largely untapped. Several sub-Saharan African countries that are not members of SACU present relatively sizeable overall imports markets, including Nigeria, Kenya, Ethiopia, Ghana, Tanzania, Côte d'Ivoire, Senegal and the Republic of Congo, yet these countries' imports from South Africa are negligible.

Improving economic prospects for many of these African economies

could provide a solid basis for a stronger export performance and the enhancement of South Africa's manufacturing capacity. The average yearly growth for sub-Saharan Africa, excluding South Africa and Nigeria, is forecast at about 5% until 2024.

South Africa's trade deficit in manufactured goods widened to R310-billion in 2018, as the value of manufactured imports rose to R1.02-trillion.

Manufacturing and Electricity

Uninterrupted and competitively priced electricity is an imperative to successful manufacturing.

State-owned electricity firm Eskom's price increases have outpaced inflation over the past decade and tariffs are continuing to rise sharply. The National Energy Regulator of South Africa has sanctioned increases of 9.41% for 2020, 8.10% for 2021 and 5.20% for 2022. These increases are in addition to the approved 4.41% hike for the next three years, following Eskom's regulatory clearing account application.

Businesses have warned that substantial tariff increases will have a major impact on cost structures while Seifsa economist **Marique Kruger** has said that the sharp increases will make it difficult for manufacturing companies to plan production processes and that more companies in the electricity-intensive subsectors could close down.

In the metals and engineering (M&E) sector, electricity costs represent 3.08% of total input costs, but about 6% of the electricity-intensive subsector components of the M&E sector. The electricity cost component adds up to about R9.36-billion to the basic iron and steel products subsector and R2.23-billion in the basic nonferrous metals production industry.

The cost of electricity blackouts are also significant to the manufacturing industry and the larger economy.

Manufacturers report that two hours of load-shedding can translate into about five hours of downtime, as machines

Source: Creamer Media

have to be reheated, while sudden power losses cause mechanical and electrical damage to machines. Workers also have to be compensated when they work overtime to make up for lost production. All these issues raise the cost of manufacturing products in South Africa and lessen the industry's competitiveness. Ongoing uncertainty about electricity supply is expected to have a dampening impact on fixed investment activity in 2019, indicating that the manufacturing sector is likely to remain under pressure.

Policy Developments

To tackle the decline in South Africa's industrial and manufacturing capacity, the Department of Trade and Industry (DTI) developed an Industrial Policy Action Plan (Ipap) and launched the first iteration in 2008.

In its first ten years, the Ipap managed to successfully ramp up production in the automotive sector, resuscitated the ailing tooling industry and boosted the clothing, textiles, leather and footwear industries.

Automotive exports have doubled over the past ten years, with the sector producing 600 000 vehicles a year and supporting 113 000 jobs. The clothing and textile sector, which was on its knees ten years ago, has also been revived. The clothing and textile sector currently employs 95 000 people, while 22 new factories have been opened in the leather sector, supporting 2 200 jobs.

The DTI is also pleased about its steps to rebuild the tooling industry. Through its National Tooling Initiative, many foundries, as well as tool, die and mouldmaking companies, have been assisted through various DTI programmes, while 1 800 students have been trained.

One of the flagships programmes within the Ipap is the Black Industrialist Scheme (BIS), which was launched in November 2015. The programme benefits from specifically targeted funding earmarked by the IDC and the National Empowerment Fund. By early 2019, a total of 131 projects had been approved, with black entrepreneurs having leveraged about R13.20-billion of private-sector investment. The 131 projects have created about 9 500 new jobs and retained 8 900 in a wide range of manufacturing subsectors.

Government's initial goal was to financially assist 100 black industrialists and, with that goal having been surpassed, the DTI has set its sights on assisting another 100 black entrepreneurs over the next two years.

The BIS regards a black industrialist as a business that is more than 50% black-owned, or somebody who controls the business, takes personal risks with his/her participation and does business in the manufacturing sector.

Besides the BIS, the DTI also provides incentive packages to support local and foreign investments. The first major initiative was the 2012 launch of the Manufacturing Competitive Enhancement Programme, through which local manufacturers were able to discard obsolete and antiquated machinery and equipment for new investments valued at R30-billion. This was followed by the sector-specific incentives – the Automotive Incentive Scheme, the Aquaculture Development Enhancement Programme and the Business Process Services Incentive. The Ipap is also using public procurement as a key lever for industrialisation and reindustrialisation by designating certain sectors or products for local procurement. To date, 23 sectors and/or products have been designated for local procurement, with varying minimum local content thresholds. Between 2015 and July 2017, about R60-billion was reported to the DTI as value for local content in procurement. This includes the rail rolling stock fleet procurement of about R49.50-billion. However, the challenge remains the verification of the real achieved value, and the South Africa Bureau of Standards has been given a mandate to conduct accurate content verifications.

Changing Landscape

As the Fourth Industrial Revolution (4IR) gathers momentum, manufacturers are under intense pressure to innovate. The sector faces a multitude of ever-changing disruptive digital technologies – predictive analytics, additive manufacturing and the Industrial Internet of Things, to name a few. Amid the changing landscape, countries have to rethink their strategies and businesses have to adapt to the digital landscape, and align their operations and offerings with the new capabilities of a tech-centric ecosystem.

Management consulting and professional services firm Accenture states that the value-add of digital initiatives, such as blockchain, the Internet of Things (IoT) and artificial intelligence (AI) to industry could be as much as R2.50-trillion and could be unlocked by 2026. The highest potential for gains are in agriculture, manufacturing and financial services, with IoT likely to play the most important role.

In manufacturing, the implementation of technologies, such as IoT and connected devices, as well as AI throughout the value chain, has the potential to improve responsiveness to demand and allow for the introduction of many value-adding services, effectively turning production companies into service companies.

Positioning the South African economy for the digital industrial revolution, also known as 4IR or Industry 4.0, requires buy-in from the private and public sectors. Currently, South Africa is not well placed for the 4IR and, according to the DTI, the nation ranks between forty-sixth and seventy-fifth globally on a variety of metrics assessing readiness for 4IR.

The DTI argues that the key components of the digital revolution – IoT, Big Data, AI, automation, robotics, new processes and materials, additive manufacturing, logistics, marketing techniques and sales channels – will put pressure on areas where South Africa is already lagging or weak, such as education and skills, as well as enabling infrastructure such as broadband and communications.

However, as the continent's strongest production centre, South Africa's manufacturing industry has potential. The World Economic Forum lists South Africa's ability to innovate as one of the country's greatest strengths. The strong innovation culture and entrepreneurial activity is supported by a strong financial sector. Human capital, with a shortage of engineers, scientists and digital skills, remain the most pressing challenge for growing the country's manufacturing capabilities.

It is also critical for South Africa to improve its institutional framework to effectively respond to change, offer a stable policy environment and direct innovation.

Pumps

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Source: Creamer Media

The global industrial pumps market is expected to reach $88.40-billion by 2025, according to a new report by Grand View Research, expanding at a compound annual growth rate (CAGR) of 5.90% over the forecast period.

Demand for industrial pumps is on the increase owing to their use in a wide variety of applications such as water and wastewater, power construction, chemicals, and oil and gas. This, in turn, has led to increased spending by industrial pumps manufacturers to provide value-added benefits to consumers.

The industrial pumps market is categorised according to product type, which includes centrifugal, reciprocating, rotary and diaphragm pumps; and end-user, which includes the oil and gas, water and wastewater, chemicals and petrochemicals, pharmaceuticals, and food and beverages sectors, among others.

Centrifugal pumps held a major share of the global industrial pumps market at $43.50-billion in 2018, owing to their capability of handling varied pressure and their good load handling abilities at rather low maintenance costs and on account of their predominant use in utilities and shop floors of manufacturing units.

Positive displacement pumps, meanwhile, are reported to have held a market share of 13% in 2018 and are projected to generate a revenue of $10.71-billion by 2026, at a growth rate of 5.30% a year, according to market research and consulting firm Reports and Data. The firm estimates that the industrial pumps market will reach $89.21-billion by 2026.

Pumps, however, are outgrowing their conventional role as humble mechanical labourers, with the advent of digital technology and intelligent or "smart" pumps.

An intelligent pump is a pump that has the ability to regulate and control flow or pressure. It can be defined as the combination of a pump and a variable frequency drive (VFD) with digital control ability. However, the meaning of the term intelligent pump is transforming to refer also to embedded or attached sensors that collect data and transmit pump performance and/or process information for predictive asset management purposes. With the advent of intelligent pumps, remote condition monitoring, energy management as well as remote systems control become realistic prospects.

The Internet of Things and the Industrial Internet of Things (IIoT) – or the extension of Internet connectivity into anything from the machines in a factory to the engines inside an aeroplane – can collect, analyse and exchange data. The capacity to drive energy efficiency, remotely monitor and control pumping applications, and foresee issues before they cause system failures or impact operations is driving the adoption of IIoT technologies in pumping systems. It is also providing pumps manufacturers with the capability to innovate and provide for all pump solutions for end-users, instead of only a few components. Pumps manufacturers who succeed in providing IIoT capabilities will be better positioned to take advantage of these trends.

IIoT offers pumps manufactured by an original equipment manufacturer the capability to connect to the cloud, potentially help end-users troubleshoot and diagnose problems in the field without having to send a service technician on-site, among other advantages.

With intelligent devices like sensors and VFDs connected to a network, the data can be analysed and used to better understand how pumps are being used and when or why they operate outside required parameters. Pumps manufacturers could use this data to understand trends,

manufacture more reliable pumps and predict market needs before they happen.

According to pump-users publication Pump & Systems (P&S), IIoT could also help pumps suppliers capture incremental revenue through aftermarket sales. For instance, if a pumps supplier sells a connected VFD installed on a pumping system, the VFD can collect data on the physical condition of the system and, through analytics, calculate whether the pump is on the verge of seal failure. An automated notification can be sent to the end-user cautioning that seal failure is imminent, and an order for replacement parts can be automatically placed. This would result in increased uptime and increased revenue through aftermarket sales for the distributor.

For the service providers, connected pumps will make it easier to proactively fix end-user problems, possibly even before the users know there is a problem and create a greater awareness of what may need to be fixed.

"This will strengthen the value for service providers already offering maintenance contracts and open the door for those who do not yet offer them," P&S says.

Labour is the leading driver of costs for pump system integrators and service providers. Pump systems that are powered by connected devices speed up installation, commissioning and troubleshooting of the system. This increases labour efficiency, with less time being spent at each job, which enables the service provider to complete more jobs in a day, ultimately resulting in an increase in profits. As P&S explains: "Whether through intelligent sensors autotuning themselves to match the specific demands of the pumping system or connected technical support that offers step-by-step guidance through startup, maximising labour savings leads to better, faster service for the end-user and increased revenue and margins for the service provider."

End-users also stand to benefit from connected devices through increased customer service, better quality products and better situational awareness of their operations.

Aftermarket Service

The use of connected pumps allows the transmission of important data, enabling a range of IIoT applications, however, for pumps manufacturers, to differentiate themselves in an industry where most suppliers are offering similar equipment or technologies, the real differentiating factor in future will be the service, innovation and support that are offered with regard to the products companies supply.

Engineering solutions provider Weir Minerals Africa, for example, launched its e-commerce platform to the market in 2016. The site provides a rapid response buying channel for the company's products and was initially developed to serve smaller customers or the cash-based customer segment. However, this has evolved significantly over the past two years and today the company has about 2 900 wear parts listed on it, compared with the 72 parts when it was first established.

The platform was expanded in late 2018 to incorporate a full credit-based facility that facilitates a faster buying experience for the customer.

Customers also have access to the customer care line and can speak to a sales administrator who will assist, providing customers with the same level of service they would have received in person.

As a value-add, the e-commerce platform suggests other items that should be included in the purchase, improving the process for the customer. Weir also plans to improve on linking recommendations. This entails informing customers that there is a newer, more improved and compatible version of the item available. This will ensure that customers will always buy the latest components the company has to offer in South Africa.

Another company that is intensifying its focus on aftermarket services that add value to customer operations is local pumps manufacturer KSB Pumps and Valves, which under the umbrella of the SupremeServ division will extend its services and engineering expertise to include maintenance of its entire systems, reverse engineering of rotating equipment and system optimisations. All aftermarket services globally will fall under the new KSB SupremeServ banner, which encompasses existing and new maintenance, logistics and engineering infrastructure and is entirely focused on elevating customer assistance to new heights in the pumps industry.

This includes maintenance of third-party peripheral equipment to ensure its clients' systems perform optimally at all times. The company says that its aftermarket engineering teams can also remanufacture or reverse engineer equipment that is no longer available but necessary to meet clients' requirements.

The company's service offering includes a faster supply chain with a shift towards fully automated logistics functions for faster spare parts turnarounds, upgraded high-tech service centres at all KSB branches, specialised repair services on all makes of pumps and related equipment, specialised welding, as well as installations, commissioning, performance testing on site, decommissioning and other advanced field service and engineering services.

Also, in an unprecedented move in the local pumps industry, pumps distributor Integrated Pump Technology (IPT) announced in 2018 an extension of the warranty on Grindex submersible pumps from 18 months to 30. Traditionally, pumps companies offer a warranty period of just 12 months.

IPT, and its sister company Integrated Pump Rental, also offer an integrated pump solutions approach, where they offer sales as well as rental options. IPT maintains that, while the companies' market offerings differ, it is their philosophy of providing single-source pump solutions to customers in the mining industry that has led to the significant growth of both in the past four years. Both companies' extend a full service offering that includes not just the supply of a pump, but also installation of the pump and associated accessories, including hosing, flotation devices and control panels. Both companies also provide support including maintenance contracts with skilled artisans performing this work. This, the company says, ensures optimum performance of a pump installation.

Mining Contents

Source: Creamer Media

Source: Creamer Media

Source: Creamer Media

Coal

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While thermal coal's share of the global energy mix is forecast to decline from 27% in 2017 to 25% in 2023 as more stringent air-quality policies are introduced, coal divestment campaigns gather momentum and renewables costs continue to fall, the International Energy Agency (IEA) expects power station demand for the fossil fuel to remain stable over the outlook period.

This upbeat forecast is based on the expectation that the envisaged environment-related demand reduction, projected to be most pronounced in Europe and North America, will be more than offset by strong growth in Asia, the agency states in its 'Coal 2018' report.

India is expected to post the greatest demand increase in Asia, but a deceleration in the growth rate is predicted, owing to a large-scale expansion of the country's renewables sector and increased use of supercritical technology in new power stations. Elsewhere on the continent, significant demand growth is predicted in Indonesia, Vietnam, the Philippines, Malaysia and Pakistan. The IEA's projection for China, which accounts for nearly 50% of thermal coal global consumption, is for a 3% demand decline in the five years to 2023 as clean-air measures are implemented.

The World Coal Association (WCA) is also upbeat about thermal coal's prospects, pointing out in March 2019 that the world's current coal-fired electricity generation capacity of 2 000 GW – which requires six-billion tonnes of coal a year – represents an increase of 62% since 2010, and that more than 300 GW is under construction in Asia alone.

Given the availability of technology that reduces harmful-gas emissions from coal-fired power stations, the WCA believes coal will continue to have a role in a carbon-constrained world. One such technology is carbon capture, use and storage (CCUS), which the association says could be retrofitted to some power stations, with more than 300 GW of the existing generation capacity in China alone reportedly meeting the criteria for CCUS retrofit.

However, the thermal coal sector suffered a blow in March 2019, when the Japanese government announced that it would no longer approve any new coal-fired power stations. This coincided with major Japanese companies announcing their intention to move away from coal, and South Korea increasing taxes on thermal coal by 27%.

While the thermal coal sector is under pressure, largely because of the commodity's environmental impact, the coking coal market is booming, buoyed by strong demand and barely growing supply, which have resulted in prices doubling to more than $210/t since 2010. Consultancy Wood Mackenzie expects the 2019 average price to be upwards of $180/t, while its counterpart, Fitch Solutions, has forecast $195/t and financial services firm Credit Suisse $203/t.

There are concerns, however, that the high prices of coking coal may prompt

Source: Exxaro

significant production capacity expansion, boosting output as consumption slows, thus exerting downward pressure on prices.

Meanwhile, owing to slackening demand in key markets, economic analysts FocusEconomics expects thermal coal prices to average $93.80/t in 2019 – 1.50% lower than the economics firm's previous forecast for the year – and to decline further to $87.20/t in 2020. National Australia Bank has also revised its 2019 price forecast downwards – from $95/t to $88/t. Credit Suisse forecasts $85/t in 2019 and $80/t in each of the next two years.

South African Coal Market

South Africa's estimated coal endowment of 30-billion tonnes, valued at R6-trillion, equates to 3.50% of the global total. Coal mining in the country primarily takes place in the fast-depleting Mpumalanga coalfields – which account for 83% of total production – with smaller quantities mined in the burgeoning Waterberg region of Limpopo, as well as in KwaZulu-Natal and the Free State.

South Africa's coal deposits are generally shallow, largely unfaulted and slightly inclined, which lends them to opencast and shallow underground mining, with a high degree of mechanisation.

Coal is the largest revenue generator in the South African mining industry, earning R139.40-billion in sales in 2018, up 7% on the previous year. Forty-nine per cent of this figure comprised export receipts.

The sector, which employed 86 919 people in 2018 – 5.30% more than in 2017 – also contributed R168-billion to the fiscus in the form of royalties and paid R24.70-billion in wages and salaries, according to industry body Minerals Council South Africa.

The coal mining sector faces several challenges, including poor policy cohesion, exemplified by State-owned electricity utility Eskom's insistence on procuring the fossil fuel from suppliers with a 51% broad-based black economic-empowerment level, while the Mining Charter stipulates 30%.

Coal miners also have to contend with cumbersome application processes for environmental, prospecting and mining right licences; constraints on the coal export channel, which extends from the Waterberg to the Richards Bay Coal Terminal (RBCT), on the KwaZulu-Natal coast; near-mine communities demanding jobs and tenders; and challenges in municipalities where mining operations are located.

Also of concern is the Carbon Tax Act, which took effect on June 1, 2019, and aims to increase the cost of carbon-intensive goods and services through the appropriate pricing of carbon, thus promoting noncarbon alternatives.

Meanwhile, South African coal mines produced 252.60-million tonnes in 2018, marginally higher year-on-year. Until the disposal in 2018 of its Eskom-tied mines and its 73% interest in Anglo American Inyosi – owner of the Mpumalanga-based New Largo thermal coal product and disused Old New Largo colliery – Anglo American Coal South Africa (AACSA) was the largest coal producer in the country. AACSA and Seriti Resources, the startup that acquired its former coal assets, together with Exxaro, South32, Glencore and Sasol Mining, produce 80% of the country's coal, with the balance accounted for by 50 to 60 junior miners, some of which have entered the sector in recent years, following Eskom's implementation of a procurement policy that favours suppliers with a black ownership of 50% plus one share.

Of the 252.60-million tonnes produced in South Africa in 2018, 73.47-million tonnes – 4.10% less than in 2017 – was exported, with the balance sold on the domestic market, where Eskom is the biggest consumer, accounting for 53% of demand. The main export destination in 2018 was India, which received 35.29-million tonnes, followed by Pakistan (9.37-million tonnes) and South Korea (6.73-million tonnes). The Netherlands received 3.14-million tonnes and Spain 1.38-million tonnes, while Egypt was the top destination in Africa, receiving 1.33-million tonnes.

The RBCT expects to ship 77-million tonnes in 2019, higher than 2017's all-time high of 76.47-million tonnes. However, Minerals Council South Africa calculates that, if gross fixed capital formation in the sector – which totalled R18-billion in 2017 – increased by 10% a year, coal exports could grow to about 110-million tonnes a year, creating an additional 11 600 jobs.

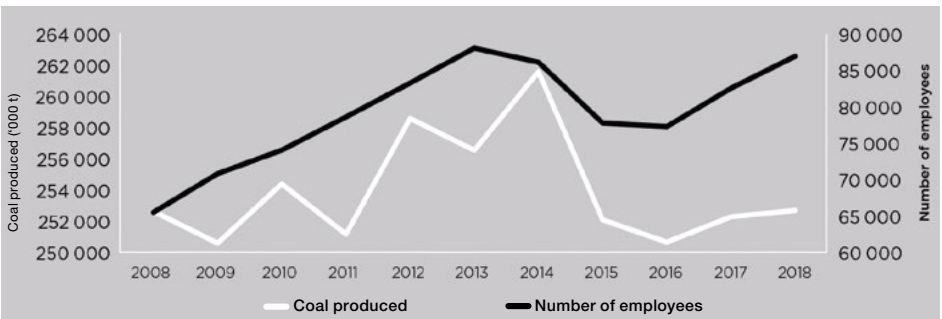
Corporate Activity

Anglo American has not been the only mining major to have divested, or announced plans to divest, from some of its coal assets in South Africa in the past two years.

South32's South African Energy Coal (SAEC), which produces 28-million tonnes a year – half of which it delivers to Eskom – has been up for sale since 2018. While details are sparse about progress on the sale, CEO **Graham Kerr** told an interviewer in March 2019 that a shortlist was being prepared from more than 50 bidders. Mining news website miningmx reported during the same month that the winning bidder would have to be anchored by a black-owned company with a balance sheet that is capable of funding the cost of resource renewal and production growth, as well as rehabilitation charges. SAEC boasts 4.50-million tonnes of *in situ* resources and a 21% entitlement at the RBCT.

Seriti is reportedly one of the

South African coal production and employment: 2008 to 2018



Source: Minerals Council South Africa

entities interested in acquiring SAEC, said to be worth about $800-million, along with Phembani Group, owned by telecommunications giant MTN's former chairperson and CEO, **Phuthuma Nhleko**, and nonprofit group Mining Forum of South Africa. Exxaro executives would neither deny nor confirm the company's interest in SAEC when they presented 2018 financial-year results in March 2019.

However, they confirmed that Exxaro had decided against preparing a bid for another coal miner that is up for sale – Optimum Colliery Holdings – explaining that, as the transaction was designed as a package deal, it would be value destructive for the company.

Seriti has, however, stated that it is interested in acquiring Optimum Colliery Holdings, owned by the controversial **Gupta** family's Tegeta Exploration & Resources, which is in business rescue and whose Optimum coal mine is contracted to supply Eskom's Hendrina power station, in Mpumalanga. Should it be selected to buy Optimum, Seriti would be entitled to the company's 7.50% stake in the RBCT, which, based on the terminal's yearly capacity of 81-million tonnes, equates to just over six-million tonnes a year.

In January 2019, a consortium that includes State-owned African Exploration & Mining Finance Corporation (AEMFC) announced that it was also vying for the Optimum mine, with the entity stating that it envisaged a public–private partnership model where it would own the mine and an established privately owned mining company operating it. AEMFC, which owns the Vlakfontein colliery, in Mpumalanga, stated that it had the financial wherewithal to bid for the Optimum mine, which would include providing a R250-million guarantee.

Electricity Generation

Eskom consumes more than half the coal mined in South Africa. During the 2017/18 financial year, its 16 coal-fired power stations burned 115.49-million tonnes of the fossil fuel, compared with 113.74-million tonnes in the previous year.

Source: Creamer Media

The utility procures more than half its coal under a model whereby it provides mine owners with capital to develop and expand their mines, with the output supplied to the utility at cost plus a small margin. However, it has failed to commit sufficient capital for this purpose over the past few years and announced in 2015 that it intended to withdraw from the cost-plus mines, a decision that was reversed in May 2018 by CEO **Phakamani Hadebe**, who has announced that he will be leaving the parastatal at the end of July 2019.

The lack of sufficient investment in new capacity at the cost-plus mines, coupled with factors that include a decline in supplies from Tegeta, has resulted in a precipitous decline in coal stockpiles at Eskom's power stations since October 2017, when available supplies were above 40 days.

To help remedy the situation, Hadebe told *Engineering News* in November 2018 that 27 new coal supply contracts had been concluded since January 2018 and that more contracts were due to be signed shortly.

The new contracts, he added, were in line with the provisions of the Preferential Procurement Policy Framework Act and the Public Finance Management Act, which meant that the utility was not insisting that suppliers be majority owned by black shareholders.

He explained that more than 70% of the contracts that had been concluded by that time were signed with companies whose black shareholding was below 50%.

In the longer term, Eskom intends to boost its coal supply by extending cost-plus contracts, investing in cost-plus mines, extending existing fixed-price contracts and conducting open tenders to source uncontracted coal for the life of power stations.

While coal deliveries to Eskom power stations totalled 115.49-million tonnes in 2018, the latest draft of the Department of Energy's Integrated Resource Plan envisages an increase to 139-million tonnes a year by 2023, followed by a decline to current levels ten years later, before contracting further to 90-million tonnes a year by 2020. The Minerals Council calculates that the expected increase in demand from Eskom in the coming years will require a R1.30-billion investment in new mines, which will result in the creation of an estimated 6 500 additional jobs. As some of the existing coal mines are nearly depleted, several new operations will need to be developed, at a cost of about R20-billion, to meet Eskom's demand.

Gold

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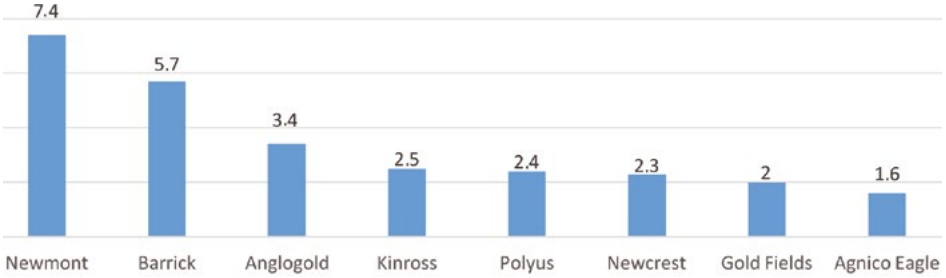
Gold companies ranked by 2018 gold production (million ounces)



Source: Barrick Gold

Far-reaching changes have swept through the global gold mining industry in the past year, with takeovers of Randgold Resources by Barrick Gold and Goldcorp by Newmont Mining creating two new gold Goliaths, leaving South African gold mining companies quite some way behind.

Newmont Goldcorp is now the world's largest producer, with a 2018 output of 7.40-million ounces, followed by Barrick at 5.70-million ounces. South Africa's AngloGold Ashanti remains in third position, but at a more distant 3.40-million ounces, while fellow Johannesburg-headquartered Gold Fields is in seventh place at two-million ounces.

AngloGold Ashanti and Gold Fields have turned their gaze internationally and derive most of their revenue from operations outside the country. Each have only one mine left in South Africa, leaving the local gold industry anchored by Sibanye-Stillwater, Harmony Gold, DRDGold and Pan African Resources.

Gold mining in South Africa is considered to be a sunset industry, with production in terminal decline.

Once the world's largest gold producer, South Africa is producing at only a fraction of what it produced in its heyday in 1970, when output peaked at 1 000 t/y. Statistics South Africa reports that, in the past 20 years, gold miners have had only two years of positive yearly growth – in 2002 and 2013. Last year, production fell by 14% to 132.20 t, according to figures provided by Minerals Council South Africa.

The industry is facing challenges such as deeper-level mining, decreased productivity, ever-increasing costs, labour disruptions, community protests and illegal mining. Further, no new deep-level gold mines have been built since 2003.

According to the GFMS Gold Survey 2019, published by global market data provider Refinitiv, the rate at which South Africa's production costs are rising rank among the fastest. Multiple operational disruptions, owing to power cuts, seismic damage and labour unrest, pushed up the 2018 total cash cost and all-in sustaining cost (AISC) of South African mines by 10% and 12% respectively to "near subeconomic values". Gold Fields' South Deep mine operated at an AISC of $1 903 oz last year, compared with a world average of $897/oz. Sibanye, which suffered a bruising five-month strike at its gold mines, operated at an AISC of R914 590/kg, or $2 030/oz, in the March 2019 quarter – almost double what the company received for the gold it sold.

Following the strike called by the Association of Mineworkers Union, Sibanye has said that it will restructure its unprofitable gold mining operations and that it could lead to more than 6 000 job losses.

South Africa's gold mines last year employed 101 000 direct employees, who earned R26.50-billion.

Power Shortages

Production costs will continue to increase as the cash-strapped Eskom looks towards electricity users to help keep it afloat. The mismanaged State-owned utility increased tariffs by an average of 15.50% a year from 2006 to 2017, reducing fixed investment in gold mines by R16.06-billion. This year, tariffs rose by another 13.82%, with increases of at least 8.10% and 5.22% to follow in the next two years.

The industry has warned that it cannot absorb any more electricity increases, as the majority of the county's gold mining operations are marginal. In 2018, 71% of gold mining operations, representing 60% of gold production, were either marginal or lossmaking.

Mining companies are studying self-generation alternatives to reduce their reliance on Eskom. Generating renewable energy for their operations will take companies down the cost curve and provide crucial energy security. Prospects for self-generation received a major boost when the National Energy Regulator of South Africa was given Ministerial approval in May to licence projects that have a combined capacity of 500 MW.

Allowing the private sector to arrange its own sources of lower-cost power could strengthen the South African mining industry's investment case. However, to take mining companies completely off the grid will require substantial investments that will take several decades to come to fruition, and it will severely hurt Eskom's revenue, accelerating the utility's death spiral.

Going Offshore

While the much-talked about global consolidation of the gold industry has not spilled over to South Africa (other than a rumoured, but-denied, merger of AngloGold and Gold Fields), the spotlight has fallen on the strategy that number-three producer AngloGold will pursue.

AngloGold has announced that it has embarked on a process to review divestment options for its South Africa operations, including the Gauteng-based Mponeng mine, which will require a substantial investment to extend its life, the surface rock dump processing business and mine waste retreatment operations, which includes Mine Waste Solutions.

CEO **Kelvin Dushnisky** has emphasised that Mponeng is a well-capitalised and -run operation with an excellent orebody, but that the group has competitive, higher-return options available in its portfolio, which makes an investment by AngloGold in deepening the mine unlikely.


Source: Creamer Media

AngloGold concluded the gross R3.58-billion sale of its Moab Khotsong gold mine, in the North West, and related assets and liabilities to gold mining company Harmony last year. It also concluded the separate sale of the Kopanang gold mine, in Gauteng, and related assets and liabilities to Chinese-backed investment company Heaven-Sent SA Sunshine.

Names of companies that have been circulating as interested parties in the assets that AngloGold plans to sell include Sibanye, Harmony and Heaven-Sent SA Sunshine Investment.

Sibanye CEO **Neal Froneman** has told Bloomberg News that the Mponeng mine and Gold Fields troubled South Deep mine would fit into the company's portfolio.

The completion of its gradual withdrawal from South Africa could result in AngloGold's moving its primary listing to an international exchange, such as London or Toronto, although Dushniksy has told *Mining Weekly* that the company will always have a JSE listing as well.

Sibanye has also indicated that it is considering moving its primary listing offshore to ensure that it can compete for international assets, removing the perceived "South Africa discount" associated with being listed on the JSE. The company is currently listed in Johannesburg and has American Depositary Receipts that trade in New York. Froneman has emphasised that moving its primary listing is not an exit strategy from South Africa and that it will stay domiciled in the country.

Sibanye's growth options in South Africa's gold mines have largely been exhausted, with an extension for the Driefontein mine, in Gauteng, said to require R1-billion, which may be a tough sell to investors in the country's current gold mining environment.

Gold Fields has invested heavily in its offshore assets in the past two years to offset the underperforming South Deep mine.

Brighter Days Ahead

Following what proved to be a challenging year for the gold price, 2019 looks set to be a good year for South African gold producers, as ever-increasing geopolitical risks are strengthening the metal's fundamentals, combined with rand weakness. A stronger rand reduces the rand revenue that South African producers earn for gold they sell at a price determined in US dollars on global markets.

Gold, which is traditionally seen as a safe investment during periods of uncertainty, reached a trough of $1 160 oz in August last year, but conditions started to improve thereafter, and this has continued into 2019. Prices have been supported by strong demand and a fall in long-term real interest rates.

While there is consensus about the direction of the price of gold this year, analysts seem somewhat divided over the exact impact that Britain's exit from the European Union, the US-China trade wars, US real interest rates, the dollar price and the likely impact of geopolitical factors will have on the gold price. The London Bullion Market Association's 2019 Precious Metals Forecast Survey came up with a divided opinion for gold prices, with a forecast range of $1 150/oz to $1 475/oz: "A trading spread of $325 (25% of the forecast average price) suggests that the gold price could be in for an interesting journey in 2019".

European precious metals consultancy Metals Focus expects global gold demand to rise to the highest level in four years, as higher consumption by jewellers offsets a fall in central bank buying. The world will consume 4 370 t of gold this year, the most since 2015 and up slightly from 4 364 t in 2018.

Metals Focus' 'Gold Focus 2019' report, published in March, is forecasting accelerated growth in jewellery fabrication, with a 3% rise to a four-year high of 2 351 t. The largest increase comes from India. Industrial offtake is expected to result in a further slight rise in 2019, while physical investment is forecast to remain flat at 1 082 t. Central bank buying is likely to remain elevated at 600 t this year, but the consultancy does not expect the official sector purchases to match 2018's levels. Purchases by the official sector surged almost 75% in 2018, as central banks added gold to diversify their reserves.

Gold supply will increase by 1% to 4 707 t, the report predicts.

Overall, Metals Focus is forecasting that macroeconomic conditions will remain generally positive for gold this year, which should encourage professional investors to remain net buyers, supporting the price. Metals Focus is forecasting that gold prices will average at $1 310 oz this year, up from $1 268/oz last year.

The World Bank is also predicting a price increase of about 3% for 2019, setting its forecast at $1 300/oz on robust demand and a prolonged pause in interest rate hikes by the US Federal Reserve.

The GFMS Gold Survey for the fourth quarter of 2018, published in January, forecasts gold at $1 292/oz in 2019.

Iron-Ore

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Source: Assmang

Production cuts in Brazil in the wake of a tailings dam collapse in January 2019 that left about 300 people dead or missing, coupled with weather-related disruptions in Australia, will have major implications for the seaborne iron-ore market in the near term.

The failure of the 'upstream' tailings dam, at Vale's Córrego do Feijão mine, in the Brazilian state of Minas Gerais, prompted the number one iron-ore producer to decommission similarly constructed dams over the next three years at a cost of $1.30-billion. The resultant production loss is estimated at 40-million tonnes a year, equivalent to about one tenth of the miner's output.

Vale suffered further setbacks when Brazilian authorities cancelled the licences for a tailings dam servicing the 30-million-tonne-a-year Brucutu iron-ore mine, the largest in Minas Gerais state, in February 2019, and for 13 other tailings dams a month later. While Vale successfully challenged the suspension of operations at Brucutu and was allowed to reopen the mine in April 2019, the reprieve was short-lived, as a higher court upheld the suspension in a judgment delivered in May 2019.

In Australia, which, together with Brazil, produces more than 70% of the world's iron-ore, a tropical cyclone in the Pilbara region in March 2019 resulted in significant production disruptions at all the major miners, including Rio Tinto, BHP and Fortescue Metals Group, causing them to lower their shipment forecasts for 2019 from previously announced volumes.

According to some commentators, mines in China, the largest iron-ore consumer and a significant producer of the ferrous metal, have limited capacity to plug the resultant supply gap, owing to environmental constrains and high costs.

Amid the production cutbacks, iron-ore demand from Chinese steel mills – which account for about 65% of global demand – has been on an upward trend, driven partly by high levels of mill profitability. According to the China Iron and Steel Association, production in the first two months of 2019 increased by 9.20% year-on-year to 12.60-million tonnes, while Fortescue Metals Group CEO **Elizabeth Gaines** told US television channel CNBC in May 2019 that she forecast a 3% to 4% steel production increase for the whole year.

Owing to the supply disruptions and increasing demand from Chinese steelmakers, iron-ore prices have surged, with the benchmark spot price surpassing $100/t in May 2019, the highest in five years.

The high iron-ore prices represent a boon for miners of the ferrous ore, which are generating huge cash margins. Fortescue Metals Group, for example, paid out a surprise out-of-cycle 60c-per-share dividend to its shareholders in May 2019, while Rio Tinto has generated an extra $2-billion in free cash flow for every $10/t increase in the iron-ore price. In a trading statement released in May

2019, Kumba Iron Ore, the dominant producer in South Africa, reported that it expected to post a stronger financial performance for the half-year to June 30, 2019, underpinned by the higher ore prices and a weaker average rand:dollar exchange rate. Kumba is due to announce its results for the period in July 2019.

Large South African Producers

South African iron-ore miners produced 74.60-million tonnes in 2018, an increase of about 0.20% on 2017 output, according to industry body Minerals Council South Africa's 'Facts and Figures 2018' booklet. The sector's revenue for the year totalled R45.50-billion, down 7.80% on the 2017 figure.

According to the Minerals Council, the South African iron-ore sector is facing severe challenges, including policy, regulatory and operational uncertainty, which have inhibited investment and exploration for new orebodies. Without further exploration and additional discoveries, it is projected that known iron-ore reserves will be exhausted in the next 20 years. Other challenges include inadequate rail capacity and the reliability of the dedicated railway line from the Northern Cape iron-ore mining hub to the Port of Saldanha, on South Africa's West Coast, double-digit increases in administered prices and challenges in municipalities where the mining companies operate.

The South African iron-ore mining sector is dominated by Kumba Iron Ore, which owns the Sishen and Kolomela mines, both located in the Northern Cape. The miner produced 43.11-million tonnes in 2018, compared with the previous year's 44.98-million tonnes. Sishen's contribution, at 29.25-million tonnes, was 6% lower than in 2017, while production at Kolomela remained relatively unchanged, at 13.86-million tonnes. Kumba's reduced production, however, was in line with guidance of 43-million tonnes to 44-million tonnes.

Production in 2019 is expected to range from 43-million tonnes to 44-million tonnes, comprising 30-million tonnes from Sishen and 13-million tonnes from Kolomela.

Kumba's 2018 sales, comprising 3.29-million tonnes delivered to local steelmaker ArcelorMittal South Africa and 39.97-million tonnes shipped to overseas customers, represented a decline from 44.89-million tonnes in 2017, which resulted in a 1% year-on-year revenue decline to R45.73-million tonnes. Headline earnings of about R6.68-billion were about the same as in 2017.

South Africa's second-largest iron-ore producer, Assmang, is a 50:50 joint venture between Assore and African Rainbow Minerals that owns the Khumani mine, adjacent to the Sishen mine, and the Beeshoek mine, near the Northern Cape town of Postmasburg.

Assmang produced 18.58-million tonnes of iron-ore during the year ended June 30, 2018 – about 5% up on the preceding year – with Khumani contributing 14.70-million tonnes and Beeshoek 3.88-million tonnes. Commensurate with the increased production in 2017/18, iron-ore sales were 600 000 t, or 4%, higher year-on-year higher, at 17.90-million tonnes.

During the six months to December 2018, the company produced 8.74-million tonnes, 4% lower than production in the corresponding period of 2017/18. Lower year-on-year sales for the period, at 8.75-million tonnes, were attributable to challenges on the Sishen–Saldanha railway line and represented a decline from 9.12-million tonnes for the period from July to December 2017.

Outlook

In light of the supply disruptions at the Big Four iron-ore producers – Vale, Rio Tinto, BHP and Fortescue – coupled with robust Chinese steel demand and improved profitability levels at steel mills in the Asian country, many commentators believe that the benchmark price for 62%-iron-content ore, which breached $100/t in May 2019, will remain at elevated levels for the rest of 2019.

Financial services firm Citibank forecasts that the price will average $86/t in 2019 before easing to $70/t in 2020. Broking firm Credit Suisse projects a peak of $110/t in the September quarter, when China's port inventory is expected to be at its lowest.

In the medium term, Australia's Office of the Chief Economist believes that the iron-ore price – in 2019 dollar terms – will increase from an average of $55/t in 2021 to $58/t in 2024 as supply growth decelerates and demand growth continues to increase. This forecast is underpinned by the assumption that the price will tend towards the breakeven level by producers of the last tonnages needed to meet demand and that about 5% of producers, mostly in China, will be lossmaking.

Source: Creamer Media

Platinum

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Source: Creamer Media

The global platinum market ended 2018 with a 645 000 oz surplus, according to data published by the World Platinum Investment Council (WPIC). Global demand decreased by 5% year-on-year to 7.37-million ounces in 2018 on the back of lower demand in the automotive, jewellery and investment segments.

Platinum supply also decreased marginally to 8.01-million ounces because of lower mine supply, while refined platinum output decreased by 1% year-on-year to 6.09-million ounces, as a result of lower output in Zimbabwe, Russia and North America. South Africa, however, marginally increased its supply for the year, after output in 2017 had been impacted on by community disruptions and safety-related stoppages.

South Africa's refined platinum production increased by 1% year-on-year to 4.41-million ounces in 2018, compared with the 4.38-million ounces produced in 2017. The sector, which is one of the largest employers and a significant export revenue earner, produced about 259 t of platinum in 2018, earning about R96-billion in revenue and paying about R48-billion in employee salaries and R900-million in royalties.

The sector, however, faces many challenges, including an oversupplied global market, weak demand, industrial action, lower productivity and rising costs. The Minerals Council stated in February 2019 that more than 60% of the South African platinum mining sector was lossmaking or marginal.

The council states in its National Platinum Strategy for South Africa document, published in February 2019, that the viability of the platinum mining industry is under threat, with various financial indicators, including return on assets, return on investment and gearing, besides others, having deteriorated, partially because of lower PGM prices on global markets in recent years. The lower PGM prices have been driven by structural changes to supply and demand, with an increase in the recycling of the precious metal, while mine supply has remained flat. Simultaneously, platinum is being replaced by palladium in catalytic converters fitted to gasoline cars.

Platinum producers

Anglo American Platinum (Amplats), Impala Platinum (Implats), Lonmin and Sibanye-Stillwater are the four biggest platinum producers in South Africa. There are also a handful of smaller platinum producers, as well as development companies, operating in the country.

Improved operational efficiencies and higher productivity levels across its portfolio resulted in a 4% year-on-year increase in Amplats' PGMs production for 2018 to 5.19-million ounces (2017: 5.01-million ounces). Its platinum output was also up 4% year-on-year, at 2.45-million ounces (2017: 2.40-million ounces). The company's strategy of repositioning its portfolio, removing lossmaking ounces and improving operational efficiencies started to deliver benefits for Amplats during 2018, with its headline earnings a share up 95% year-on-year to R7.60-billion (2017: R3.90-billion).

Amplats expects to produce between two-million and 2.10-million ounces of platinum metal in concentrate for 2019 and between 2.20-million and 2.30-million ounces of refined platinum.

Implats, meanwhile, produced 1.57-million ounces of platinum in concentrate in its 2018 financial year (FY2017: 1.56-million ounces), as a result of improved performances at its Impala, Marula, Mimosa and Impala Refining Services operations. It achieved a gross profit of R1.60-billion, compared with a loss of R539-million in the 2017 financial year, but its earnings were negatively impacted on by R13.60-billion in impairments.

Another significant platinum miner, Lonmin, has long been struggling with financial constraints amid challenging business fundamentals, including volatility in PGM prices and the exchange rate, as well as inflationary cost pressures. During its 2018 financial year, ended September 30, it continued to cut costs and drive efficiencies to ensure that it ended the year in a net cash position. Nevertheless, it warned in October 2018 that it was unable to fund the investment needed to sustain the business. At the time, it also entered into a $200-million forward metal sale agreement with Pangaea Investments Management. The funds were expected to provide Lonmin with improved liquidity had a proposed merger with fellow miner Sibanye-Stillwater not been completed.

Further, as a result of higher PGM basket prices and a weaker rand:dollar exchange rate, Lonmin delivered a $70-million operating profit for the six months ended March 31, 2019, compared with the $32-million loss it recorded in the prior interim period. This, along with the $200-million previously raised, resulted in an improved performance in Lonmin's profitability for the short term.

The miner, however, warned in May 2019 that it would not be a solution to the long-term capital structure challenges facing the company.

Meanwhile, the strategy of Sibanye-Stillwater, which owns PGMs and gold mining operations in South Africa, and a PGM operation in the US, to diversify into PGMs and into the US has paid dividends, as its PGMs operations contributed steady performances in the 2018 financial year. The US PGM operation accounted for about 50% of the group's adjusted earnings before interest, taxes, depreciation and amortisation for the financial year.

Merger

Sibanye agreed in December 2017 to acquire Lonmin in a deal that would value the embattled Lonmin at R5.15-billion. Sibanye believes that the acquisition will further advance its PGM strategy, while Lonmin expects the merger to result in the creation of a larger, more diversified and resilient company.

The transaction had been approved by the UK and South African competition authorities. Although labour union, the Association of Mineworkers and Construction Union, had tried to halt the transaction, the Competition Appeal Court of South Africa, in May 2019, upheld the Competition Tribunal's November 2018 decision to approve the deal.

Lonmin and Sibanye shareholders voted in favour of the transaction in May 2019, despite earlier concerns that the deal may not receive the required votes from Lonmin's shareholders.

News service Bloomberg had reported earlier in the month that Standard Bank had called on shareholders not to vote in favour of the deal, stating that the offer undervalued Lonmin's assets by up to R6.64-billion. The bank believed that Lonmin's shares were worth about R35 apiece, while Sibanye was offering R11.60 a share. Sibanye had increased the share ratio it was offering Lonmin investors in April 2019, but the transaction value was reportedly still lower than its initial offer.

Bloomberg further reported that, following the transaction, Sibanye will be the world's biggest platinum producer and the world's second-largest palladium producer.

Outlook

The WPIC has lowered its forecast for a platinum supply surplus to 375 000 oz for 2019, compared with the previously anticipated 680 000 oz, as a result of a significant increase in investment demand that is likely to offset lower automotive, jewellery and industrial demand.

South Africa's platinum mining sector is expected to increase its mine supply for 2019 by 5% year-on-year to 4.69-million ounces, mainly as a result of the increase in the processing of pipeline material. Science and chemicals company Johnson Matthey, however, has warned that production in South Africa could be impacted on by the electricity supply challenges of power utility Eskom, as well as possible labour disruptions when wage negotiations get under way later this year.

Source: Impala Platinum

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