Can Eskom Perform the Power Pivot?

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He has edited several prominent South African newspapers and online publications, including the Sunday Times, The Times, Rand Daily Mail and BusinessLIVE.

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Introduction

President Cyril Ramaphosa has announced that the cap on private electricity generation is to be lifted to 100MW, opening up the grid to private generation.

"This will remove a significant obstacle to investment in embedded generation projects. It will enable companies to build their own energy facilities to cater to their own needs,"[1] Ramaphosa said, adding that the Department of Minerals and Energy had been given 60 days to implement the change – a lightning fast schedule when compared to the usual snail's pace adopted by government.

This sea-change in policy, which effectively places the onus for new energy generation in private hands, was brought about by the systemic failure of Eskom's old generation units, leading to ever-increasing numbers of 'load-shedding' days and placing a cap on economic growth.

There are still many possible slips between cup and lip. The recalcitrant Minerals and Energy Minister, Gwede Mantashe, must still lead the process. Private generators must still obtain a 'grid permit' to supply their surplus to Eskom. The price for this surplus will still be set by a monopoly, and so on.

The reality is that this policy shift announced in 2021 was first agreed on under President Thabo Mbeki in 1998, but was not implemented due to political opposition and the erosion of implementation capacity in the state and in Eskom.

While corruption and rent-seeking, which escalated to all-out looting under President Jacob Zuma, has contributed to Eskom's woes, the story of Eskom's decline is fundamentally one of policy failure and, where the right policies have been agreed on, a failure to implement them.

Eskom: The Mother of all SOEs

The sheer scale of the South African electricity utility, Eskom, is breath-taking. One hundred percent owned by the state, it has 6.2 million direct customers, 30 operational power stations generating (on a good day) 44 172MW. It has total annual sales of 208 319GWh, approximately 387 633km of cables and power lines. And, as of 2019 it had 46 665 employees.[2]

But while size and scale were an advantage in the past, Eskom has been overtaken by the rapid pace of change in the energy sector. It has failed to open its grid to private energy producers on a significant enough scale to drive competitive pricing and has missed the pivot to renewable energy except where this has been allowed on the fringes. It's primary energy source remains coal, now viewed as an environmental hazard and bereft of fresh investment.

The result has been that Eskom has begun to teeter under the burden of unreliable generation from its old fleet of power stations, mounting debt and the departure of core engineering and project management skills needed to modernise.

Where Did it All Go Wrong?

In 1998, South Africa's energy supply was in the pink. A low cost, coal-fired fleet was producing surplus energy at one of the cheapest prices in the world. The South African economy was powering up and would in the early 2000s, enjoy growth of over five percent for consecutive years.

Sitting at the heart of the energy network was the giant state-owned enterprise, Eskom, a beacon of efficient power production but somewhat out of tune with the global trend towards modernising power production to make it more responsive to market demand.

Eskom had been brought into existence and nurtured by the state since its establishment as the Electricity Supply Commission in 1923 by Hendrik van der Bijl after whom the town of Vanderbijlpark was named. The largest of South Africa's state-owned enterprises, it is the single largest producer of electricity in Africa with 2019 revenue of R179.8 billion.[3]

In 2001, Eskom was named the 'Global Power Company of the Year' by the Financial Times at a New York ceremony.

But, in accepting the award, then Eskom CEO Thulani Gcabashe issued a warning: "The business-as-usual approach is no longer effective."[4]

With the advent of democracy, Eskom's mission was revised to that of maintaining a supply of cheap electricity to power up the economy while expanding residential electricity on a vast scale to make up for the race-based backlogs that resulted from the apartheid era.

Gcabashe's warning was not heeded and, due to a series of policy missteps, confusion over its mission and outright theft and corruption, Eskom entered into decline in the mid-2000s and is now regarded as the single-largest risk to the South African economy as it is unable to supply sufficient, reliable and affordable power and carries a massive debt burden in excess of R400 billion.

The policy missteps began with the publication of an energy white paper in 1998. Government decided it had the space and time to re-orient its energy policy to bring it into line with other developing nations where increased private participation in the generation of energy and the transmission grid was becoming the norm.

In December of that year, government's department of minerals and energy produced its 'White Paper on the Energy Policy of the Republic of South Africa'[5].

The paper outlined how government wanted to modernise energy production. "Government supports gradual steps towards a competitive electricity market while investigations into the desired form of competition are completed. Eskom will be restructured into separate generation and transmission companies. Government supports the development of the Southern African Power Pool (SAPP). Various measures to improve governance effectiveness within the sector are presented,"[6] the white paper said.

The upshot of it was that "Government will encourage competition within energy markets".

"Government also recognises the fundamental importance of pricing to the efficient operation of energy markets. Government policy is to remove distortions and encourage energy prices to be as cost-reflective as possible. To this end prices will increasingly include quantifiable externalities."

The white paper noted that "energy services to poor households will, necessarily, have to be subsidised at times since the fulfilment of basic needs remains a higher priority for government than the achievement of cost-reflective prices for this market segment."

But it added that subsidies should be transparent.

Government committed to seeking to stimulate energy investment "from both local and foreign sources" by creating "an investor-friendly climate in the energy sector through good governance, stable, transparent, regulatory regimes and other appropriate policy instruments."[7]

What government was, in essence, doing was putting the brakes on the expansion of generation by Eskom as this would now take place through private participation. It represented a bold pivot away from the idea of the state dominating electricity production and distribution, which would be corporatised through regional distributors.

"Government realises that competitive models and private sector participation hold the promise of benefits for electricity consumers and will therefore be closely following developments in countries implementing these new arrangements.

"Government will initiate a comprehensive study on future market structures for the South African electricity supply industry. In the light of the above, it is clear that the introduction of Independent Power Producers (IPP) will be allowed in the South African electricity market. Any fundamental market restructuring is likely to be delayed for a number of years while the distribution sector restructuring and the bulk of the electrification programme is undertaken."

Eskom requests to expand its build programme to meet future needs were then denied by government, which saw private generation sources as the answer. The utility adapted by downsizing its engineering and management capacity to roll-out new power stations, leading to the departure of many engineers, procurement specialists and other high-level skills.

Panic Stations

The white paper foresaw that the country would run out of electricity by 2007 due to increasing demand and poor maintenance, but government failed to get the projected new private investment in energy production off the ground.[8] In the early 2000s, President Thabo Mbeki faced a growing backlash against his economic agenda, which was caricatured as 'neo-liberal'. In this environment what was essentially the privatisation of future generation capacity became a non-starter and nothing was done about the looming energy crunch.

When government finally woke from its slumber in 2004, when the Department of Minerals and Energy finally invited proposals for increasing power production by 1000 MW a year from 2007, the private sector was hesitant as it was explained that Eskom would retain market dominance and control at least 70% of generation.

As a result, when the predicted shortfall came in 2007 and 2008, Eskom introduced a new phenomenon, "load shedding", a euphemism for blacking out sections of the grid because there was insufficient power supply. It was believed that, without load shedding, there was a risk that the entire grid could collapse.

Panicked by the shortfall, government responded by authorising Eskom to build on a scale never seen before. Two power stations – initially codenamed Alpha and Bravo and later named 'Medupi' and 'Kusile' – each producing a mammoth 4800 MW would be rapidly constructed to plug the generation hole.

Eskom, now bereft of the project management, engineering and procurement skills it had lost when government said it no longer needed to build power stations, found itself managing two of the largest power-station builds on the planet.

The scale of these build programmes was astonishing.

Kusile and Medupi would each have six units producing 800MW and would be the fourth largest coal-fired power station in the world on completion.

Each tower boiler would be no less than 115m high and air-cooled condensers would be constructed on and supported by 60m high concrete columns. No less than 16 000 tons of structural steel would be used in the construction of each boiler and 115 400 tons of structural steel would be used in the rest of the build programme.[9]

Construction would include the development of the precinct, power station buildings, administrative buildings, control buildings, medical and security facilities, new roads and a high-voltage yard.[10]

Infrastructure would include a "coal stockyard, coal and ash conveyers, water-supply pipelines, temporary electricity supply during construction, water and wastewater treatment facilities, ash disposal systems, a railway line, limestone offloading facilities, access roads (including haul roads) and dams for water storage, as well as a railway siding and/or a railway line for the transportation of the limestone supply."[11]

As the world turned against fossil fuels, it was decided that Kusile would become the first South African power station to use "flue-gas desulphurisation (FGD) – a state-of-the-art technology used to remove oxides of sulphur, such as sulphur dioxide, from exhaust flue gases in power plants that burn coal or oil."[12] This would require limestone as a feedstock.

The bulk of the coal will be sourced from local mines, with further exploration continuing.

The years that followed would demonstrate the folly of this build programme as corruption, incompetence and mismanagement would see it fall behind budget, fail due to poor construction and miss deadlines. Only half the capacity was operational by 2021 – some 14 years after commissioning - following interventions to deal with major design flaws. In the absence of a large-scale build programme outside Eskom, the country would find itself with a continuous energy deficit and the continuation of load-shedding.

Eskom entered decline as its mission blurred and its finances tanked. A revolving door was placed on the management floor as CEOs came and went.

In the 22 years between 1985 and 2007, Eskom had only three CEOs – Ian McRae (1985–1994), Allen Morgan (1994-2000), and Thulani Gcabashe (2000-2007). After that, the management wheels came off and over the next 13 years, Eskom had no fewer than 13 CEOs, some interim and others acting.[13]

The board was similarly unstable and the utility had six chairman over the last decade.[14]

Hyenas at the Door

While Eskom struggled under the weight of its growing financial burden and lack of skilled management to pull off the mega-generation projects, a new threat emerged – corruption. Over the last decade, no less than R178 billion is estimated to have been spent on dodgy tenders that were subsequently "red flagged" by an investigation conducted by the law firm Bowmans.[15]

Starting in 2018, no fewer than 110 criminal matters were reported to the police and a further 60 cases were reported to the National Prosecuting Authority (NPA) by the police, according to a News24 investigation.[16]

"At Kusile alone, corruption, theft and fraud, coupled with poor management and inadequate planning, have seen the construction costs of the facility balloon to R161 billion from the initial estimated cost of R78 billion," the report said.[17]

Evidence is mounting at the Zondo commission of inquiry into state capture that Eskom was a key part of a giant "state capture" project which accelerated under the administration of the former president, Jacob Zuma.

Spearheaded by the Gupta family, Zuma's state capture project saw, in addition to the myriad of leadership changes referred to above, the redirecting of contracts – such as coal supply contracts at Eskom – to a Gupta owned mining company and a raft of other irregular management practices that may constitute serious economic crimes.

The descent of Eskom into the cesspit of graft was detailed in the report by then Public Protector, Thuli Madonsela, entitled 'State of Capture' released in late 2016.

Eskom is mentioned no fewer than 917 times in the report, which laid bare the Zuma state capture project.

Madonsela, in an exhaustively documented investigation, found that Eskom had enabled the Gupta's to purchase the Tegeta mine after prejudicing its owners, Glencore, by refusing to authorise a continuation of their contract. "In light of the extensive financial analysis conducted, it appears that the sole purpose of awarding contracts to Tegeta to supply Arnot Power Station, was made solely for the purposes of funding Tegeta and enabling Tegeta to purchase all shares in OCH. The only entity which appears to have benefited from Eskom's decisions with regards to OCM/OCH was Tegeta which appears to have been enabled to purchase all shares held in OCH. The favourable payment terms given to Tegeta (7 days) need to be examined further,"[18] she found.

The extent to which President Jacob Zuma himself intervened in Eskom was revealed in the testimony of former Minister of Public Enterprises, Barbara Hogan before the Zondo Commission. This is described in Ivor Chipkin's submission to the Zondo Commission:

Hogan recounted how a dispute had occurred between Eskom's then chairman, Bobby Godsell, and then CEO, Jacob Maroga, who resigned. The board accepted his resignation, but Maroga then refused to leave, denying that he had resigned.[19]

"He appealed to Minister Hogan to intercede on his behalf and to confirm his position. She would not, claiming that she did not have such authority. "In terms of corporate governance in a company," Hogan explained, "the relationship between the CEO and the Board is one of accountability and as a Minister, as a shareholder, the corporate governance framework does not allow the shareholder to intervene in that relationship". "You can try and mediate and sort out things, but you cannot make a decision about what must take place"."[20]

She then received a call from the president himself.

"According to her testimony he asked, "What do you think you are doing?" He then gave her an instruction. "They [the board] have got to stop now". Hogan refused to confirm Maroga's appointment insisting that such an instruction must come from the President himself."[21]

After some toing-and-froing, Maroga then wrote a letter to Hogan and the board, copied to the Eskom executive and the Parliamentary Portfolio Committee on Energy in which he said:

"I wish to affirm I remain the chief executive of Eskom. The shareholder at the highest level has confirmed that any action regarding my status […] must be requested formally and granted by the shareholder. I have affirmed that no request has been formally lodged and none has been granted".

Maroga's use of Presidential intervention (the "shareholder at the highest level") amounted to what Hogan called a "declaration of independence" from the Board and of the Minister.

Hogan then approached the ANC and Zuma changed his mind, phoning Maroga and telling him to vacate his office immediately.

In Chipkin's words, "he had accepted the authority of the ANC in settling disputes between members of the political and bureaucratic elites."[22]

Crisis Point

When Cyril Ramaphosa won the battle for the ANC presidency from the faction supportive of Jacob Zuma in December 2017, he began the dismantling of the state capture project. In January 2019, Jabu Mabuza, a senior business leader whose life would be taken by COVID-19 four years later, was appointed to head the Eskom board. The appointment was made a month before Ramaphosa formally assumed office as president of the country, but it was clear that the decision emanated from the office of deputy president. Phakamani Hadebe was appointed Chief Executive Officer.

Mabuza, who took charge of an entirely new board, initiated an era of reform within Eskom, attempting to turn back the tide of rot that had set in over the previous decade.

The new board was tasked with “rooting out financial mismanagement, malfeasance and corruption” which was critical to restore “transparent and effective governance, and thereby build confidence in Eskom.”[23]

Mabuza and the new leadership had to accomplish this while dealing with what were euphemistically referred to as “liquidity challenges” as its debt headed for the R400 billion mark.

It would turn out to be a challenging first year as industrial action caused a round of “rotational load shedding” while there was a “rapid and unexpected deterioration in generation plant performance” even as the financials headed south due to escalating municipal arrears and rising debt servicing costs.[24]

A year and two months after his appointment, Mabuza reflected on the actions taken to deal with Eskom’s multitude of problems in the Eskom Integrated Report.

“Around 95% of the open disciplinary cases relating to procurement breaches have since been finalised, with about 10% of cases resulting in employee exits. Lifestyle audits of 365 senior employees have been conducted to ensure that those employees comply with the highest standards of integrity and ethics, and do not engage in illicit activities in the performance of their duties.

“Approximately 12% are considered high risk cases, and have been handed over to the Special Investigating Unit (SIU) for further investigation,” he said.

Members of the new board and exco were made to complete declarations of interest and Mabuza said “any conflicts are being managed in line with Eskom’s ethics policies and procedures.”[25]

Eskom had recovered R902 million and interest from McKinsey and Company – which had been a beneficiary of the state capture era and Trillian Management Consultancy had been ordered by the courts to repay approximately R600 million.

Mabuza pledged that rotten contracts were being terminated and monies were being recovered.

The weight of the challenge faced was underscored by his report that “Irregular expenditure for the current year totalled R6.6 billion, of which approximately 20% relates to new transgressions. The remaining 80% is attributable to issues which had been detected previously.”[26]

This suggested that despite the firing of the old order, the public announcement of a clean-up and a year of aggressively pursuing this, 20% of irregular expenditure took place under Mabuza’s watch.

While Mabuza’s section of the report made for eye-popping reading, the financial section outlined the perilous state of the utility’s finances with revenue running way short of costs.

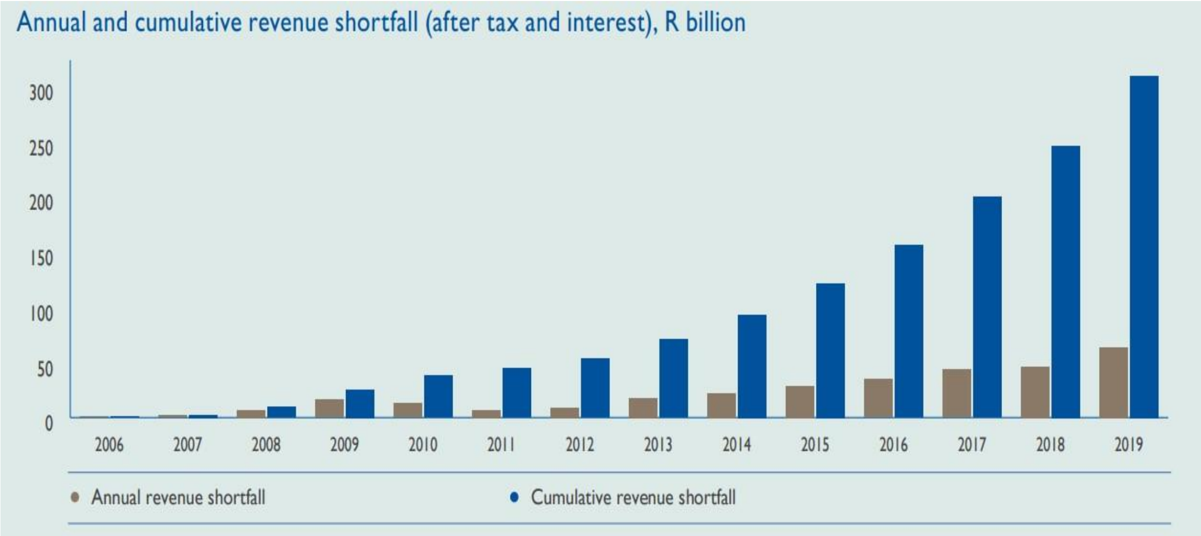

Figure 1: Graph from Eskom Integrated Report, 2019

Adding to the problem was the cost of the large-scale roll-out of electricity to households which had taken place via municipalities that were unwilling or unable to collect revenue. The extent of the municipal debt problem was starkly illustrated in this graph:

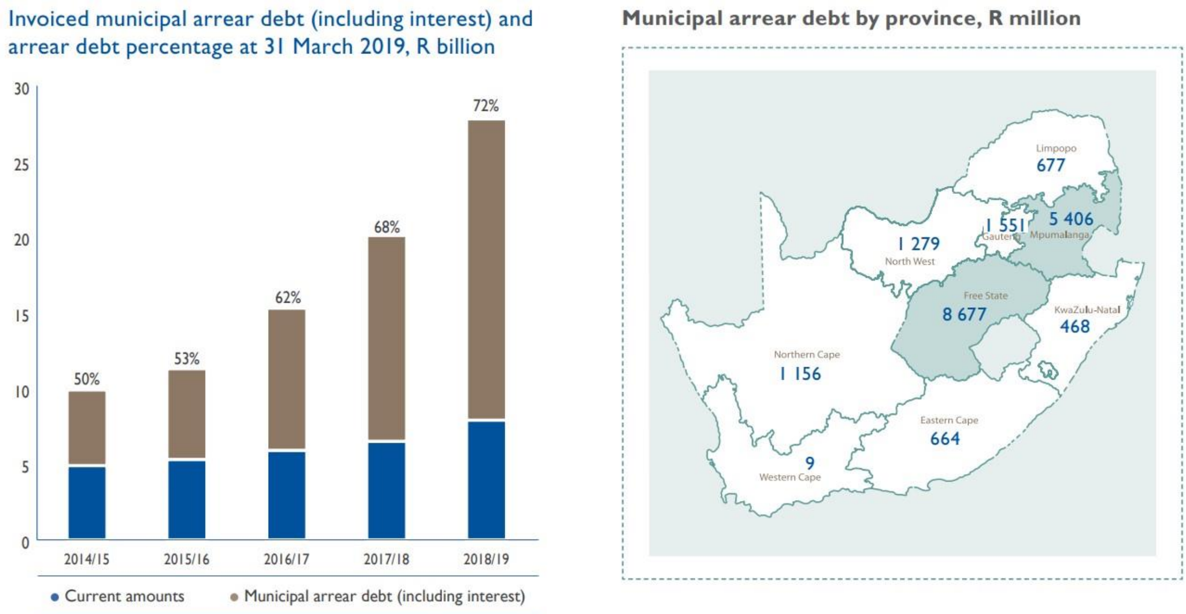

Figure 2: Graph from Eskom Integrated Report, 2019

"All of our solvency ratios performed worse than target during the year, and remain well below acceptable investment-grade levels. Moreover, all solvency ratios declined compared to the prior year. Of concern is that our cash interest cover ratio declined below one, indicating that our operating cash flows during the year were inadequate to fund even the interest component of our debt service requirements.

"Our cash from operating and funding activities combined were also not sufficient to meet our total debt service requirements and capital investment activities, resulting in a significant deterioration in our liquidity position," the report said.[27]

Even as the report was being released, news broke that the utility would lose yet another CEO with the departure of Phakamani Hadebe set for July 2019. It would later be announced that Mabuza would assume the duel roles of chairman and acting chief executive officer while the search for a replacement continued.

As it battled to turn itself around in a sea of debt, Eskom was about to suffer its greatest disaster, pushing the utility over the red line and panicking the country's leadership.

In December 2019, Eskom made an unprecedented move. Mabuza announced that, for the first time ever, the utility would have to implement 'Stage 6' load shedding due to the breakdown of several generation units, and the failure of a conveyor belt at Medupi.

Stage 6 load shedding meant that the power would go off for four hours at a time several times a day, severely impacting businesses and homes throughout the country.

"Eskom unreservedly apologises to all South Africans for the inconvenience during this difficult period,"[28] Mabuza said.

Government went into crisis mode. President Cyril Ramaphosa cut short a visit to Egypt to convene a crisis meeting with Minerals and Energy Minister, Gwede Mantashe, Public Enterprises Minister, Pravin Gordhan, and the Eskom board.

After the meeting, Ramaphosa said a combination of sabotage, wet coal and an ailing power fleet had caused the meltdown. He said Eskom had asked for government to initiate the emergency procurement of 5000 MW of generation capacity to plug the gap between supply and demand.[29]

What followed was an illustration of the dysfunction at the heart of the state when it comes to implementation. Although the 5000MW was needed as "an emergency", it took three months – until February 2020 – for Mantashe to issue a Request for Information and then only for 2000MW. It took until late 2020 for the formal Request for Proposals to be issued and until April 2021 for the winning bidders to be announced.

When the announcement came, a fresh controversy arose.

The Energy Department said that eight bidders would provide the 2000MW and that the bulk of the power – some 1220MW – would come from Turkish 'power ships' under the umbrella of Karpowership SA that included local partners - that would be anchored offshore. It was not clear whether or not these ships would pass environmental impact assessments and why a 20-year contract would be signed with them if they were only a stop-gap measure.

The Amabungane Centre for Investigative Journalism then revealed how the tender process had been adjusted to favour the Karpowership SA bid.

"Perhaps most problematically Mantashe's department, which ran the tender, permitted temporary leases of second-hand ships to qualify as "greenfield projects" and magically meet a 40% local content threshold during "construction" despite the fact they are foreign-built," the investigators wrote.[30]

The investigation revealed that briefing notes issued by the Department of Minerals and Energy in answer to questions appeared to favour the Karpowership SA bid.

Rival bidder, DNG Energy alleged in court papers that there was "undue influence" at every stage of the bidding process and in concessions that were made as deadlines drew near.[31]

Can a New Broom Sweep Clean?

On January 15 2020, following a lengthy head-hunting process, Andre de Ruyter began his term as Eskom CEO. With his experience in industry at Sasol and Nampak, where he was CEO, he was seen as a hard-nosed businessman who would put aside political considerations and right Eskom's listing balance sheet.

De Ruyter began his tenure a month before the Covid-19 storm hit with Eskom in the grip of load-shedding and debt rising fast.

In the month he took office, Eskom's Chief Operating Officer, Jan Oberholzer, spelled out the parlous state of the utility in an ominous 'System Status Briefing' to the public. "The power system is vulnerable and volatile with 21 days load shedding since September 2019, including Stage 6 on 09 December 2019 as unplanned breakdowns were above 12 500 MW."[32]

Planned maintenance was affected "due to high breakdowns and was below the intended 5 500 MW". Returning the fleet of rickety old power stations to "a more predictable state" would cause load shedding. The system would be "vulnerable for 18 months with an increased likelihood of blackouts."

Even as Oberholzer spoke, there was growing consternation over a virus causing a disease recently named "Covid-19" that had hit China hard and was threatening to spread rapidly across the globe. When South Africa responded in late March with one of the world's toughest lockdowns, all but the most essential industries ground to a halt.

The result was a sharp drop in electricity usage. This was not made up for by an increase in private household power usage, which had risen as people have stayed at home.

Eskom finally had some breathing space.

Andre de Ruyter's primary response to the Covid-19 crisis was to immediately take advantage of the drop in demand by shutting down the power stations most in need of repair and getting maintenance that had been delayed by the need to keep the lights on, underway.

When he finally came up for air, he was able to finally give the nation some positive news about the state of Eskom.

Addressing a parliamentary committee alongside Gordhan in early May 2020, he delivered what appeared to be the first good news coming from the utility in several years.

Whereas 31 days of load shedding had been anticipated prior to the Covid-19 crisis, this had been cut to three as the utility worked furiously to catch up on its maintenance backlog.

"We are taking advantage of the very unfortunate circumstances that are associated with this global pandemic,"[33] he said.

Spending on diesel – a major item for Eskom as it struggled to produce enough power – had been reduced from R490 million a month to R338 million a month by the end of April.

A new structure with a title as long as its list of tasks had been established. The Reliability Maintenance Recovery Steering Committee would oversee the repairs to the power stations in most dire need with eleven already under close supervision.

In a further boost to the utility's maintenance capacity, he announced that 60 retired Eskom engineers had made their services available free of charge or on the basis of covering their costs in what he described as "a very good form of national service".

By the end of the year, De Ruyter said, Eskom would have 900 MW in additional capacity including new power from independent power producers.

In a briefing on 21 May, Oberholzer reported that planned maintenance had doubled to 9000 MW "on occasion". This meant that Eskom was able to take 9800 MW of generation capacity out of production to implement overdue maintenance in the second week of April as demand slumped – incidentally, an indicator of just how severely the lockdown impacted the economy.

The average capacity under maintenance was 6776 MW against 4200 MW prior to the Covid-19 crisis.

The honeymoon would be over – or at least less intense – as government began opening the economy. On his concluding slide, Oberholzer said: "While we don't expect to implement load shedding this winter, the risk of load shedding does remain."

The speed with which Eskom responded to the lockdown by accelerating maintenance is evidence that it was finally demonstrating the organisational agility required to deal with its generation crisis.

In its May 2021 'Status of the System' briefing, Eskom would report: "Unfortunately, as at March 2021 increasing breakdowns and low plant availability meant that Eskom was forced to implement load shedding totalling 43 days since 01 April 2020 (including 15 March 2021), compared to 46 days for the 2020 financial year ended 31 March 2020."[34]

But, in May 2021, Eskom was forced to once more announce load-shedding.

As the economy was returning to full capacity, Eskom stunned the nation with an unexpected load-shedding alert: "Eskom regrets to inform the public that due to a loss of 10 generating units at seven power stations during the past 24 hours, stage-2 load shedding will be implemented starting at 5pm this evening (Sunday) until 10pm on Tuesday."[35]

Balancing the Books

While the reduction in consumption finally opened the door to ramping up maintenance, it had its downside – a drop in revenue as industries closed down and private consumers found themselves under financial stress due to layoffs or reduced income.

Eskom may get out of the maintenance woods only to find itself in a revenue desert.

De Ruyter told the energy expert, Chris Yelland, in an interview published by Daily Maverick in mid-April that he expected the revenue hit due to Covid-19 to be around R5 billion.

“We have estimated that the impact of the lower electricity consumption resulting from the current lockdown equates to about R2-billion to R2.5-billion as a reduction in our cash flows. Of course, the impact on our revenue line is greater, but there is also a saving by virtue of the fact that we burn less coal and diesel, so there are fairly large primary energy cost savings.”[36]

The outlook was beset with uncertainty. “At this point, we don’t know whether the lockdown is going to be extended further. We don’t know the rate of recovery of the economy once industry reopens and people return to work, or whether there will be a structural reduction in electricity consumption. These are very difficult things for us to call.”

Exactly how big the Covid-19 hit on Eskom’s revenue will be is the million-dollar question.

De Ruyter’s 21 May 2020 briefing outlined the utility’s parlous finances. Among the points in his slide presentation were:

- Debt approaching R450 billion;
- Volume declining 1% a year;
- Tariffs not cost reflective;
- R38 billion receivables outstanding; and
- Operating expenditure up 30% in five years reaching R151 billion in 2019 financial year.

The sobering numbers set the scene for a graphic showing Eskom’s “death spiral” if it did nothing. Poor governance and poor moral combined with Eskom unable to operate with growing losses and rising borrowing, leading to “severe restrictions and curtailments would be forced upon Eskom”.[37]

In his interview with Yelland, De Ruyter was clear that he would have to focus on reducing costs. “I have already engaged with my executive team and told them to manage their costs, manage their procurement, scrub their capex, and get those numbers down, because we don’t have the luxury of abundant support from the fiscus, regardless of what happens after Covid-19.”

By the 21 May 2020 briefing, he was able to report reducing capital expenditure by R22 billion, but this was eaten up by the loss of revenue related to low consumption during the heavy Covid-19 lockdown.

A year later, Eskom’s finances were still in a dark place although the rate of decline had slowed.

In slides accompanying his ‘Status of the System Briefing’, De Ruyter revealed that “As of 31 January 2021, municipalities owed Eskom a staggering R35.2 billion.”[38] The utility had been downgraded twice by Moody’s and Fitch although revenue had, thanks to a tariff increase which countered the effect of the heavy lockdown, improved marginally from R107 billion to R108 billion.[39]

"Without Government support, cash from operations remains insufficient to service debt."[40]

The Structural Challenge

While De Ruyter and the Eskom management struggled to rein in the debt behemoth and the maintenance backlog, they were also attempting to re-organise Eskom to make it more efficient, competitive and sustainable in the long run.

On 7 February 2019, President Cyril Ramaphosa announced in his State of the Nation Address that Eskom would be split into three entities – generation, transmission and distribution.

Done correctly, such a move would revolutionise the way energy flowed in South Africa. The theory governing the policy was that if the transmission agency was independent of generation, it would seek out energy sources that were reliable and able to offer the best price.

Making the announcement, Ramaphosa said: "It is imperative that we undertake these measures without delay to stabilise Eskom's finances, ensure security of electricity supply, and establish the basis for long-term sustainability."

Eight months later, in October 2019, the Public Enterprises minister, Pravin Gordhan, released the 'Roadmap for Eskom' document explaining how the entity was to be reshaped. Among other things, the document said:

"Eskom's vertically integrated structure was appropriate at its inception and served the country well for over 90 years. This configuration is no longer suitable to meet the country's energy needs and has made the business susceptible to the kind of problems it has recently experienced, including state capture. The restructuring of Eskom into three subsidiary businesses – generation, transmission and distribution – is necessary to reduce the risk that Eskom poses to the country through its dependence on fiscal allocations and inability to supply the economy with adequate power."[41]

And, it said: "To realise these reforms, tough decisions will have to be made and implemented."

The roadmap said that transmission would be "functionally separate" by March 2020 and an independent legal entity by 2021.

"The Eskom that must emerge from these reforms must be capable, transparent, accountable, competitive and world class. Government has a responsibility to mitigate the systemic risk that Eskom has become to the country."[42]

When De Ruyter took office he "slammed the brakes" on the roadmap, to use the language of a City Press report.[43]

According to De Ruyter, separating the group into three distinct legal entities too hastily was risky. It would have implications for capital gains tax, there was the complication of transferring employees from one entity to another, there were regulatory issues and, perhaps most importantly, the new structure needed to make sense to Eskom's financiers.

They would want to know that the new entity which housed their debt would be able to repay them.

De Ruyter suggested it might take two years of consulting auditors, attorneys and financiers before implementation could begin.

"I think if we have a divisional structure, and each division has its own income statement and balance sheet, and one begins to put the commercial structures in place, then it gives you an opportunity to have a real prototype that you can take on a road test," he said.

In May 2020, De Ruyter announced that progress had been made with "divisionalising" the utility and that boards for the generation, transmission and distribution divisions had been appointed. In his briefing to parliament, he said this had been done at no extra cost.

In a live address on YouTube in February 2021, De Ruyter indicated that progress was being made on spinning off the utility's transmission business. "Why do we prioritise transmission? It's to enable us to demonstrate to private investors, in generation in particular, that their bids will be fairly adjudicated compared to legacy Eskom generation."[44]

He said the balance sheets of the proposed new businesses were being worked on. "The underlying issue is how much debt each of the divisions can and should be carrying. If all the actors in this ballet play their role and give us those approvals as quickly as is required, we should have the ITSMO (independent transmission system and market operator) in place within the year," he said.

Are We There Yet?

So, is Eskom dealing with its challenges? Is it on the path to becoming a functional, sustainable entity that can fund itself and meet the country's energy requirements?

There can be no doubt that, perhaps for the first time in fifteen years, it has begun to acknowledge its problems. And, it has begun to deal with some of them.

The implementation of long-overdue maintenance during the lockdown window will improve the reliability of some power stations. But others that require deeper maintenance remain a threat to consistent power supply.

The reality is that the large fleet of ageing coal-fired power stations – and the poorly constructed behemoths, Kusile and Medupi, are beginning to fail with increasing regularity, causing sudden bouts of load shedding and dampening economic development.

It has begun to deal with its costs, but its operating expenses are still woefully out of touch with its revenue and the latter is likely to be given a substantial haircut by the fall in demand during lockdown.

The real problem is that it's key consumption cost driver – the bloated and unproductive staff it acquired during the Zuma years (and beyond) – appears untouchable as government shies away from taking a decision that will trim back the excesses.

Substantial measures have been taken to deal with corruption, but too few cases have gone to court and too many of the crooks who raided Eskom are now sniping at its leadership from the outside with confidence that they have impunity. This has led to the continuation of bad practices with 20% of the problems arising after the new board took office.

Finally, there is uncertainty about the more than R400 billion of debt. How will this be carved up between the three new entities? Will these entities in fact be independent or are they just the existing management with fresh labels? De Ruyter has said that the debt will be manageable if reduced by R250 billion, but there is no clarity on how this could happen without creating another government debt balloon somewhere else.

The Big Energy Choices

The way forward for Eskom is clear, but movement is slow.

The global context is highly relevant. There is simply no new investment money for coal-fired power, even for the acquisition of existing coal power stations. Investment has pivoted sharply away from fossil fuels and nuclear and is now directed at developing renewable energy sources. This shift in direction is no longer a choice to "do the right thing", it is the only way to raise funds for new energy projects.

Both the US and China – the two key drivers of the global economy – have pledged to move to reduce emissions by curtailing the use of fossil fuels. US President Joe Biden has announced an infrastructure plan that includes some US $174 billion on introducing electric vehicles.[45]

The significance of these moves cannot be underestimated. They generate momentum for green energy and push investment in fossil fuels further out to the margins.

The government has embraced this pivot, but is moving at a snail's pace to act on its word.

The recent announcement of winning bidders for the procurement of 2000MW emergency power for the South African grid showed a heavy bias towards gas – the Karpower ships being the main beneficiaries – and suggested that government still remains sceptical of stepping up renewable energy contributions to the grid. A cynic might say this may have something to do with the fact that renewables do not offer ready opportunities for tender exploitation because the key inputs – sun and wind – cannot be provided by companies through tenders and there would be fewer opportunities for rents for the ruling elite.

The truth is probably more prosaic: Government lacks the capacity to imagine and the skills execute large-scale engineering projects such as would be needed to turn solar and wind from peripheral sources of energy to mainstream suppliers.

In June 2021, Ramaphosa finally acknowledged this when he announced that private companies would be allowed to generate their own energy with a cap of 100MW. Some 23 years after government's 1998 white paper proposing private participation in generation, a decision had been taken to implement the policy.

While it is dithering over the future of energy, government needs Eskom to deal with its ageing fleet of coal-fired power stations as they begin to become less and less reliable. It is extremely concerning that ten units fell over in a 24-hour period in May 2021, suggesting that the level of vulnerability is growing. This is despite the fact that 2020 presented Eskom with an opportunity to take units offline to maintain and repair them on a large scale due to the sharp drop in consumption.

Increased private power generation will, ironically, give Eskom a new lease on life. With an expected 5000MW of new generation anticipated, Eskom will finally have the space to retire its least reliable and most costly coal-fired power stations and reduce the use of diesel to plug the power gap. This will improve its balance sheet with its aggregate cost of generation falling.

It remains to be seen, however, if government can live up to its desire to encourage private generation. Will Mantashe’s recalcitrant department embrace the pivot and issue the grid permits timeously? Will Eskom fairly price the electricity surplus that enters the grid from private sources? These questions remain unanswered.

Over the Zuma years, Eskom was transformed from an effective technical outfit to a contract-management company without the core skills to manage large projects and to navigate changes in technology making new forms of energy viable.

This bloated management layer has been trimmed under De Ruyter’s leadership but it is still not fit for purpose. The consumption expenditure on a large cohort of expensive and unproductive employees is a key drag on Eskom’s finances and must be dealt with.

Eskom now has the opportunity to modernise, mobilise new sources of capital for renewables and open the generation and transmission markets to private players to introduce competition over pricing. Whether it can meet this challenge and rein in its debt without severely damaging the South African economy is the billion-dollar question.

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