A look at Eskom's management strategy

Unisa's Graduate School of Business Leadership's (SBL) Professor PMD Rwelamila, a specialist in management systems, provides insight into the failure of Eskom to adopt sound project management strategies that could have circumvented billions of rands wasted due to administrative failure and non-compliance.

Professor PMD Rwelamila

In July this year, Eskom released their much-delayed financial results. Poor results revealed, amongst others, a net loss of R2.3bn and an amount of R19.6bn that was attributed to irregular expenditure. The utility claims that 60% of incidents related to administrative non-compliance, and noted that irregular spending was not necessarily fruitless and wasteful expenditure.

With an amassed debt of R399bn by the end of March 2018, according to data compiled by Bloomberg, it will take a mountain of concerted effort to move the utility into a sustainable, profit-making organisation. As rescue strategies are fleshed out in the coming months and as parliamentary hearings unravel the extent of the wrongdoing and mismanagement, a critical question to ask in practical terms is how Eskom came to be so woefully mismanaged.

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Sikonathi Mantshantsha 19 Jan 2018

If one is to take a step back to see where the utility went wrong, there are clear indications that inadequate monitoring as a result of unsatisfactory internal processes and a poorly applied organisational structure allowed flawed decisions and critical actions to go unchecked.

A decade ago in a bid to meet South Africa's expanding power consumption, Eskom embarked on one of the world's biggest projects. A mega-structure power station, named Medupi, was to be developed in the Limpopo Province. A total of six boilers would each power an 800 MW turbine, producing 4800 MW of power for South Africa's national grid, making it the largest dry-cooled coal-fired power station in the world. The cost of producing the power station would be R80bn.

In 2018, production of Medupi only now nears completion. According to the station's director, all units will be fully operational by 2020.

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The Medupi project has endured numerous delays over its lifetime with an overspend of R52-billion - almost equal to that of the total estimated cost.

Project-based organisations (PBOs) versus routine organisations

Successful management of a project the size of Medupi requires a different orientation of governance and an appropriate organisational structure. An organisation's structure directly informs how human resources are able to be distributed; how an activity is rolled out and managed; how risks are identified; and how project learning - and, ultimately, project memory - is captured.

Complex projects like Medupi require large-scale outsourcing to multiple stakeholders with the incorporation of varied timelines and deliverables and the development of different risk profiles. Project-based organisations are able to handle this complexity due to their governance frameworks and structure that gathers human resources and supporting processes around the development, implementation and completion of the project.

PBOs are substantially different to routine organisations which rather use the principle of specialisation based on function or role. In a routine organisation, decisions are decentralised since issues are delegated to specialised persons or units, leaving them the responsibility of implementing, evaluating, or controlling the given procedures or goals.

Despite challenges, Eskom improves operational performance

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For all intents and purposes, Eskom appears to have been structured as a routine organisation, which is a fundamental shortcoming. Power stations are - or should be - discrete projects, each with their own life cycle, cost centres and risk

profile. Eskom's management of its power stations has resulted in sub-optimal development and management, and ultimately delivery. For personnel, operating in departmental silos makes it difficult to perceive how their particular contribution relates to the company's – or project's - big picture. A lack of accountability has invariably given rise to inefficiencies in administrative processes that have impacted negatively on the project.

The concept of a core team

Central to the PBO, the core team represents all the disciplines from departments or functional units that are necessary for successful project implementation. The core team remains visibly active throughout the duration of the project, not only because this signifies 'warm bodies' around the table at all times, but because the team carries with it the institutional memory. In terms of Medupi, it is doubtful whether Eskom has had one core team since project inception.

Risk management

Risk management is an integral feature of a PBO. Not only does it speak to the roadmap of the overall project, but it also interrogates the detail. Risk management requires rigorous consideration of what must be achieved in relation to resource availability. And this lack of adequate risk management is one of the most glaring inefficiencies in Eskom's project management environment.

When conceptualizing and later on scoping Medupi, Eskom failed to recognise a lack of mega-structure A-class welders and non-destructive testing specialists in South Africa, a critical aspect of the project's implementation. The resultant solution was a failed bid to upskill local welders; the local industry was unable to train local welders fast enough to do the job reliably and productively. The utility then worked with Hitachi to bring Asian welders to the Medupi project.

As many as 2000 specialist welders were required to work on Medupi (and Kusile) power plant construction sites. In 2013, it was reported that a total of over 34,000 A-class welds had been completed at Medupi boiler 6 in a 19 month period.

Additionally, although recognised upfront that there were insufficient competent engineering practitioners to execute Medupi and a resultant strategy formulated to contract-in large and multinational engineering companies to assist, the roles and responsibilities were not ideally defined. As a result, the decision-making and processes to be followed were highly protracted and resulted in significant delays.

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Had Eskom undertaken a comprehensive due diligence, the lack of local welders would have been identified as a major risk, requiring solid contingency plans to be put in place, before the project reached the implementation phase. Comprehensive due diligence is a foundation of a mature PBO. Eskom has no choice but to take a deliberate introspection and assess its project management maturity challenges.

Conclusion

It is imperative for Eskom to surrender an ongoing reliance on reactive solution-seeking.

To succeed in the long-term, the utility should ensure that its expertise dominates all plans. Plans should be project-based and complemented by stringent evaluation processes. When specialist project teams are gathered, it is critical that those specialists have the supporting knowledge and experience to drive each aspect of the project.

Ongoing compliance must be supported by stringent checks and balances at regular intervals built into the project's

timeline. When concluded, all projects should be completed using a standardised concluding process based on best practice and should be uniformly monitored and evaluated using external parties to provide credible audits.

Risk management must be both immediate and insightful, complemented by robust disaster management that enables quick turnaround times on decisions. Consultation with external parties in the private sector should be continually undertaken to harness practical solutions.

As the largest power utility on the African continent, Eskom authorities and the government as a major shareholder simply cannot behave like ostriches. The solution lies in making sure that Eskom can leap-frog to at least a Level 3 maturing across all functional areas. Eskom should be blazing the way as an institution that is capable of innovation and flexibility and is committed to continuous learning and knowledge-gathering. In conjunction with this, the utility should prioritise the ongoing and transparent communication of its goals and progress in order for the public to understand the organisation's strategy in bringing power to the people.