The State of Energy in South Africa

Will we survive Eskom?

By Anna Mouton

ABOVE Solar power is one way to address South Africa's energy needs.

"I'm here to explain where Eskom has brought us and where it's going to take us," opened Paul Nel, energy expert at infrastructure engineering and advisory company Aurecon. Nel has three decades of experience in the energy industry of which 18 years were spent at Eskom.

Nel began by outlining the external challenges faced by Eskom. Load-shedding started in 2008 — the same year as the global financial crisis — and energy sales by Eskom have stagnated ever since. Growth in annual gross domestic product has likewise been poor. The mining sector has performed disappointingly from around 2005 and manufacturing has shown only modest growth. "The only sector with a different story is agriculture," said Nel, referring to the steady increase in the size of this sector. "The last thing we as a country need is for agriculture to also start suffering due to a failing utility."

POOR PLANT PERFORMANCE AND THE NEW BUILD

According to Nel, Eskom has four main internal problems. Two of these relate directly to their generating plants. "The power stations are simply not performing," he stated. "In March this year when we went through load-shedding, Eskom had 28 000 megawatts available but a total installed capacity of about 48 000 megawatts."

Lack of maintenance has contributed to the decline in plant performance over the past decade. This is exacerbated by the age of Eskom's power stations. "Sixty-five percent of the megawatts that Eskom has to drive this economy is thirty-plus years old," said Nel. "If you don't invest in ageing plants you're looking for trouble."

The second major issue lies with Eskom's new power stations — Medupi and Kusile — expected to be completed from 2021. "The unwritten expectation is that these power stations will eventually cost the country R400 billion before the contractors walk off site fifteen years after they started — seven years late." The original budget for construction was R150 billion. On top of that the plants are struggling to deliver the capacity for which they were designed.

FINANCIAL WOES AND PEOPLE PROBLEMS

"Eskom's current debt is R450 billion — 15% of South Africa's total sovereign debt. "That gives you a sense of why the rating agencies are so fixated on what's happening at Eskom," said Nel. "The expectation is that the debt will rise to R600 billion before we get anywhere close to a turnaround."

The new builds are not the only reason Eskom has money troubles. Over the past ten years Eskom has burnt more than R47 billion of diesel to supplement their generation capacity. Eskom has also seen a tripling of their manpower budget and a near four hundred percent increase in coal spend. "And keep in mind that in this period they didn't sell a single additional gigawatt-hour," stressed Nel.

"One certainty is that electricity prices will rise."

The fourth challenge facing Eskom is people. Eskom has lost many skilled personnel. "I need to mention that there are still really good people in Eskom," said Nel. "Eskom needs to figure out how to retain the skills they have." Eskom also has to consider its labour force of more than 40 000 when attempting significant organisational change that may affect employment levels.

WHAT LIES AHEAD?

"This is where the news gets a little better," said Nel. "There's intent from both government and the current management at Eskom that something is wrong and we need to fix it." The appointment of a credible board and an industry task team was the first step. Subsequently the task team's recommendations around restructuring Eskom have been accepted by government.

Nel warned that turning around the maintenance backlog and addressing technical issues at the new plants would be difficult. Managing Eskom's debt is a further predicament. One certainty is that electricity prices will rise. "In the last ten years tariffs already increased by five hundred percent," said Nel, "but we still pay relatively little for our energy."

Nel believes that growth in energy production must come from renewable sources. "It's the cheapest energy available at the moment — and it's quick. In the time that Eskom struggled to get one unit at Medupi on line, private industry built 4 500 megawatts of wind, solar and hydro projects. It's the only energy that's currently being considered for funding by large institutions."

Nel concluded on a positive note. "We're at a low point, but I don't think we're going to go much lower. We will survive and we'll hopefully come back here next year and have a better story to tell." **FQ**

Paul Nel
Energy consultant
Aurecon