

Does Eskom operate in the real world?

Last week, Deon Joubert, a corporate specialist at Eskom, published an article to defend Eskom's position on renewable energy ([Eskom's cost calculations on renewable electricity – more nuance](#)). Rather than an article, it could be labelled a technical position paper dealing with a number of investment and operational considerations within a utility such as Eskom. There are issues raised in Deon's article that I agree with but unfortunately there is much that I firmly disagree with. I do not think that Voices is an appropriate forum to debate all the hard technical issues raised by Deon, but certainly some of his arguments and underlying principles (or assumptions) can (and should) be discussed on a public forum such as this. Deon correctly pleads for the avoidance of a conversation that is "based on subjective and ill-informed personal opinions" and argues for "a facts-based scientific debate". Unfortunately, even as I was still nodding my head in agreement with these sentiments expressed, he went off and did exactly the opposite.

Underlying all the technical issues and arguments raised by Deon, it is clear to me that he questions whether as a country, we should have embarked on the process to procure renewable energy from independent power producers (the "REIPP programme") in the first place. I gather this from phrases such as: "...to determine how much these 'sunk cost' could have been avoided...". Deon further states that Eskom is now forced to pay 214 c/kWh for 7200 Gigawatt of renewable energy whereas with surplus generating capacity, it could have produced this power by mainly incurring additional fuel cost, which he states is around 30 c/kWh. This difference is glaring and seems to attack the very essence of the IPP programme. Lastly, Deon raises the issue of the premiums paid for renewable energy under bid windows 1 to 3 and he seems to imply that this cannot be justified under any circumstance.

As stated previously, one could easily get into a debate around hard technical issues and scientific method. That would be a convoluted process of little interest to most readers on this forum. I therefore decided to follow a completely different approach. In reading Deon's article and starting to formulate my counter positions on some key issues raised by him, it dawned on me that essentially Deon and I see the world very differently. Let me be more specific – Deon and I seem to have totally different perceptions (or paradigms) of the electricity scene as it played out in this country over the past decade or so. Of course, one's perceptions of the past have a strong bearing in determining one's views and expectations of the future. Not surprisingly, I think

Deon and I hold radically different views of the electricity future in this country. The key question is then: what are the main differences in our paradigms?

If I try to reconstruct Deon's paradigm (as I believe it permeates through all his arguments) it looks something like this:

*Eskom is a world-class electricity utility. It manages its electricity production and costs optimally. It is able to bring on-stream new production capacity in time and on budget, ensuring a sufficient buffer between rising demand and available capacity at all times. Given this, the consumer faces no risk of any supply interruptions, now or at any point in the future nor does the consumer face any risk of undue price increases.*

Given this paradigm, I can understand exactly where Deon comes from. The load shedding and power interruptions that we've experienced from pre-2010 was merely a short-term hiccup. It had no impact on the economy nor the confidence of the public in the abilities of our public utility. This short-term hiccup was quickly addressed through the procurement of new generation capacity (Medupi and Kusile) on a fair, equitable, cost effective and transparent basis. Implementation of this new generation capacity was managed expertly and professionally bringing the new capacity online, on time and within budget. Given this, the country now boasts sufficient generation capacity for way into the future. Moreover, our overall electricity cost will remain globally competitive for decades and will give our industries a competitive advantage over competitors such as Australia, Brazil, Argentina etc. etc.

Against this background, one can hardly fault anything Deon has said about the REIPP programme and the cost premiums that were incurred (for a 20-year period) during the early bid windows. This is of course with the proviso that his paradigm is reasonably realistic. Do you believe it is realistic? I can categorically state that I do not think it is realistic. In fact, I think Deon runs the risk of being labelled as someone living in a fool's paradise. Deon talks glibly of a scenario of over-supply of electricity. That implies that the risk of major breakdowns bringing our grid to the brink again is non-existent. Deon glibly states fuel costs (as the only significant variable - or marginal cost in the production of electricity) of 30 c/kWh as if the ability of Eskom to continue to manage this cost optimally is unquestioned.

Sadly, Deon's paradigm underlying his arguments around renewable energy is, in my view, fatally flawed. The inability of Eskom in the past to manage its coal reserves,

the lack of a proper and adequate maintenance regime leading to numerous unexpected breakdowns, the demonstrated inability to manage large capital investments leading to the cost overruns and delays on Medupi and Kusile, the ongoing allegations of corruption in award of contracts and paying exorbitant prices in the name of economic empowerment, those are the things that underpin my paradigm of Eskom - and I believe most members of the public share this paradigm. Under my paradigm, breakdowns and supply interruptions are here to stay. Under my paradigm, exorbitant cost increases, inefficiencies and poor management choices (all conveniently justified in the name of empowerment) will continue to drive our electricity price upwards at a relentless rate and will erode our international competitiveness. I would be very happy if my paradigm of the future proves to be wrong, but would I bet against it? Definitely not.

If it is true (as Deon states) that the price premiums the country is paying under bid windows 1 to 3 of the REIPP programme cannot be justified, then I would counter his argument by stating that: we have Eskom, and no one else, to blame for that Deon. The old adage goes that you cannot fool the market. Under the early bid windows the market was fully aware of the situation the country and our utility found itself in. Which astute businessman would not have 'upped' the price given the state of desperation that prevailed? Those premiums in fact prove how different the market perception was.

It is this paradigm of Eskom that still prevails in the market today. It takes many-many years to build a reputation in the market, but sadly that reputation can be destroyed rapidly in a short space of time. Unfortunately, I fear that Deon's reality is also Eskom's reality. I think Eskom owes it to the public to at least try and restore its reputation through delivering sound results across the full value chain of electricity generation and distribution over a protracted period of time. That is if they are at all interested in changing the paradigm in the public mind. Acting as if no gross mistakes were made (and are indeed still being made!) is simply being foolhardy and arrogant.

I would like to conclude with two final remarks that are firmly rooted in my paradigm of the future of electricity in this country.

**Firstly**, it is my perception that the REIPP programme of the DoE was well run and is internationally acclaimed. The well-documented economic phenomenon of the Experience Curve – which predicts that prices will rapidly decline – is clearly witnessed. Most importantly we have not reached the price bottom yet (for solar) and

we will reap the benefit of continually declining prices if the programme continues. This is borne out by experiences elsewhere in the world. Eskom's agitation that the programme be halted will remove the opportunity to recoup those premiums payable under bid windows 1 to 3. In fact, I would like to see the programme expanded. This expansion should specifically require bidders to include storage capacity and options in their projects. As is the case with solar electricity, I believe we will see a similar rapid decline in the price of storage costs. Electricity storage holds the key to finally move away completely from fossil fuel based electricity.

**Secondly**, the REIPP programme proved that the Department of Energy in partnership with the private sector can procure and manage the implementation of large-scale capital investments to the benefit of our country. This is in stark contrast to Eskom's recent history. Abandoning this capability and implementation model in favour of Eskom with regards to the nuclear build may prove to be a disaster.

I believe that while such differing paradigms of Eskom's abilities prevail inside the organisation and outside the organisation, there is little hope for a facts-based, scientific debate. I am highly concerned that ill-informed, personal opinions around the capabilities of Eskom are impacting on critical decisions (such as the two issues listed above) by Government, around our future electricity supply. Against this background, Government should not be surprised at the level of emotion and indeed suspicion that surrounds virtually every decision made in this regard. When it comes to electricity, it is time for Government to do a reality test on its paradigm.