

## **Economic regulation of the electricity industry: a balancing act**

No-one can dispute that electricity is an essential input to production and economic growth in South-Africa.

Eskom, a wholly state-owned utility dominates electricity generation, it supplies approximately 95% of South Africa's electricity. The Electricity Supply Industry (ESI) has been facing numerous uncertainties during the past decade. This included aspects such as the restructuring of the industry, the regulatory environment (specifically the methodologies used to approve prices and tariff structures), potential of new market players as well as other issues, including environmental and social objectives.

Among these uncertainties is the realisation that generation capacity is running out and that new capacity will soon be needed to avoid the risk of electricity blackouts. Eskom has been here before. According to Dr. Grové Steyn, as a reaction to the shortage of capacity, electricity prices rose in real terms by 70% between 1974 and 1978. By 1981 there was widespread load shedding. "By 1983 Eskom had generation plant totaling 22 260 MW under construction or on order." (Grové Steyn. "Eskom: Are we missing an opportunity to learn from history?"). This led to the cancellations, mothballing and the wasteful surplus capacity of the 1990s and early 2000s.

Confusion regarding government policy on the issue of electricity supply had exacerbated the problem. Recent press statements have made it clear that Eskom will be investing about R150 billion over the next five years in generation capacity. The understanding for some time from government statements and policy was that the next power station will be built by an independent power producer (IPP) and that future generation capacity will be split between Eskom (70%) and IPPs (30%).

Perhaps it was not the case but it certainly did appear at some stage as though government had retracted on its strategy to involve private sector in the development of utility infrastructure. There could have been many reasons for this reversal of strategy, one may be that private interest was not as forthcoming as was expected, another might be that the whole process was delayed because of parties not agreeing on terms of the power purchase agreements or it might be some completely different reason. This is in itself not as problematic as the fact that any changed views were not communicated clearly and timeously to allow all parties to act accordingly and to erase any uncertainty. This uncertainty created has possibly been one of the main reasons for the underinvestment in generation capacity that the country is now facing. The private sector's apparent lack of enthusiasm should also be seen in the light of Eskom's dominant position in all aspects of the electricity industry and the lack of a level playing field, notably guaranteed access to the market.



The White Paper on Energy (1998) contains government's stated objectives with respect to the electricity industry that are as follows:

- To improve social equity,
- To enhance efficiency and competitiveness of the SA economy by providing low-cost and high-energy inputs to the industrial, mining, and other sectors, and
- To achieve environmental sustainability.

The Energy White Paper is also explicit regarding its views on electricity pricing: "In its approach to electricity pricing policy government has to achieve an appropriate balance between meeting equity, economic growth and environmental goals. Pricing policy has to steer a course between affordable electricity prices for households, low-cost electricity for industrial consumers, prices which provide efficient market signals by accurately reflecting the cost of supply, and a general price level that ensures the financial sustainability of electricity utilities." This statement reflects the difficult role that an economic regulator has in implementing the "conflicting" aspects that are raised here.

The National Electricity Regulator (NER) was the economic regulator of the electricity industry from 1995 to 2006, when it was succeeded by the National Energy Regulator (NERSA). The NER was governed by 1987 legislation with no requirement for transparency, whereas the post-Constitutional NERSA is required by legislation to be transparent, to allow stakeholders to make representations and there is an automatic right to take decisions for review by the High Court. Unfortunately, in general, stakeholders have failed to exercise these rights.

It had also been generally known that South Africa's electricity prices have been low for some time and that the correct price signals are not being sent to electricity consumers causing inefficient electricity consumption. It has been argued that future production cost should be used as a basis for approving electricity prices. NER considered it inappropriate at the time to allow Eskom a higher tariff increase while not necessarily being the preferred supplier of new generation capacity. It is understandable in a way that the NER had been in a situation of conflict of approving high electricity prices that would send the correct price signals to consumers but would allow Eskom to have substantial free cash flows that might potentially not be used in the interest of electricity consumers. NER at the time chose to allow price increases that would allow Eskom to recover its costs and a more than reasonable return.

As stated above, in establishing NERSA as an independent economic regulator legislation was carefully drafted to make the regulatory process transparent and inclusive to achieve stakeholder participation and transparency in decision-making. This in itself provided some comfort to industry, consumers and other interested parties.

Through a Multi-Year Price Determination (MYPD) process the then NER approved the following price increases for Eskom: 2006/07 - 5.1%, 2007/08 - 5.9% and 2008/09 - 6.2%. At the time this decision was made, Eskom's planned capital investment amounted to approximately R97 billion. It was clearly stated in the regulatory decision that "the NER in making this determination has struck a balance between the needs of customers for both low prices and security and reliability of supply, while being mindful of the need for Eskom to finance its business, and especially to fund the major investment now needed in new generating capacity." Since then unplanned growth and changes in primary energy cost has resulted in Eskom revising its planned capital investment which will now cost R150 billion over the next five years as opposed to the original amount of R97 billion. As a result Eskom approached NERSA (that had subsequently taken over the role of the NER) for a price increase of 18% for 2008/09 and a similar increase the year after that.

The pending decision on electricity prices will be a challenging one for any regulator and would have to take into account a number of "conflicting" priorities such as:

- The extent to which a price increase can be absorbed by households which depends on the income levels of the individual households. The poor are more vulnerable than the affluent to an increase in prices. This poses a

challenge for the regulator in terms of balancing issues of affordability and accessibility with the allowable rate of return for Eskom.

- For consumers not supplied directly by Eskom but via municipalities will have to face an even higher increase since a premium will be placed on top of the percentage increase that is approved by NERSA for Eskom.
- Policy incoherence and uncertainty. This uncertainty has possibly been one of the major reasons for the underinvestment in generation capacity that the country is now facing.
- Higher electricity prices will provide price signals that will lead to consumers using electricity more efficiently. It could make more expensive alternatives acceptable, e.g. renewable energy.
- High electricity price increases will impact on the competitiveness of energy-intensive industries. Some sectors, such as the mining and metallurgical sectors (e.g. platinum, gold, ferro-alloys, aluminium), are sensitive to a change in electricity prices. Electricity makes up a large proportion of their input cost, with the result that an increase in electricity prices influences their cost significantly. Moreover, many of these industries are export-driven, and with higher costs their global competitiveness will be adversely affected.
- High electricity price increases could lead to higher inflation and higher interest rates, as well as a cycle of higher salary claims, higher food costs, etc. putting more pressure on inflation.

The above are but a few of the challenges highlighting the complexity of economic regulation. It is a balancing act between economic priorities of different role players. Should NERSA come to the conclusion that the 39% increase over two years should be implemented in order to meet Eskom's revenue requirements, they would have to carefully examine the consequences of such a decision to determine how it could best be implemented to the advantage of the economy and electricity consumers.

This subject again raises the importance of coherent and integrated sector-specific strategies; that will assist in ensuring that consistent policy messages are being communicated to regulators and stakeholders.

Economic regulation is supposed to be a means to an end. The end is improved sector performance. For regulation to be successful it needs to function within a coherent set of rules. However, within this set of rules the regulator itself needs to be effective in executing its independent role in a pro-active manner. More importantly, it must be perceived to be making a positive difference to all industry players, giving confidence that policies are being implemented in the best interest of industry, end-users and thus of the economy as a whole.