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Lessons from the **South African Electricity Crisis**

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South Africa is suffering an electricity crisis. Blackouts have been widespread and the impact disastrous. Electricity supply is predicted to constrain growth for at least the next five years. How could this have occurred when until recently South Africa had a surplus of cheap electricity? This One Pager explores the causes.

The origins of the crisis stem from an ambitious electricity restructuring and privatisation programme started in the early 1990s. The process has been protracted, reforms have been difficult to implement and the private sector has failed to respond. Meanwhile, public investment has stalled; this is the main cause of the current crisis.

The focus of reform was on bringing market forces to bear on the electricity supply industry. Eskom, the state utility, was corporatised and in 2001, its core activities (the generation, transmission and distribution of electricity) were separated, with their finances ring-fenced.

The fragmented national distribution system was to be reorganized into six electricity distribution companies, owned by Eskom and the municipalities. Ultimately, the goal was competition and private sector participation in distribution. However, this process has involved complex legislation regarding the transfer of assets and has been painfully slow. By 2005, just one company had been created, only to be disbanded soon afterwards.

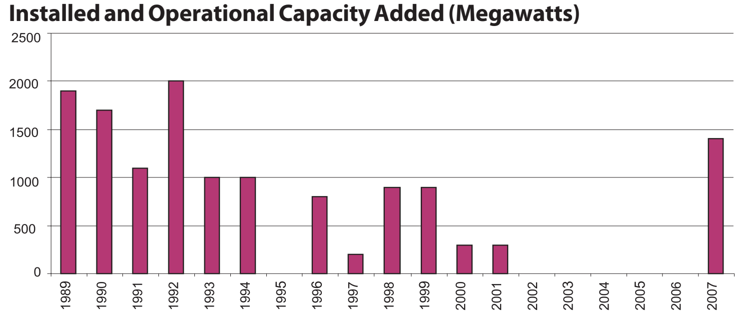
Crucially, policy uncertainty has contributed to a collapse in investment, in some cases falling to 1-2 per cent of the asset base rather than the desired level of 10 per cent. Lack of investment in the distribution infrastructure is a key factor in the crisis. There are now calls to drop the restructuring programme in favour of strengthening the existing structure.

In generation, the restructuring programme also aimed to create competition and bring in private sector participants. There was a moratorium on investment by Eskom in order to prevent crowding out of the private sector. In addition, public expenditure was steered away from investment to boost the economy following the removal of capital controls. There was, however, virtually no interest from the private sector: investment in new generating capacity dropped to zero between 2002 and 2006 (see Figure).

During the recent power cuts, a very high proportion of generation capacity was out of service. During January 2008, for example, this reached 23 per cent, mostly due to unplanned maintenance.

The Eskom plant is under severe strain due to factors such as poor coal quality, staff shortages and a high load on its capacity. A vicious circle has developed: a high proportion of plant is out of action, so further strain is placed on the existing plant, which becomes even more likely to break down.

Installed and Operational Capacity Added (Megawatts)



Source: UBS Investment Research.

Underlying the low level of plant availability in the longer term is the lack of investment in generation capacity, which has stemmed from unwarranted optimism in the willingness of the private sector to invest. The result has been a fall in Eskom's reserve margin (the ratio of peak-load unused capacity to total capacity) from more than 20 per cent to a precariously low eight per cent.

Because of this additional strain on the system, frequent outages are inevitable. Similar reform packages have been repeated in much of sub-Saharan Africa. But the 'unbundling' of the electricity supply industry to facilitate private sector participation has failed to elicit the critically needed investment (Bayliss and Fine 2008).

Across all developing countries, private sector investments in the power sector declined from US$ 47 billion in 1997 to US$ 14 billion in 2004. However, international advisors have continued to adhere to the orthodox package of restructuring policies, claiming that obtaining private sector investment is unavoidable because of a widening 'investment gap' in the power sector.

Meanwhile, a dramatic and rapid scaling up of financing is required in South Africa. Eskom plans to invest about US$ 44 billion over the next five years to raise capacity in the energy sector. This is projected to be financed by a combination of borrowing, price hikes and a government loan of US$ 7 billion. But the additional capacity will take several years to come on stream.

The electricity crisis of South Africa demonstrates that the widespread efforts across developing countries to encourage private sector investment in the electricity industry are unlikely to succeed. So the government and state utility must continue to scale up public investment in order to maintain and expand electricity capacity.

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Reference:

Bayliss, Kate and Ben Fine, eds. (2008). *Privatization and Alternative Public Sector Reform in Sub-Saharan Africa*. London: Palgrave MacMillan.

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