

# Electricity crisis: Why not smarter solutions?

People have been shocked by Eskom's proposed price increases to deal with the electricity crisis. **David Fig** assesses Eskom's plans and contends that the energy provider is way off beam.

**T**he protests by Cosatu (Congress of South African Trade Unions) unions in April 2008 have drawn attention to the fact that workers have reached the end of their tether on the question of higher oil, food and electricity prices. Inflation in these commodities has risen higher than ever, and the oil price rise has, amongst other things, led to higher prices for coal, uranium, and imported foods. Some of our imported foods include rice, and more frequently than before, grains like wheat and maize, when we cannot grow enough at home.

In March, the electricity utility, Eskom, made a second application to the National Energy Regulator, (Nersa), to approve a price rise of 53%. This was in addition to a previous application for a rise of over 14%. Eskom claims it needs these rises in order to cover the higher costs of coal for power stations as well as to cover the more than R300-billion it wants to spend on new power stations. It is up to the regulator to approve this decision. The regulator invited public comment for a brief period to 29 April.

## CUTS AND CASH

The background to the application was the sudden return to load

shedding (power cuts) around the country that was initiated in January 2008. Eskom claimed that the blackouts were vital if the grid was to operate, since demand for electricity had outstripped supply.

In theory there is enough electricity to go around, since Eskom has the capacity to generate more than the highest demand on the coldest day of winter. However, because of management inefficiencies and a series of logistical errors, the grid was not generating at its full capacity. Eskom blamed this in turn on factors like deliveries of coal being too wet to burn after high summer rainfalls, or insufficient deliveries of coal to the power stations.

The power cuts were, at first, instituted in a random fashion, so that businesses, hospitals and education institutions had no inkling of when they would occur. More recently, Eskom announced a plan, which was placed on its website, of when cuts of two to four hours would occur in specific areas. While these have, for the most part, been adhered to, some cuts still last far longer than the advertised times. The cuts have caused great disruption to the economy, to congestion on the roads, and to people's sense of

confidence in the government.

Government has left Eskom to resolve problems that Eskom was unable to manage in the first place. It is like giving a jackal the right to police the chicken hok. Eskom's top officials were going to award themselves huge annual bonuses until a public outcry argued for a rethink. Yet we are still in a situation where the government looks to Eskom for solutions in which the public has no say.

We would expect that by now government would have appointed a commission of enquiry into Eskom's mismanagement. In democratic societies, a crisis of this sort would at least have led to the resignations of the relevant ministers, in this case the Minister of Minerals and Energy, Bulelwa Sonjica (and also the former energy minister who is now the deputy president, Phumzile Mlambo-Ngcuka) and the Minister of Public Enterprises, Alec Erwin. However, our cabinet ministers, and other public officials responsible for the crisis, are all still in place. Nor have heads rolled from Eskom's board.

Instead we are hearing from some ministers appeals to accept Eskom's demand for higher rates, because if we don't the medicine will be even more bitter in the future.

Eskom is also trying to railroad the public and the regulator into accepting its huge need for more capital.

### ESKOM'S PLANS

What is Eskom intending to do with the cash it raises from the public? Apart from its announced intention to build up its coal stocks, there are six main projects it plans to spend on. These are described below.

Eskom will spend money on two new enormous coal-fired power stations generating a total of 9 576 MW. The first will be in Medupi, Limpopo province, and the second called Project Bravo at Kendall near Witbank in Mpumalanga. Generation will only start after 2011, and the projects together have an estimated cost of R163-billion.

It is also planning for nuclear power generation estimated at producing 10 000 MW and costing over R100-billion. These include plans to commission a pilot pebble bed modular reactor (PBMR) generating 165 MW and five larger pressurised water reactors (PWRs) each generating around 1 000 MW. If authorised, these will only come into operation around 2016.

Eskom will also commission two open cycle gas turbines at Atlantis and Gouriqua in the Western Cape. These would assist in times of peak demand and consume large amounts of imported diesel fuel in their operations. Together these will cost R5-billion, and generate around 2050 MW.

Next it plans to establish a pump storage station at Ingula in the Drakensberg, costing R9-billion, and generating 1332 MW from 2012. This will entail pumping water up the escarpment and releasing it to turn turbines at periods of peak demand.

Then it plans to re-commission mothballed coal-fired power

stations at Camden, Grootvlei and Komati in Mpumalanga. This process will gradually become fully operational by 2011, generating 3 800 MW at a cost of R20-billion.

Finally, plans are also afoot for a solar thermal power station near Upington in the Northern Cape, which will generate 600 MW and cost at least R50-million.

### PROBLEMS WITH ESKOM PLANS

Apart from the thermal power station, the rest of the programme needs an intensification of South Africa's reliance on fossil fuels. This comes at a time when our emissions are the eleventh largest of all countries, and higher per capita than even those of the United States.

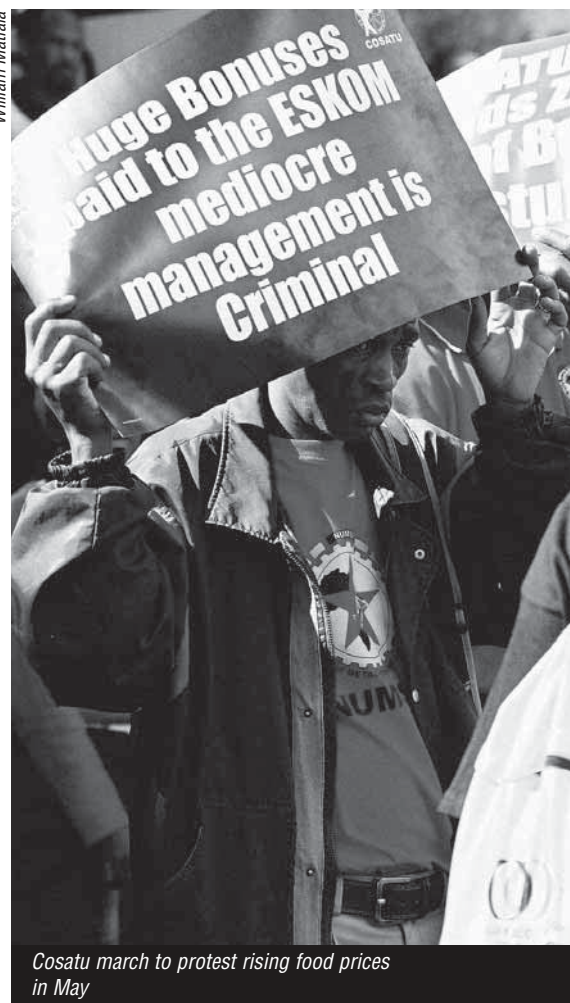
As the international community begins to enter negotiations to revise the Kyoto Protocol, greater attention will be paid to emissions in the developing countries numbered amongst the world's largest emitters, like China, Brazil, India and South Africa. It is likely that the world will expect South Africa to reduce its greenhouse emissions, of which carbon dioxide is probably the most significant. Most of our emissions come from burning coal.

So instead of making a deeper contribution to relieving global warming, Eskom is expecting us to go down the road of greater carbon emissions. This contradicts some of the earnest declarations around international consumption made from time to time by environment minister Marthinus Van Schalkwyk.

The nuclear industry claims that it is part of a solution to climate change because it does not emit carbon. In reality, it is only the reaction in the power station that does not emit carbon. All the other stages in the production of nuclear-based electricity, produce a great deal of carbon intensity. To produce

nuclear energy mining, milling, transport, reactor construction, conversion, enrichment, reprocessing, and disposal of waste all make a significant contribution to carbon emissions. We should not

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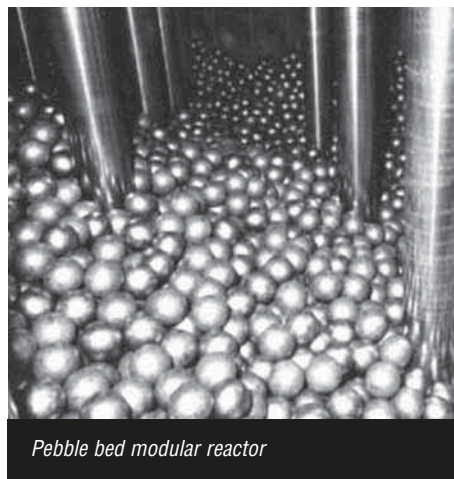


Cosatu march to protest rising food prices in May

fall into the trap that nuclear is a better energy alternative than coal.

Nuclear power also leaves behind the insoluble problem of radioactive waste, the possibility of weapons proliferation, and the need for a repressive state to control and safeguard nuclear materials which means overly centralising power generation.

If this analysis seems far fetched, we only have to turn to the latest nuclear policy document from the Department of Minerals and Energy



Pebble bed modular reactor

(DME) released in mid-2007. It calls for all the stages in the nuclear chain mentioned above, as well as the creation of a nuclear police force to oversee this (see [www.dme.gov.za](http://www.dme.gov.za) for the text).

Using apartheid-style consultation, the DME published its nuclear policy document in the Government Gazette, expecting a good response. Only 26 entities sent in comments, of which the large majority were members of the nuclear industry. Instead of promoting a real national debate on the matter, the DME announced in January 2008 that this poor consultation was adequate for getting a full mandate from South Africans to go ahead with the policy, since the majority of responses were positive.

No one has independently evaluated Eskom's proposals. Are they the most appropriate way to go in the light of our development needs? Do they serve the commitments we are expected to make in terms of climate change? Or are they kneejerk responses to a crisis which is ill-understood by officials and politicians who seek a quick fix by ignoring South Africa's long-term needs?

#### NEED FOR INFORMED DEBATE

Everything boils down to the regulator. If the regulator accepts Eskom's proposals, it will be accepting the argument that our long-term electrification should depend on expanded coal and

uranium use. This solution is favoured by large industry in the short run, but in the long run it ties our development to outdated and retrogressive energy options.

This is precisely the time when we need an informed public debate in which the accepted views can be evaluated, questioned and challenged. We must create an open and robust society where our democracy can assess our options more effectively. We should be allowed to place the concerns of working people on the table, and not just pander to the short-term interests of capital. Before we are pushed along the path of unsustainable energy options, we should surely consider the alternatives. Alternatives are increasingly available, technologically feasible, and worthy of investment.

Yet Eskom seems only marginally interested in their adoption. As the rest of the world makes increasing investments in wind, solar and other alternatives, Eskom is using the current crisis to scare the public into acceptance of the fossil fuel and uranium route.

Part of the reason for this is that alternative energy sources are less centralised, and easier to place in local community hands. For this reason they require less monopoly control. Alternative energy sources will generate far more jobs than the older forms of energy, and will open the way for local people to gain livelihoods from their installation,

maintenance and repair without the need for expensive training. New energy forms suit our development needs more exactly.

We should be heading forward to become a smarter society, not one which continues with outdated energy solutions belonging to the fossil and uranium age. Are we up to the challenge?

If unions want to make the case for more affordable and more sustainable energy, they need to consider how we generate it. In the past some unions, including Cosatu as a federation and the National Union of Mineworkers, have questioned going down the uranium nuclear road to the extent of passing congress resolutions opposing this. Is it not time for labour to sponsor a national energy debate which looks into the new array of possibilities for energy production that the 21st century has opened up? Or is it alright to leave the policy making to the special interests of Eskom and large industries which argue for more of the same recipe?

Our development needs, including the need to create more jobs, demand that we take the politics of energy more seriously. <sup>LB</sup>

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