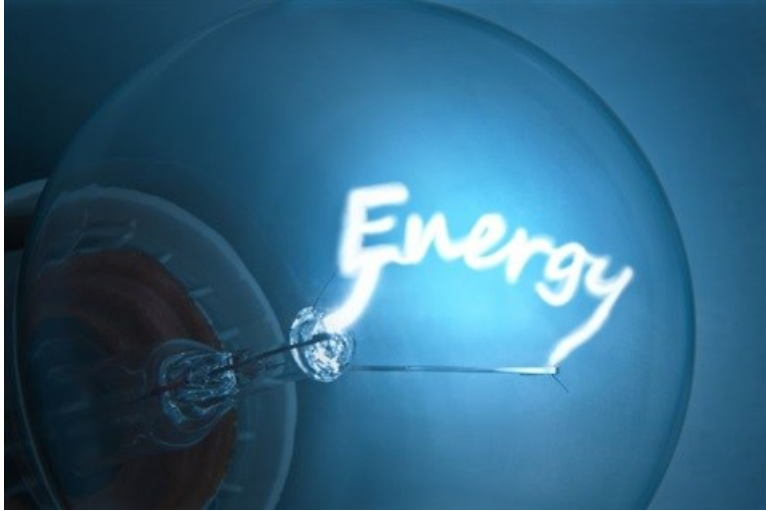


Addressing the national energy crisis

 By [Sindy Peters](#)

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WWF South Africa believes a potential answer to the country's energy crisis lies in diversification. We can no longer depend solely on Eskom to meet our escalating energy needs, nor can we continue our heavy reliance on coal.



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This was the message from Saliem Fakir, head of the WWF South Africa Living Planet Unit, speaking at the environmental organisation's 46th Annual General Meeting held late last week in Cape Town.

"We are in a situation in South Africa at the present moment where we are well below our reserve margin. It's remarkable that Eskom is able to manage a situation of crisis in which the grid is not collapsing to a point where we have rolling blackouts like we had in 2007," said Fakir.

He is of the opinion that in the long-term, South Africa cannot rely on a sole state entity to provide the increasing energy needs of the entire country - we need to think of other timeous, more affordable means outside of Eskom. Our options, other than coal - from which 90% of our current energy derives - lie in nuclear, gas and renewables; however they each have challenges of their own.

Nuclear legislation

South Africa recently signed nuclear agreements with both France and Russia, but nuclear is not the answer to our short-term needs. According to Fakir, it would take 15-20 years before any new nuclear plants would come online - the technology is complex, and apart from meeting regulations of domestic legislation, it requires licencing from the International Atomic Energy Agency. The other issue with nuclear is cost, with overruns in various case studies ranging between 50-200%.

"Nuclear has a danger of really crippling our economy ... Eskom alone can sink the country's credit ratings if it doesn't solve its balance sheet problems, especially with the injection of new equity and the ability to finance new projects going forward," said Fakir.

Detailed work on fracking

Time and money are also limiting factors when it comes to gas - fracking, regardless of all its surrounding controversy,

would only be a viable working solution 10-15 years from now, said Fakir. WWF-SA has done detailed economic work on fracking, with a focus on the technical aspects of drilling costs, to deduce whether it would be a potentially profitable solution, and whether gas will be cheap.

"Our analysis shows that generally, shale gas ... or any unconventional oil and gas well, is costly and marginal unless the gas price is right, so you have to have a high gas and oil price. In the US it's been unique because of very particular circumstances in the US infrastructure - really developed market, good knowledge of the geology, that they've managed to extract the gas, I wouldn't say cheaply, but very effectively and efficiently. If you look at what's happening in the US, in the next five years there's likely to be a lot of write-downs of many of the shale gas assets because they are just not financially viable," explained Fakir.

Renewables and the REIPPP Programme

While WWF-SA obviously favours cleaner, greener energy options, Fakir believes that renewables won't entirely resolve our immediate energy crisis, but it does provide a framework of what can be done outside of Eskom.



Saleem Fakir, head of the WWF South Africa's Living Planet Unit

WWF-SA recently completed an analysis of renewables programmes in the country and how they were financed. The report is now being used by South Africa's National Treasury to deal with discrepancies or gaps in the Renewable Energy Independent Power Producer Procurement (REIPPP) Programme.

"Our belief is that we can get up to 19-20% of renewables on South Africa's grid by 2030 ... We've been doing detailed modelling of that in terms of whether the grid can take that 20% threshold.

"A second part to that is to really look at private and government pension funds to be able to finance the increased build of renewables up to 2030 and that detailed work will be out next year," said Fakir.

He described the REIPPP Programme as one of the most significant post-94 public-private partnership programmes in South Africa, second only to the Gautrain in terms of the ability to bring in private sector funds and deliver rapidly. A noteworthy aspect of the REIPPP Programme is that it hasn't required subsidies.

Market structure needs change

Going forward, if we are to diversify our energy sources and providers, the electricity market structure and system need to change to allow for more players to enter it, said Fakir.

With the rising costs of electricity coupled with disruption in supply, as well as the significant decrease in costs of solar PV, there has been a significant move by corporates and households alike toward renewable technology.

"We've seen a very significant uptake in the agricultural sector with farmers who again have to rely on Eskom's supply who are starting to build their own sources of electricity. Outside of the government procurement we've seen lots of private investment in renewables because of the situation in the country," said Fakir.

This installation of independent energy sources does however have a negative effect on municipality revenues; WWF SA is starting to look at this area more closely, together with the National Treasury, to try and find other ways in which municipalities can deal with their long-term financial needs and budgets.

The energy-economy nexus

WWF-SA's Living Planet Unit has a four-fold energy strategy for the period 2014-2019 covering Climate, Energy and Poverty; Environment and Climate; Energy and Economy; and Low Carbon Development Pathways.

Focusing on the nexus between energy and the economy, Fakir explained the positive effects as a result of investment in the energy sector: building new infrastructure directly affects energy security, it creates income flow in various parts of the economy, and more electricity supply makes for more manufacturing and economic activity.

"We have to try to understand the dynamics between energy and the economy very systematically and strategically. Then we also have to look at the electricity market and how to ensure that we don't have only supply of electricity from the government, but also other players outside of the state to be able to do that. We'll be doing a lot of work on what is called distributed generation which is basically a non-utility scale energy supply in the next coming years," concluded Fakir.

For more info, [download the Renewable Energy Vision 2030 - South Africa report](#).

Access the WWF Integrated Annual Report 2014 at www.wwf.org.za/media_room/publications.

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