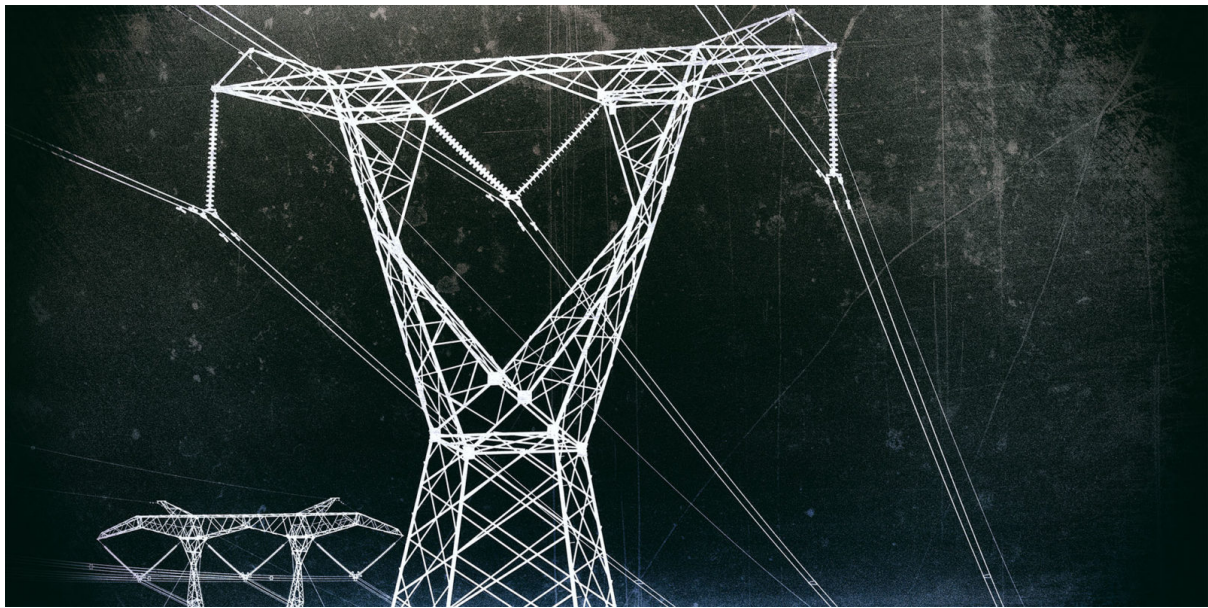


OP-ED

The power cuts will continue unless SA's new electricity plan translates into urgent new power procurements

By Anton Eberhard • 17 October 2019



Power lines run from one of Eskom's coal-fired power stations near Villiers, South Africa. (Photo: EPA-EFE / Kim Ludbrook)

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History will judge current ministers harshly should they fail to act with urgency now to avoid further power cuts. It takes time to plan, design and run competitive procurement processes, and for projects to be constructed and produce electricity.

South Africa is sleep-walking into further periods of power cuts and darkness. Eskom has re-instituted load-shedding. A fifth of Eskom's power stations are broken at any one time. And no new grid-connected electricity generation capacity has been procured since November

2014, despite Eskom system adequacy reports indicating that we are short of power and risks of further power outages are high.

South Africa's national integrated resource electricity plan (IRP) should have helped us avoid this situation. Its purpose is to model the optimal mix of energy resources and demand-side interventions that would guarantee a reliable, least-cost supply of electricity. Having failed to update the plan since 2011, the government this week finally approved a new IRP.

Regrettably, the new electricity plan eschews its primary purpose of defining an optimal mix that could guide sensible investment decisions and instead settles on an uncomfortable compromise: it proposes a "balanced energy mix" that purports to offer opportunities and hope to different energy constituencies and interests. However, the political judgements underpinning this approach are misguided and are unlikely to achieve intended outcomes.

It is only a small minority – no-longer politically connected – who believe nuclear reactors are price-competitive in South Africa or, indeed, capable of being financed. All the planning models show nuclear power to be the most expensive option. While there is the interesting possibility of scientific and technological breakthroughs in next-generation, small, modular nuclear reactors, none are yet commercially available, let alone for export. South Africa's own attempts at developing such a reactor – the PBMR – ended in failure after many billions of public funds went down the drain without even a prototype being built. It is clearly

imprudent to include technologies that have not progressed beyond the research and development stage.

Equally puzzling is the reference to high efficiency, low emissions coal technology. These power stations offer only marginal reductions in carbon dioxide emissions at substantial extra cost. A few years back, the Department of Energy ran a competitive tender for privately funded coal independent power producers (IPPs). Even without incorporation of new low-emission technology, bid prices came in higher than renewable energy alternatives. Banks are withdrawing financing for new coal power stations and it's doubtful these plants will ever reach financial close or commercial operation.

References to new nuclear and coal in the text of the IRP are thus a mirage; a misguided political strategy that will backfire as none of these plants are likely to be built. Failure to make clear, economic choices around South Africa's electricity future also means that the consequences of the inexorable global shift away from coal are ignored and no explicit plans or investments are being made to ease adverse impacts in affected communities, such as coal towns in Mpumalanga, or to fully harness the opportunities that come with more competitive clean energy technologies.

Policy-making should involve explicit choices against clearly defined policy goals or criteria that are supported by sufficient consensus. Despite the fractiousness among advocates of different energy industries, there is a remarkable consensus, in most countries, on ultimate policy objectives for the sector: namely, an energy system that can deliver reliable electricity at competitive prices while being environmentally sustainable and also

contributing to broader economic objectives such as local investment opportunities, manufacturing and jobs.

But South Africa's new IRP doesn't take this obviously more rigorous and defensible approach where different options are evaluated against the above policy criteria. The draft plan was sent to Nedlac where the approach of the labour and civil society delegates appeared to be one of negotiating for special interests instead of an informed discussion around the assumptions and data that underpin the planning models. Subsequently, adjustments have been made to the optimised energy mix without any quantification of the additional costs to society, the economy or the environment.

The consequence of this highly politicised approach to electricity planning is that likely there will be legal challenges, ironically from nuclear or coal lobbies, which government has sought to appease but who feel short-changed, as well as from environmental advocacy groups who are dismayed to see polluting coal plants forced into the plan without any economic justification. These challenges could be disastrous for South Africa's electricity supply security as they will further delay the initiation of new power procurements that are now so urgently required.

Government has three main options to bolster supply security and prevent future power cuts: the performance of Eskom's power stations would need to improve dramatically (unlikely given ageing plant plus inadequate past maintenance); government could initiate a new IPP procurement (which could take time given the requirements for Nersa concurrence and public consultation plus the risk of court cases); or

government could free up the distributed generation market so that multiple private project developers and investors can contribute innovative local solutions to meet electricity needs.

While fixing Eskom is hard, and launching a new REIPPP auction may be delayed, lifting regulatory barriers for distributed electricity generation is easy: it simply requires the Energy Minister to gazette an amendment to Schedule 2 of the Electricity Regulation Act that exempts small projects up to 10MW from the requirement to obtain a licence from Nersa, and instead require the regulator to institute an efficient, automatic registration system. The government could also issue directives to Eskom and municipalities, backed by more explicit requirements in transmission and distribution licences, for grid-connection and wheeling procedures to be expedited. These simple steps will liberate a huge pipeline of investment, contributing not only to electricity supply security but to the President's priority policies aimed at boosting investment, economic growth and jobs.

South Africa should also consider deeper legislative and regulatory reforms to accelerate investment in power generation. The IRP should be indicative, rather than determinative: ie it should provide a broad vision and framework for electricity investments, but companies and individuals should be free to innovate and invest in power options for themselves and for trading across the grid. While the Minister should still retain the powers to intervene if supply security is under threat, the regulatory framework should facilitate – not constrain – private initiative and innovation. An independent

electricity System Operator should be assigned the responsibility for producing biennial IRP updates so that they become progressively less politically contested over time.

History will judge current ministers harshly should they fail to act with urgency now to avoid further power cuts. It takes time to plan, design and run competitive procurement processes, and for projects to be constructed and produce electricity.

The Energy Minister has a statutory responsibility to authorise the next least-cost public power generation procurement (which is already overdue). And the Energy Minister has the statutory powers to ease regulations which could liberate massive investment flows in distributed energy projects. Imagine what energy would be released if the government was crystal clear in its vision of the future of the electricity sector in South Africa and required all its ministries, agencies and enterprises to act together with purpose and resolve to facilitate reliable, competitively-priced and sustainable electricity supplies that will power accelerated economic growth and development. **DM**

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