

## South Africa's energy future a pawn in a larger political game

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Professor Anton Eberhard of the University of Cape Town's Graduate School of Business says it's time to call out the bluff and bluster of those who belligerently oppose private investment in renewable energy independent power projects (IPPs) and the transition away from coal and nuclear set out in South Africa's new electricity road map, the integrated resources plan (IRP). "It is clear that some are frustrated and angry that they will no longer have access to special deals with Eskom or the coal and nuclear industries. Others may feel marginalized and alienated from president Ramaphosa's new political dispensation - but their false narratives around IPPs and the IRP should not cloud our policy and investment choices," he adds.

Eberhard argues that South Africa needs to embrace unprecedented global innovation in new low-cost energy technologies and competitive markets if it wants to support real economic transformation. Failure to do so means it runs the risk of succumbing to a parochial and reactionary minority who are more interested in rent-seeking opportunities in old and expensive technologies that will impede social and economic development.

"South Africa's highly competitive IPP programme, has attracted more than R200 billion in private investment in projects which have been built on-time and on-budget and, in the most recent bid round, without subsidies," says Eberhard.

According to Eberhard, it is a coalition of the recently side-lined and embittered that is currently dominating many public platforms, inciting resentment and opposition. It includes elements from the Zuma-wing of the ANC, the EFF, the Nuclear Industry Association of South Africa, the Coal Transporters Forum, some unions, a small minority of energy professionals, including a number of ex-SOE board members and managers accused of corruption, Black First Land First, and advocacy groups such as Transform RSA and the South Africa Energy Forum. Bizarrely, this coalition has been joined by those who deny anthropogenic climate change, as well as some members of the Free Market Foundation.

"The anti-IRP and IPP advocacy is founded on four fallacies," explains Eberhard. "They argue that solar and wind energy are unreliable and expensive; that the IRP does not adequately take into account the impacts and costs of renewable IPPs on the rest of the electricity system; that these IPPs don't promote local industrialisation or create enough jobs; and that the procurement of IPPs has been corrupt and has benefitted the president's family and a new politically-connected elite."

Eberhard argues that whilst solar and wind energy were costly in the past, innovation and expanding global markets have led to dramatic cost reductions over the past five years and they are now the cheapest new sources of grid-connected power in South Africa. "If South Africa ran a new competitive procurement now, solar and wind energy bids would be below ZAR 50c/kWh, lower than the operating costs of Eskom's most expensive coal power stations," he adds.

The theory that the IRP ignores the costs on the rest of the system for backup and ancillary power services is at odds with the objective of the IRP, which is the least-cost mix of power sources that delivers an acceptable reliability standard, explains Eberhard. "The PLEXOS computer model, which underpins the IRP, is the industry gold standard and is used by a large number of utilities and countries around the world. It shows that gas (or equivalent flexible resources) complements the variability of solar and wind energy and, together, their weighted average cost is less than either coal or nuclear power stations - despite the fact that the IRP cost assumptions for solar and wind are conservative and those for nuclear optimistic."

Eberhard says the arguments of the anti-IPP coalition against the IRP simply do not stack-up and hence many in this group now abandon any pretence that nuclear or coal are least-cost. They argue instead that industrialisation and jobs should be the deciding factors in our new investment choices, ignoring the impact of electricity prices on affordability or economic

growth.

"Renewable energy contributes to local manufacturing and jobs and has potential to do much more," says Eberhard. He cites data from the Department of Energy which shows that localisation in the renewable energy IPP programme is above 45%. Additionally, local equity ownership has exceeded 50% for many projects and more than 80% of debt financing has been from local banks.

"Comparing the low number of operating jobs on a solar or wind farm with those at an Eskom power station is disingenuous and ignores their vastly different energy outputs," says Eberhard. "On a like-for-like, jobs per kilowatt-hour produced comparison, there is incontrovertible evidence that renewable energy generates more direct jobs than coal or nuclear energy."

Eberhard says there is no basis for conspiracy theories that the IPP programme is corrupt and has benefitted members of President Ramaphosa's family and administration. "There have been more than 400 bids over five procurement rounds where around 92 projects have been awarded under conditions of fierce competition. Bid evaluations and awards have been undertaken under the strictest security, with independent and transparent auditing."

IPPs currently contribute less than 5% of South Africa's electricity. Their costs are transferred directly to consumers through regulated tariffs. Although Eskom's finances or jobs are not yet directly impacted by IPPs, and neither are jobs in coal mines, Eberhard says this is coming. "President Ramaphosa and his Ministers now need to take the lead, and embrace the global tide of innovation in energy markets which can provide competitively priced, reliable and clean energy services for economic growth and prosperity for all our people."

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