Planning for Power in South Africa

Clarity on some of the issues around the Integrated Resource Plan (IRP) 2016 assumptions and base case

The purpose of this media statement is to clarify some of the issues around the Integrated Resource Plan (IRP) 2016 assumptions and base case. Some press reports have indicated that a decision has been taken by the government "to delay nuclear until 2037".

This is simply untrue and a complete misperception of the process being undertaken. Attempts have also been made to drive a wedge between the Department of Energy (DoE) and Eskom, notwithstanding that the group executive of Eskom responsible for generation, Matshela Koko, participated fully in the media briefing on November 22.

Since the promulgation of the IRP 2010-30 in March 2011 there have been a number of developments in the energy sector, in the country and in the region, which necessitate that we review and update the plan. Some of the developments include additional capacity that has come online, and demand levels lower than that envisaged in the promulgated IRP 2010-30.

The IRP 2016 update process is similar to that followed for the promulgated IRP 2010-30 except that it uses the promulgated policy-adjusted IRP 2010-30 as a reference point.

Base case results

The base case that was presented to the media this month is a starting point and not the end point.

The base case is simply the foundation on which various scenarios will be tested and used to build the final policy- adjusted IRP update.

Scenarios to be tested include but, are not limited to (1) carbon budget as an instrument to reduce greenhouse gas emissions; (2) primary fuel price tipping point (coal, gas and nuclear); (3) low demand trajectory; (4) embedded generation (rooftop photo voltaic); (5) enhanced energy efficiency; (6) low Eskom plant performance; (7) regional options (hydro, gas); (8) indigenous gas; (9) unconstrained renewable energy; (10) new technology (storage); (11) electricity network implications; and (12) additional sensitivity analysis.

The various scenarios listed above will ultimately and certainly result in changes to the base case. For example, at an international level South Africa has climate change commitments to reduce greenhouse gas emissions.

The Department of Environmental Affairs has recently advised the Department of Energy that the IRP 2016 must consider using the carbon budget concept. This relates to the quantity of greenhouse gas emissions that can be emitted in total over a specified time (a 10-year cycle in the case of South Africa).

Preliminary results from the carbon budget scenario indicate a significant change in the energy mix and timing, with increased renewables, no new capacity from coal, and nuclear coming online around 2026. This is a most likely scenario given that renewable energy cannot be unconstrained.

This is because there are network constraints that will limit the extent to which renewable energy can be connected to the electricity distribution grid. At this stage we are also providing for storage solutions to increase the extent to which we can deploy renewable energy. These are still in the very early stages of development and experimentation.

The current renewable energy programme will not be affected and in fact it will be further developed beyond the current bidding rounds.

Implementation

Other scenarios as listed above will also impact on the plan in various ways. Given the pace and scale pertaining to the introduction of various technologies, the final IRP will ultimately be quite different from that illustrated in the base case.

Regarding implementation of the IRP in general, various technologies have different lead times. Eskom as the implementing agent has taken the position to proceed with the request for proposals (RFP) for nuclear power generation based on the likely carbon budget scenario, which indicates that nuclear commissioning could be as early as 2026.

We fully support Eskom in this regard. Eskom has also indicated that regardless of the nuclear commissioning date, the RFP provides an opportunity to get an indication of costs from the market that will help inform the nuclear power costs for the country in the future.

Clarity on costs will assist greatly in addressing the nuclear power costs issue that has long been the subject of national debate and contention.

Thus, the Department of Energy's IRP 2016 processes and Eskom's RFP processes are complimentary to each other, and should be viewed within the context of planning scenarios that present themselves based on current and future possible developments.

The Department of Energy's process for the update of the IRP has set four key milestones, which are (1) settling the key assumptions; (2) developing a base case (Starting point); (3) modelling and analysing the various scenarios; and

finally (4) developing the final plan taking into account the various scenarios and policy positions.

The first and second milestones have been completed and are the basis of the planned public consultation process. The third milestone, which involves testing various scenarios and sensitivities, is currently under way. The fourth milestone, which relates to policy adjustment, will follow once public consultations and scenario analysis are done.

Finally it also has to be emphasised that the IRP update documentation has been released for consultation purposes and a decision will only be made by the government once the consultation process has been concluded.

Minister of Energy

Ms Tina Joemat-Petterson, MP

Published on http://www.iol.co.za/business/opinion/planning-for-power-in-sa-2094579