

24 October 2018

**The Honourable Minister of Energy**

Private Bag X96  
Pretoria  
001

[IRP.Queries@energy.gov.za](mailto:IRP.Queries@energy.gov.za)

Honourable Minister Radebe

**Comments on the Draft Integrated Resources Plan 2018**

By way of introduction, I am a consultant to sponsors, developers, contractors, financiers and other role players in the Southern Africa energy space across all sectors – oil & gas (up-, mid-, and downstream), coal, renewables, and nuclear. I also have been privileged to be part of a multi-disciplinary team engaged by the IPP Office to consider and advise on short- to medium term structural changes in the electricity sector. Previously, I led the Southern Africa Energy Group for global law firm Norton Rose Fulbright before my “retirement” from formal legal practice. As such, I believe I am uniquely placed, together with few others, to be able to offer dispassionate and balanced comment on the draft IRP 2018.

The comments that follow do not pretend to be an exhaustive conspectus of policy and proposed redirection which is required in the South African energy sector. That remains to be done on a canvas much broader than the IRP, involving a consideration of amendments to Mineral & Petroleum Resources Development Act, the Gas Act, the Gas Utilisation Master Plan, the Energy Regulator Act, and suchlike, all under the rubric of a reconsideration of the White Paper on Energy and the Integrated Energy Plan.

Rather, I confine comments on the draft IRP 2018 to a few key principles which I believe can well be adopted to material advantage without disturbing what is evidently a deft balancing act that endeavours to speak to multiple constituencies and interested-and-affected parties.

1. Coal

- In view of the advanced stage of the Coal IPP Procurement Programme, in particular the long-standing appointment of preferred bidders who have expended huge financial resources in developing their projects towards financial close, it is correct that such procurement be proceeded with.

Phone: [REDACTED] Email: [REDACTED]

[www.ash3konzult.com](http://www.ash3konzult.com)

- Fundamentally, Government must be seen to honour its commitments – in this case the procurement under the Coal IPP Programme. Of course, the programme provides an inherent discretion to the Department of Energy whether or not to proceed with the procurement. However, termination of the Coal IPP Programme at this very late stage will destroy any credibility in energy procurement programmes such as still remains after the debacle in Round 4 of the Renewable Energy IPP Procurement Programme. This will have a direct impact on the Gas-to-Power procurement, where pre-financial close development costs will be many multiples of similar costs in the coal- and renewables programmes.
- Continuation with the procurement does not negate the rights of interested and affected parties to enforce their contentions in respect of concerns for the environment, other natural resources (notably water), and climate change obligations. All of those must be dealt with on their merits, in accordance with processes that exist at law.
- However, given these challenges, it is imprudent at best to base an IRP for the next 12 years on the assumption that the coal IPP new generating capacity will be on stream by 2023.
- Based simply on the likely construction period, as well as the time required to finally resolve the issues around coal (and assuming those issues are determined in favour of the developers), realistically one could not expect first power from such projects much before 2025 – i.e. a 2 year gap.

## 2. Gas-to-Power

- It is encouraging that the Department of Energy has been bold to increase the G2P procurement from the 1800MW originally intended to an aggregate of 8300MW over 4 years.
- However, procurement of first power by 2026 (a mere 8 years hence) is extremely ambitious, having regard of the major complexity in having to align multiple role players just on the procurer side, let alone craft and implement an appropriate procurement framework.
- Working backwards, realistically anticipating a 2 year construction period, an 18 month financial close period, a 1 year bid evaluation and adjudication period, a 1 year period for pre-qualified bidders to formulate detailed proposals, a 6 month period to evaluate all proposals and determine a shortlist of prequalified bidders, and a 6 month period for all interested parties to submit proposals under a new RFP, the procurement process would have to be in place and commence during the first part of 2019.
- Understanding the alignment that likely remains to be reached just between the IPP Office, Transnet, TNPA, and various IDZs, it is questioned whether it is at all feasible for a full RFP for the G2P programme to be published by the first half of 2019. More probably, in view of past experience with power procurement, despite the best efforts of all concerned, it is more likely that, even if everything proceeds relatively smoothly, an RFP can be expected sometime in 2020, and first power by 2028 (allowing for some other inevitable delay).

- This means a 2 year gap in proposed procurement of power from G2P.

### 3. Hydropower

- It is well understood that this allocation in the draft IRP2018 is based upon the commitments that South Africa has made under its treaty with the DRC in respect of Grand Inga.
- It is noted further that, just this week, it has been announced that the DRC has secured finance from China and Spain for the development of Grand Inga, bringing this megaproject a step closer to fruition.
- It is gratifying to see that the Department of Energy has pushed this procurement to the end of the plan (2030), clearly mindful of the challenges that remain – the facility must still be built, and the financing and construction of the transmission infrastructure from the DRC to South Africa must still be determined. Consequently, it is questioned whether first power from Grand Inga by 2030 is at all realistic.
- Accordingly, it is submitted that, whilst provision may be made for such power procurement, no reliance should be placed upon that power actually eventuating by that time, if ever.

### 4. Renewables

- Government's continued commitment to procurement of electrical energy from renewable resources is laudable and gratifying.
- However, postponement of procurement of first power from new generating capacity from onshore wind and solar PV to 2025 is suggested to be imprudent and contrary to other economic objectives, for the following reasons:
  - From what is set out above, it is likely that first power from coal and gas will be delayed by a number of years, leaving a significant power gap over a time critical for the success of Government's Economic Stimulus and Recovery Plan.
  - Part of that Plan is the promotion of local manufacturing. The harsh reality is that the stop-start nature of the REIPPPP, in particular the Round 4 debacle in failure to sign PPAs for more than 18 months, has rendered local manufacturing by equipment suppliers economically unfeasible.
  - Also part of that Plan is the creation of jobs. It has been demonstrated reliably that renewable energy projects create more jobs per kilowatt/hour of electrical energy produced than any other technology. It is counter-intuitive to delay procurement from these resources when a stated macro-economic imperative is the securing of investment and the creation of employment.
- All of these issues are well addressed simply by accelerating and smoothing the renewables procurement foreshadowed in the draft IRP, by bringing such procurement forward by two years, for first power by 2023, and smoothing the new additional generating capacity to be procured over 8 years to 2030.

5. A summary case for biomass

- The confinement of procurement of new renewable energy generating capacity to onshore wind and solar PV technologies is noted.
- It is strongly believed that the Department of Energy may be foregoing a golden opportunity to address a number of different imperatives by failing to consider biomass technology as an additional resource, for the following reasons:
  - The coal-fired power stations earmarked for decommissioning are based mainly in Mpumalanga province. Accordingly, it is likely that communities in that province will be the most affected by consequent job losses.
  - However, Mpumalanga province is blessed with abundant timber resources which readily lend themselves to exploitation of biomass residue for power generation purposes. These extensive resources include major plantations owned and operated by state-owned entity SAFCOL.
  - Such projects are ideal ‘job-creators’. Simple reference to the economic development commitments of the Ngodwana Energy biomass-to-power project that was successful in Round 4 of the Renewable Energy IPP Procurement Programme demonstrates how such a project can far exceed required thresholds.
  - Those currently employed in the coal sector, and whose employment is imperilled by the decommissioning of coal-fired power stations in the province, can be readily and effectively re-skilled and supported to become biomass residue collectors and transporters critically required for the fuel supply chain in such projects.
  - Whilst biomass projects are not by any means ‘least cost’ when compared with onshore wind and solar PV, linear calculations of current biomass PPA rates escalated at CPI demonstrate parity by 2023 with Eskom tariffs assessed on the likely trajectory of increases on such tariffs over the same period.
  - Biomass PPA rates could be ameliorated further through state-owned entities such as SAFCOL supplying biomass residue to projects at little- or zero cost.
  - Moreover, and in any event, an energy rate for biomass projects in excess of current Eskom tariffs should be considered to be an appropriate ‘trade-off’ for minimising job losses in a province that will be affected the most through the curtailment coal-fired generation capacity.
- Accordingly, it is strongly suggested that future opportunities in these respects not be constrained by failure to provide for biomass under the draft IRP 2018.

6. Facilitate small-scale distributed generation

- The provision for up to 200MW per year of ‘Embedded Generation’ is appreciated.
- However, there appears to be substantial confusion within the draft IRP itself as to what is intended by this concept. The term ‘embedded generation’ implies self-generation for own use – yet the draft IRP clearly anticipates such generators being able to sell power to third parties. This needs to be clarified as a matter of priority.

- In so doing, it is strongly recommended that careful consideration be given to terminology and intent. Such provision in the draft IRP presents an ideal opportunity to facilitate small scale IPP distributed generation of power willing to be taken off by private commercial offtakers, for industrial use.
- Typically, such projects are in the 1 to 5MW range, of sufficient capacity to satisfy the requirements of such offtakers, but not so large as to impact materially on Eskom's revenue stream.
- The large number of IRP deviation requests presently sitting with the Honourable Minister demonstrates the appetite of the private sector for this kind of investment, which investment comes at zero cost to the Fiscus, actually adds to Eskom's bottom line through wheeling charges, and speaks directly to the Honourable State President's growth-by-investment intentions.
- Restriction of the allocation under the draft IRP to so-called 'Embedded Generation' will mean that the bulk of the current deviation requests will not be dealt with, as these requests do not concern 'embedded generation' projects properly so called.
- Accordingly, it is strongly recommended that:
  - The draft IRP be clarified through adjustment to refer to Small Scale Distributed Generation (rather than Embedded Generation).
  - Close consideration be given to increasing the annual allocable capacity from 200MW to at least 300MW, given the clear appetite in the private sector for this kind of investment.
- Such projects will bolster Eskom's bottom line through wheeling charges, not otherwise imperil Eskom's revenue stream, not cost the Fiscus a penny, create jobs and facilitate other economic development goals, encourage private investment, and reduce the growing generation burden resting on Eskom.

7. Summary of proposed changes to the draft IRP 2018

- Bring forward the procurement of renewable energy new generating capacity by two years, to 2023, and smooth the allocated capacity to come on stream over 8 years, to 2030.
- Provide for biomass as an additional renewable energy technology.
- Adjust 'Embedded Generation' to 'Small Scale Distributed Generation', and increase the annual allocable capacity to at least 300MW.

Yours sincerely

**Matthew Ash** | Director