SALGA
South African Local Government Association

Comments on the draft IRP 2010

December 2010

KEY CRITERIA USED TO DEVELOP THE DAFT IRP 2010

Proposed Criteria	*Q1*. To what extent do you believe the draft IRP meets this criterion? If you believe it did not, explain why.	*Q2*. How would you weight the criterion (in the range 0 to 10)?
Least risk or uncertainty	**High carbon future risks not held strongly enough** – experts regard it as inevitable that carbon will be taxed at some point in the future, in which case any coal-based generation we have may become uneconomic yet have several decades of life left – possible very expensive stranded assets. **This scenario needs to be more clearly considered**. **Large EEDSM targets considered 'risky' because of past poor performance** – not valid for future planning especially because the reasons for poor performance a largely related to policy and institutional constraints both of which are subjective in the context of this planning process and can be altered going forward.	7

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Lowest greenhouse gas emissions	Scenario clearly addresses this, although not strong enough in the 'revised-balanced scenario'*	8 - if the country does not prioritise this criterion now it is likely to lead to serious disadvantages in the next 10 or 20 years -when power stations invested in today will still have a few decades of operational life
Lowest water consumption	Considered adequately	7 - clearly important in our water scarce country

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Least cost to the consumer	Unclear because **transmission and distribution costs not included**, which are substantial, and this could lead to undue burden on municipalities and sub-optimal economic solution for the country (there is a cost implication on the distribution side to utilise the additional generation capacity which is currently not considered in the IRP analysis). Also **EEDSM may not have been compared on equal costs basis to supply options** (not enough info available to know)	9 - least cost is clearly a major decision-making criterion

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Greatest regional development	Considered adequately	7
Greatest localisation potential	Considered adequately (if this refers to 'local' as opposed to 'international/imports'. However **localisation in terms of decentralised investment within the country** is different, and affects municipalities greatly - in which case the criterion is not well met (e.g. **distribution costs vs. the potential contribution of different investment options to stimulating economic growth in different provinces and municipal areas**.	9 – i.r.o. decentralisation within the country 9 - i.r.o. localisation within SA as opposed to 'international/ imports'

Additional scenarios that should have been run

- It is unclear whether the IRP scenarios include significant **EEDSM potential**. This should be included or an acceptable reasoning advanced (lack of data or past performance should not exclude this critical option)
- The treatment of **transmission costs and water costs as externalities** and not an integral modelled parameter is seen as a serious flaw.
- The **transmission and distribution** system elements have not been modelled or adequately assessed within the scenarios. This will have a large impact on proper comparative assessment of options related to the interests of municipalities.

(see next slides)

Additional scenarios that should have been run

- **Distribution Cost Exclusion**: IRP 2010 is stated as being an electricity investment plan for the next 20 years. However, it excludes the direct investment in distribution infrastructure that will be required to deliver the new capacity to end consumers, and therefore does not include the whole electricity value chain.
- Distribution infrastructure costs are estimated to be in the region of R6000 to R8000 per kVA. Consequentially, to off-take the added 8400 MW - capacity of Medupi and Kusile over the next 5 to 7 years will therefore require additional expenditure of between R 50,4 and R67,2 billion which will need to be funded by a yet to be determined increase in tariffs over and above the tariff increases that Eskom requires to fund the new stations.
- There is an impact on the price, and therefore the overall affordability of the plan.

Additional scenarios that should have been run

Upstream Eskom Transmission Cost Exclusion

- The IRP excludes the portion of transmission costs that municipal distributors would have to pay Eskom for any increase in capacity, both the capital cost where Eskom ‘quotes’ on new intake points and passes such costs onto distributors as well as the on-going notified maximum demand charges of R65 per kVA per month for additional capacity.
- These costs are substantial and their exclusion from the IRP has the potential to create future ‘price shocks’ that result in funding shortfalls and constraints to the actual utilization of the plan’s future new capacity, creating ‘circulatory’ issues that ultimately have an adverse knock on effect on future prices.

Additional scenarios that should have been run

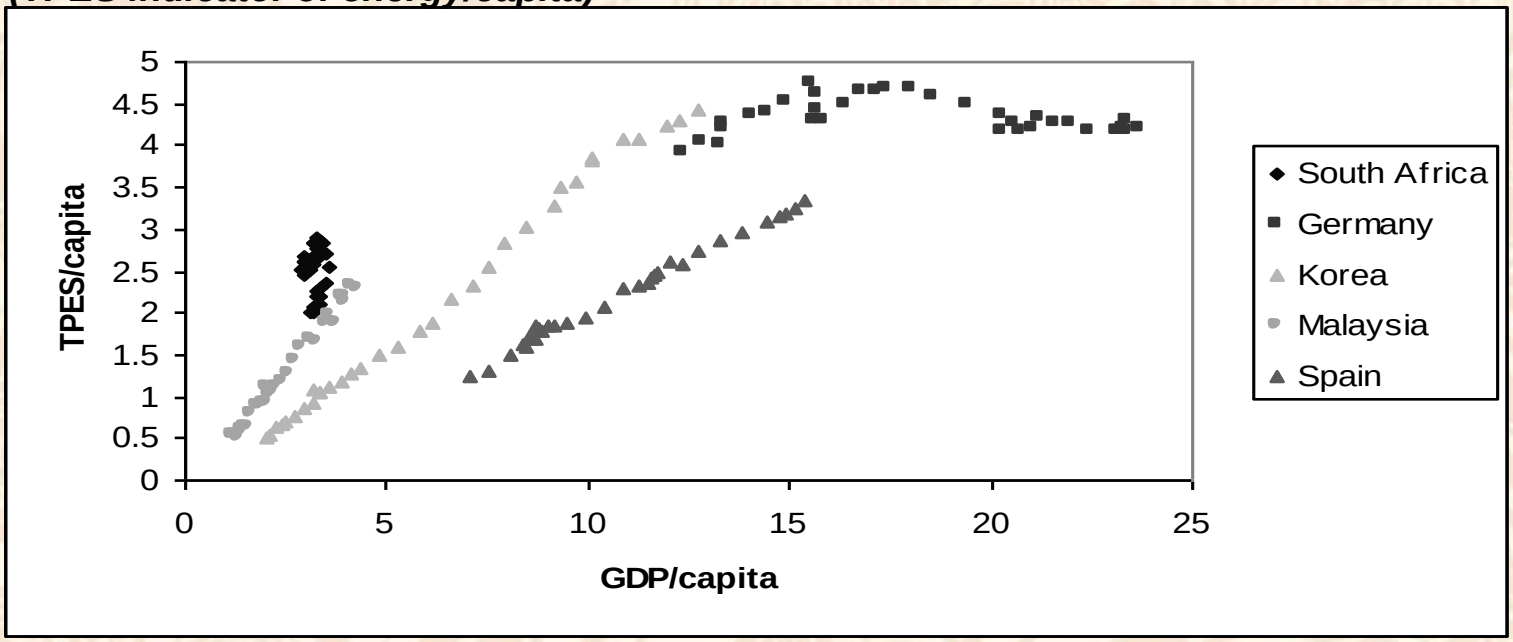
Energy efficiency and DSM

- The IRP does not provide adequate information on the potential for EEDSM - measures that have been considered and whether these investments in EEDSM have been considered on an equal footing with investments on the supply side.
- SALGA feels that until this has been given sufficient attention it would be hasty to drive supply side solutions.
- The SWH (DSM 3 500Kw) was not compared to new generation in the IRP2.
- It is of concern to municipalities, many of whom have plans for SWH delivery, that this means that money for investment in SWH development will always be constrained – not given full opportunity as it would if compared on equal footing with other generation options.

Additional scenarios that should have been run

Macro economic impact

Energy Economic Trends 1971 – 2000 (Developed by Prof Chris Cooper, SA representative to International Energy Agency).
(TPES indicator of energy/capita)



Given that for the generation component alone (the only current element modelled in the IRP) the plan seeks to allocate investment of some 800bn – 1Trillion ZAR, there is a need of a comprehensive economic impact analysis that will provide for the economic development issues to be adequately interrogated in the decision making so as to inform potentially wide varying options and solutions.

Process

Stakeholder engagement

- The IRP 2 process to date is a sea-change progress compared to the legacy ISEP Eskom planning which was essentially in-house and provided for virtually no stakeholder engagement.
- Thus there has been progress in beginning to open the process up.
- There is a need to ensure that no particular vested interest has an opportunity to influence the outcome in its favour.
- The process has offered very limited realistic opportunity for local government involvement.
- This plan has profound impacts on municipalities: not just on their electricity systems but on their economies, environments and societies. The magnitude of the proposed investment (ZAR 800Bn – ZAR1, 000Bn) would require a more thorough process of engagement in general in respect of its macro economic impact.

Process

First round of stakeholder engagement –issues raised by SALGA

- Clarity and feedback is required as to how issues raised by SALGA in the first stakeholder engagement have been addressed and the impacts on the IRP 2010 Rev 2.
  - Treatment of distribution infrastructure
  - The weighting of the parameters
  - Localisation in terms of decentralisation of investment within the country, which is very important for municipalities and provinces in the context of stimulating local economic development and employment (the green economic sector needs to be decentralised as much as possible).

Process

Technical Task Team

- Municipalities experience specific challenges and opportunities.
- The absence of a Task Team formally representing the interests of key stakeholder groups, with knowledge of a number of key areas of expertise, leads to a situation where these are not addressed in the IRP 2010 Rev 2.
- Concerned that the composition of the TTT, although in their ‘private capacity’, gives the strong impression that sector objectives have driven the plan, rather than the broad interests of society being addressed.
- The representation of local government, as the single largest ‘consumer’, would need to be included at the inception and design of the planning process.

Process

Alignment of IRP2 with other policies and plans

- There are several other national policies and several provincial and local government policies and plans that should inform the IRP or provide a context for the IRP.
- These include (for example – not a comprehensive list), the IEP, The Climate Change Policy, the Renewable Energy White Paper Revision, the IPAP II, Provincial sustainable development policies and plans, Municipal policies and plans.
- Most metros have energy and climate strategies. These have varied targets but are generally in the 10% SWH penetration by 2012 (for e.g. CoCT targets are currently 300,000 mid-high income and 100,000 low income households by 2010 and 10% energy efficiency by 2012.
- There is a logical flow of development between these areas of policy and planning. SALGA's concern is that the IRP appears to be pre-empting instead of being informed by key policy and planning areas. Assessments of the linkages are largely omitted.

Process

MTRMP

- Confusion in respect of which document should the comments focus on - MTRMP or IRP 2010?
- The relationship between MTRMP and IRP 2010 in respect of reserve margin projections needs to be aligned.
- Again, substantial involvement by local government was missing in the development of the MTRMP: this concern is specifically against the key role municipalities might play and in the potential impacts on municipalities of either successful or un-successful implementation of the MTRMP.

IRP2 Re-distributor Demand Forecast

- Municipalities/re-distributors (especially big metros), form the majority of the country's demand 'wedge' and are thus the single biggest electricity consuming sector.
- This is in turn 'driving' the expansion plan.
- It is vital that the municipal demand wedge is as accurate as possible.
- SALGA acknowledges the difficulty in obtaining demand forecast information and data from municipalities and would like to offer assistance in this process in future revisions.
- A 'dis-aggregation' of the Metro load is needed and is requested.
- This will allow metros and other municipalities to assess the IRP in terms of their own planning processes and to make a more effective input.

Demand Forecast

- **Is the demand starting point in fact correct** given a situation of suppressed demand given economic (recession) and infrastructure (at capacity in many municipalities) ?
- Lack of capital over the last decade to provide new capacity across the distribution value chain has resulted in a distortion of the customer mix
- Some cities were turning down commercial connection applications because they do not have the supply capacity and must use existing capacity to electrify households (for example of a total of 5800 new service connections made in a year for one metropolitan distributor) - creating a potential backlog
- There is always an element of cross-subsidization in tariffs – the abovementioned trend is not sustainable in the long term and a balance in the customer mix must be accommodated – accelerated connection of .
- Further work would need to be done to ensure greater accuracy in this critical component of the IRP2 demand forecast.

Demand Forecast

- The demand forecast in the IRP2 is based on existing demand and future growth linked to GDP growth anticipated.
- Need to factor in substantial plans of local government to drive efficiency and renewable development, as well as relevant national policy development such as the revised national building codes (gazetted but not yet promulgated) that require minimum efficiencies in the built environment and solar water heating in all new buildings.
- It not clear to what extent price elasticity of demand, in the context of high price increases that are currently projected regardless of the investment option, has been taken into account in the future demand projects.

General

Assumption	Too High	Acceptable	Too Low	If not acceptable, why?
Gross Domestic Product	○	○	○	
Electricity intensity	○	○	○	
Demand Side Management	○	○	●	EEDSM potential needs to be exploited much more fully given the financial and GHG advantage of doing so and compared with supply costs on equal basis (or details given that this was done – not clear from IRP documentation)
Own generation	○	○	○	
Climate change	○	○	○	
Carbon tax	○	●	○	
Water	○	○	○	
Cost of unserved energy	○	○	○	
Discount rate	○	○	○	
Renewable energy	○	○	●	It appears that 'learning curve' costs are not factored in, which will skew cost comparisons between RE and other options. If they are factored in this should be made explicit.
Exchange rate	○	○	○	
Co-generation	○	○	○	
Nuclear	○	○	○	
Imports	○	○	○	
Generation lifecycle costs	○	○	○	

Conclusion

- Given the uncertainties and issues raised in this comments, flexibility should be seen as a key criterion of the plan
  - Need a good balance between flexibility and certainty
  - Some investment options are likely to lock the country into energy mix that may not be desirable in the future