

# EIUG

Energy Intensive Users Group  
of Southern Africa



## EIUG High-level Comment on the Draft IRP Base Case

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The Energy Intensive User Group of Southern Africa (EIUG) is dedicated to the promotion of the interests of energy intensive users in South African Industry.



### KEY FOCUS AREAS:

- Affordable and Sustainable energy pricing
- Security of Supply
- Quality of Supply

Established in 1999, the EIUG is a voluntary, non-profit association of energy intensive consumers whose members currently account for over 40% of the electrical energy consumed in South Africa. Our members collectively contribute over 20% to the GDP of South Africa.

The EIUG has significant technical expertise on energy matters. It is a respected and non-partisan organisation dedicated to working towards a sustainable energy supply industry.

No of Companies



No of Employees Worldwide

1 186 543

No of Employees in South Africa

680 998

South African operations turnover

R809 601 013 043

%South African GDP

20,3% GDP

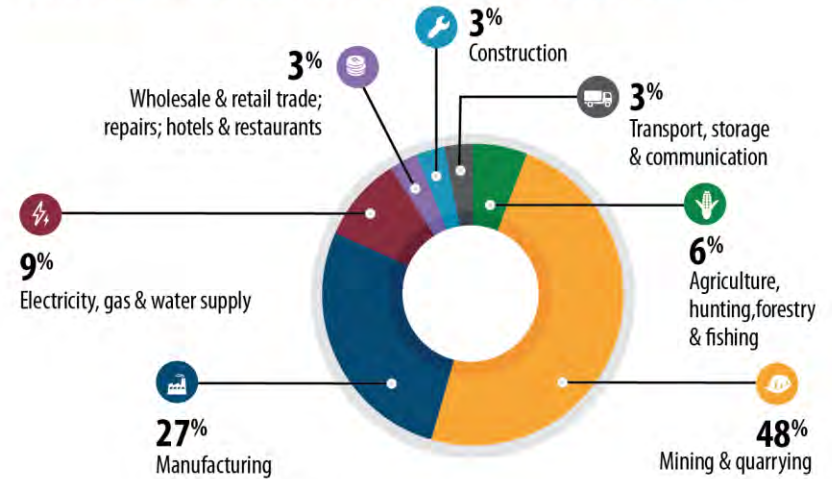
Energy Usage (in South Africa)

108 565 996 Mwh

% Members with EE Projects

67%

### CURRENT MEMBERS CONTRIBUTE TO THE FOLLOWING SECTORS:



There is no sector limitation for membership and we try get an as diverse array as possible

### ELECTRICITY COST AS % OF ANNUAL EXPENDITURE



100% = Total expenditure per sector



# IRP Consultation Process

The EIUG appreciates the opportunity to present at this stakeholder workshop, however we do not consider these workshops to constitute proper consultation, as they have given the public little time to review the plan.

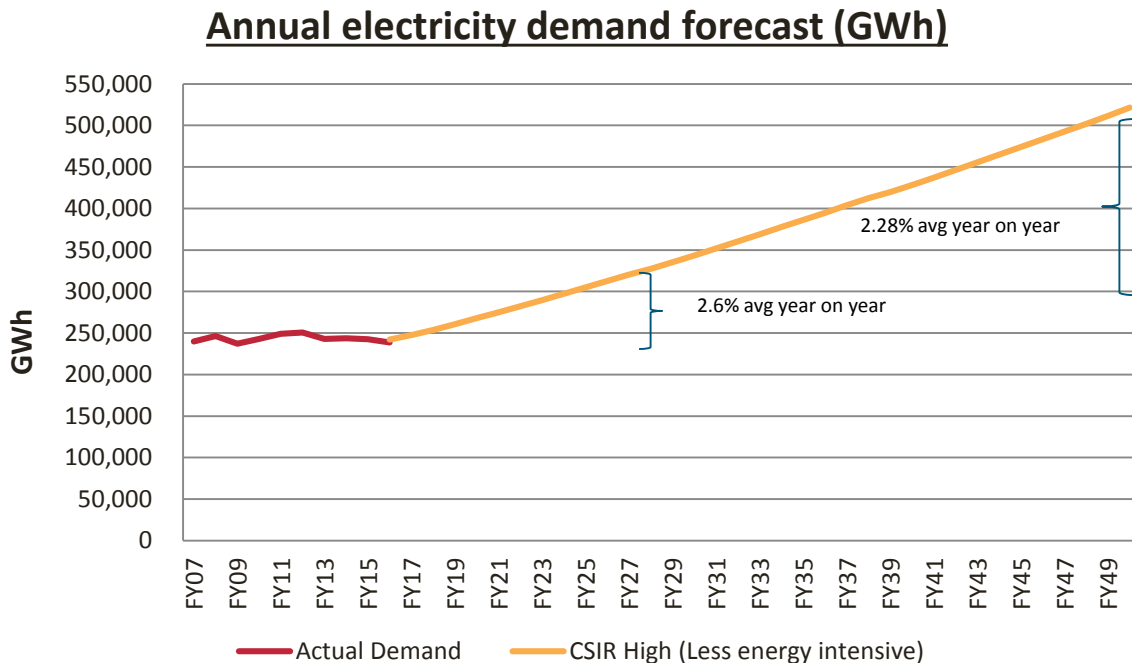
The EIUG feels that the plan requires proper consideration and will need more time to submit an informed response document. Therefore, the EIUG requests an extension to 31 March 2017 for the submission of comments on the IRP.

The EIUG believes that there must be consultations on the outputs of all current, proposed and accepted scenarios modelling work, and the potential basis and parameters for 'policy adjustment' to produce an actual plan. At least 60 days must be afforded for input on the scenarios. Once the draft policy-adjusted IRP is available, the public must have at least 30 days to provide comments thereon.

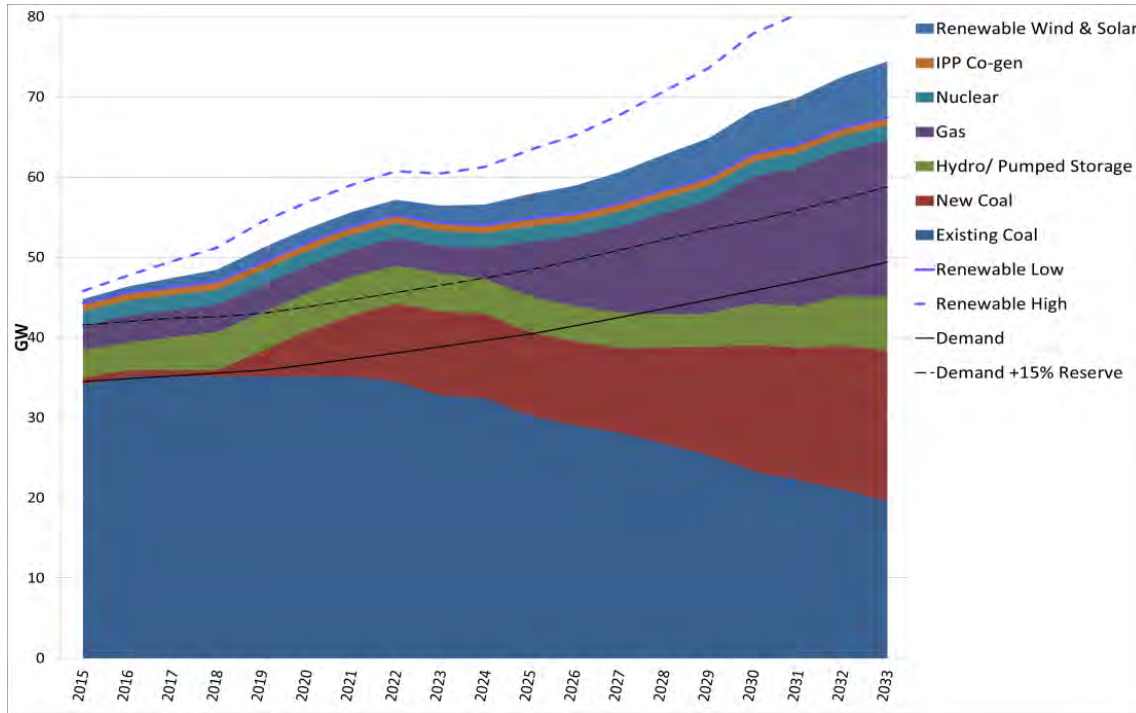
The EIUG requests that some indication of milestone dates is given for the published IRP Process, Stages and Deliverables.

# Demand Forecast

- South Africa's electricity demand has not grown since 2007, due largely to structural (not cyclical) changes in commodity markets, weak economic growth and improved energy efficiency.
- The lack of generation capacity was **not** the main reason for the drop off in demand, meaning the availability of new capacity will not automatically cause renewed demand growth.
- Although the IRP has a long-term outlook, the initial 2.6% average year on year demand growth assumption is optimistic, translating to a GDP growth of close to 5%.
- Over-building, leading to over-capacity will result in severe price increases, stifling further growth and triggering a negative spiral, where above inflation price increases and falling demand feed on each other.



# High Level Internal Analysis of Supply and Demand Outlook



Source: EIUG

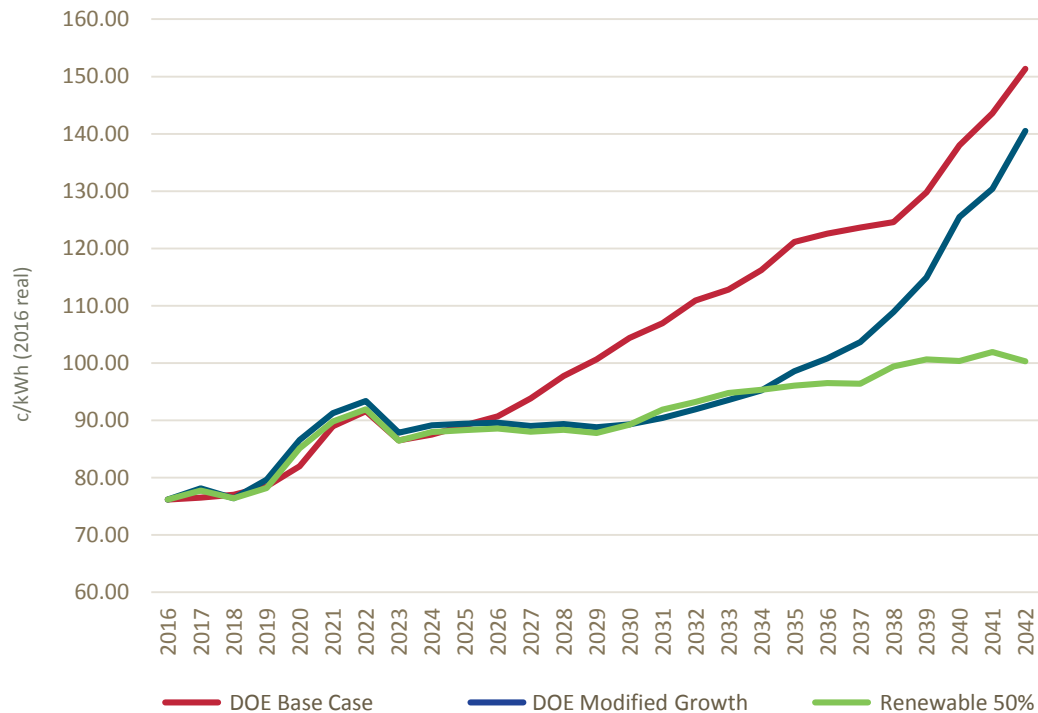
A first order internal analysis was done on the supply/demand outlook, based on information in the draft IRP Base Case as well as demand growth assumption of 1% YoY up to 2019, and 2% YoY onwards.

It confirms that the significant contributions from Medupi, Kusile and Ingula will lead to a surplus capacity situation for a period, and consequently there is no need for an urgent investment decision for further base load capacity in the short-term.

- The roll-out pace of new capacity must be appropriate to the demand.
- Modular technologies with shorter build times are more responsive to changes and allow for flexibility and diversification.

# Internal Analysis of the Base Case vs. Renewables

- DOE Base Case assumes DOE system growth figures of 2.7% p/a
- DOE Modified Growth and Renewable 50% both assume system growth of 1.33% p/a
- DOE Modified Growth uses the base case expansion, but investment is delayed because of the lower growth than the base case.
- All growth figures are energy growth.
- Renewable 50% assumes Bid Window 4 Expedited of the REIPPP figures for Renewables, and only Wind PV and OCGTs are scheduled.





# Costs and Risks

The EIUG is “technology agnostic” in the face of proven technologies. We are concerned with the reliability of supply and ensuring competitive pricing.

The IRP must use the most current, relevant and transparent data assumptions, especially on costs:

- The ratio of the cost of wind in Bid Window 4 Expedited of the REIPPP is 60% of that of coal in Bid Window 1 of the Coal IPPP. This reality is not reflected in the ratio of costs in the IRP of 93%.  
*(Least-cost electricity mix for South Africa until 2040 - Scenarios to guide the South African power system pathway – CSIR).*
- Carbon Pricing would increase the cost of fossil-fuel technologies and thereby make renewables more attractive options.
- The costs available for nuclear internationally vary greatly depending on the source, but are generally higher than that of other low-carbon options.
- Of all of the technology options, nuclear has the highest risk of cost and build-time overrun.

**There will be considerable consequences if the wrong decision is made. Analysis of the supply and demand outlook shows that we have time to make a least-regret investment decision**



# Conclusion and Preliminary Recommendations

## Conclusion

- The EIUG supports the transition to a lower-carbon economy, in a timeframe and manner with takes into account our developmental state and ensures competitiveness of our economy.
- The country needs reliable electricity supply at the lowest possible cost, delivered by a build plan using technologies that offer modularity and the flexibility to match the vagaries of demand.
- We must use this short time while we have sufficient capacity for modernization and optimization of the electricity supply and distribution system.

## Preliminary Recommendations

- There must be scenario/s with updated sensitivities with realistic demand forecasts and such must include unconstrained renewables.
- All scenarios must be based on current, relevant and transparent technology costs and a robust process to model the demand outlook.
- Water conservation and socio-economic impacts must also be considered in the policy adjusted scenarios.



# THANK YOU

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