



BLACK BUSINESS COUNCIL



**PORTFOLIO COMMITTEE
ON
ENERGY (PCE)**

**Hearing On The Draft Integrated Resource Plan 2018 (IRP) On
Friday, 26 October 2018 @10:00 In Committee Room, Goodhope
Chambers, Parliament**

22 OCTOBER 2018

**“THE PEOPLE’S IRP 2018-2050”
BY
THE BBC AND SAEF**

ABOUT US

We are a group of four black business organisations and other associate black interest groups that have vested interest in seeing an inclusive people's IRP (Integrated Resource Plan), the groupings are:

BBC – Black Business Council;

- BBC represents the interest of a federation of black businesses and business associations.

SAEF – South African Energy Forum;

- SAEF represents the interests of energy stakeholders across all energy technologies.

BEPA – Black Energy Professionals Association;

- BEPA represents the interests of black professionals and black SMME's in the energy sector.

NSBE – National Society of Black Engineers.

- NSBE represents the interests of black engineers across all engineering disciplines in South Africa and abroad.

The four organisations resolved to engage with the Department of Energy (“DOE”) Office and the honourable Minister of Energy; led by the Black Business Council. They have also resolved to extend an invitation to various stakeholders such as labour unions, Women in Energy SA, political parties, academic institutions, some State-owned entities and other interest groups to join in as part of a collective engagement in driving the adoption of a developmental energy policy (Integrated Resource Plan) for South Africa.

EXECUTIVE SUMMARY

The response first highlights general criteria for IRP formulation but importantly also outlines specific pertinent issues for South African IRP formulation. This was done to ensure that the context of the country as well as the line of sight with other policies is not lost during formulation of the policy.

The significant shortcomings with the Draft IRP2018-2030

- Misalignment with other energy related policies,
- Insufficient consideration for energy security,
- Inability to address Draft IRP2018-2030 transmission network implications and huge cost associated with it,
- Lack of transparency,
- Poor analysis of risk,
- Inaccurate and inconsistent costing analysis,
- Incapacity to drive sustainable job creation,
- Creation of ghost towns and thus stranded assets,
- Lack of ambition, concerning ignorance of the role of Eskom in the energy sector,
- Lack of consideration of south Africa's competitive advantage and industrialization ambitions to mention a few.

The response further expands on the context in which an IRP must be formulated by also highlighting the role of all applicable natural resources related to energy generation which South Africa has.

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BACKGROUND

The first IRP for South Africa IRP2010-2030 (IRP2010) was promulgated in March 2011. It was indicated at the time that the IRP should be a “living plan” which would be revised by the Department of Energy (DoE) every two years. The outcome of IRP2010-2018 energy mix based on the GDP growth of 3.5% is summarised in table 1 below:

	Total capacity		Capacity added (including committed) from 2010 to 2030		New (uncommitted) capacity options from 2010 to 2030	
	MW	%	MW	%	MW	%
Coal	41071	45.9	16383	29.0	6250	14.7
OCGT	7330	8.2	4930	8.7	3910	9.2
CCGT	2370	2.6	2370	4.2	2370	5.6
Pumped Storage	2912	3.3	1332	2.4	0	0.0
Nuclear	11400	12.7	9600	17.0	9600	22.6
Hydro	4759	5.3	2659	4.7	2609	6.1
Wind	9200	10.3	9200	16.3	8400	19.7
CSP	1200	1.3	1200	2.1	1000	2.4
PV	8400	9.4	8400	14.9	8400	19.7
Other	890	1.0	465	0.8	0	0.0
Total	89532		56539		42539	

BACKGROUND - Continued

The issued draft IRP 2018-2030 and proposed energy technology mix is shown below.

INTEGRATED RESOURCE PLAN 2018

	Coal	Nuclear	Hydro	Storage (Pumped Storage)	PV	Wind	CSP	Gas / Diesel	Other (CoGen, Biomass, Landfill)	Embedded Generation
2018	39 126	1 860	2 196	2 912	1 474	1 980	300	3 830	499	Unknown
2019	2 155					244	300			200
2020	1 433				114	300				200
2021	1 433				300	818				200
2022	711				400					200
2023	500									200
2024	500									200
2025					670	200				200
2026					1 000	1 500		2 250		200
2027					1 000	1 600		1 200		200
2028					1 000	1 600		1 800		200
2029					1 000	1 600		2 850		200
2030			2 500		1 000	1 600				200
TOTAL INSTALLED	33 847	1 860	4 696	2 912	7 958	11 442	600	11 930	499	2 600
Installed Capacity Mix (%)	44.6	2.5	6.2	3.8	10.5	15.1	0.9	15.7	0.7	
<p> Installed Capacity Committed / Already Contracted Capacity New Additional Capacity (IRP Update) Embedded Generation Capacity (Generation for own use allocation) </p>										

PROBLEM STATEMENT

It has been determined by the BBC and SAEF that the newly released Draft IRP2018-2030 has major shortcomings. The extent of the shortcomings are so significant that they could have serious implications for the developmental agenda of the country and efforts to improve socioeconomic conditions. It is also not forward-looking and not aligned to the aspirational aspects of the NDP, instead it displays lack of ambition by relying on past trends during a period when the country has been in an economic depression.

The Draft IRP2018-2030 is lacking in detail for a document of that importance and several conclusions/decisions were made without serious consideration of the context of the country, detailed risk analysis, accurate costing and transparency. The Draft IRP2018-2030 is also meant to be an update of IRP2010, however it appears to be a total overhaul and reflects lack of consultation with stakeholders in the process of compilation. The rationale and assumptions used to arrive at the conclusion and thus an energy mix are also flawed.

PURPOSE OF THIS REPORT

The main purpose of this document is to make a formal submission to the IRP 2018-2030. This is informed by the recognition that the Draft IRP2018-2030 has major deficiencies and also failed to address the following broad interventions that South African economy needs as follows:

Ensure Energy Security and Sovereignty of the State;	Minimize foreign exchange costs and unnecessary exposure to foreign currency;
Stimulate inclusive economic growth;	Ensure that the IRP serves the transformational agenda;
Drive sustainable job creation;	Ensure that the IRP serves the interests of a balanced public-private partnership agenda;
Conform to national, regional, and local development objectives;	Ensure South Africa's national and energy security by prioritising all locally available fuel sources e.g. coal, uranium, wind, sun, and biomass;
Ensure that all households and businesses have access to electricity services;	Promote and support mutually beneficial regional cooperation on energy and economic development;
Maintain reliability of supply;	Attract investment as per prescriptions of the White Paper on the Energy Policy of the Republic South Africa (1998) and the Integrated Energy Planning (IEP) which talks various technologies into account;
Minimize the short term or long-term economic cost of delivering electricity services or their equivalent;	IRP must enable the meaningful takeover of blacks and black companies in the energy sector;
Enhance energy security by minimizing the use of external resources (e.g. gas, wind turbines and solar mirrors);	Build capacity so that black companies can be tier 1 suppliers in the energy space by 2025.
  Provide local economic benefits; BLACK BUSINESS COUNCIL	8

IDEAL CRITERIA FOR IRP FORMULATION

General Guidelines and Objectives of the IRP Formulation

Additional guidelines for South African Specific IRP Formulation

Security of Supply

Minimizing Electricity Costs

Sustainable socio-economic development

Consideration for environmental Sustainability

Failure to address industrialisation and Black economic transformation

Stimulate inclusive economic growth

Promotion of diverse investment environment

SHORTCOMINGS/ANALYSIS OF THE DRAFT IRP2018-2030

Misalignment with the NDP	Insufficient consideration for energy demands up to 2025
Insufficient considerations for sustainable planning of megaprojects	Solution fails to address energy security
Lack of considerations for the electrification programme	No direct replacement of baseload
Lack of analysis of land implications of IRP2018-2030	Plant performance considerations
Global sentiments about renewable energy technologies	Insufficient Risk Considerations
Inaccurate/insufficient costs considerations	Lack of transparency
Failure to address RP2018 transmission network implication	Insufficient consideration for the context of the country
Insufficient analysis of impact of decommissioning coal plants	Total overhaul of policy without consultation
Electricity demand projections rationale	Inability to address risk related to high renewable penetration
Low capacity factor of renewable not sufficiently addressed.	Incapacity to drive sustainable job creation
ESKOM's role in the IRP is ignored.	Lack of local industry drive
Lack of consideration for SAPP/SADC energy pool plan	Understated consumption considerations as compared to similar industrialised countries
Lack of consideration for a developmental agenda	

THE ROLE OF ENERGY RESOURCES IN THE ECONOMY.

- **The role of mining**

- Value of coal in SA economy
- HELE or Clean Coal Development
- Uranium and Gold

- **The role of Renewables in RSA**

- Co-generation and Imbedded Generation
- Microgrid and Rooftop PV

- **The role of nuclear in RSA**

- Nuclear value chain
- Employment profile in nuclear sector

CONCLUSIONS

Based on the analysis and comments made by the represented groups and associates above, it is a conceived view that the current draft IRP2018 is biased towards imported renewable energy. The IRP2018 is very vague and it is likely to be subjected to continuous manipulation because there are still critical pending studies to be conducted to complete the risk assessment.

- It is forcing a non-developmental direction of the economy in the long term
- There is misalignment between the IRP2018 with the objectives of the NDP2030 and is likely to escalate the deteriorating socio-economic issues and hamper transformation.
- The IRP2018 only addresses a few of the key elements of IRP objectives set out in the introduction section of this document above.
- This in essence will risk investor confidence into South Africa and for them to make necessary preparation plans to invest in our economy.
- This preparation concerns also affects the education system, local industry and indirect investors like property developers, infrastructure and secondary related industries.

The revised Draft IRP2018-2030 must be reviewed to incorporate all relevant technologies in the needed energy mix and must present a balance view to secure realistic energy security of supply infused with specific goals of the NDP2030 which includes industrialization, technology transfer, job creation and socio-economic development and others. All the deficiencies as outlined in documents must be adequately addressed in the final IRP2018-2030.

RECOMMENDATIONS AND THE WAY FORWARD

All comments above must be investigated in detail by the DOE Draft IRP2018 team and to include in its analysis full IRP objectives stated above for it to achieve a holistic electricity planning approach. In addition to considering all the deficiency in the Draft IRP2018-2030 raised in this document, the following recommendations are made

		2018		2030		2040		2050	
Technology	CF	%	GW	%	GW	%	GW	%	GW
Renewable-Gas	40%	14.92%	8.08	26.81%	21.73	32.29%	34.73	26.75%	34.92
Hydro-Storage	60%	9.41%	5.1	9.39%	7.61	8.47%	9.11	6.98%	9.11
Coal	80%	72.24%	39.13	56.58%	45.86	42.64%	45.86	42.64%	55.66
Nuclear	90%	3.43%	1.86	7.23%	5.86	16.60%	17.86	23.64%	30.86
Total		100%	54.17	100%	81.06	100%	107.56	100%	130.55

RECOMMENDATIONS AND THE WAY FORWARD

The recommended “all technology inclusive” People’s IRP 2018-2050 is shown below :

	Coal (MW)	Nuclear (MW)	Hydro (MW)	Storage (MW)	PV (MW)	Wind (MW)	CSP (MW)	Gas/Diesel (MW)	Other (MW)	Embedded Generation (MW)
2018	39 126	1 860	2 196	2912	1 474	1 980	300	3 830	499	Unknown
2019	2 155					244	300			200
2020	1 433				114	300				200
2021	1 433				300	818				200
2022	711				400					200
2023	500									200
2024	500									200
2025					670	200				200
2026					1 000	1 000				200
2027					1 000			600		200
2028					1 000	1 375		900		200
2029					1 000			1 425		200
2030		4 000	2 500		1 000					200
2031										
2032		3 000						2 000		
2033					1 000					
2034								3 000		
2035		3 000								
2036					1 000					
2037				1 500		1 500				
2038		3 000								
2039					1 000			3 000		
2040		3 000							500	
2041								1 000		
2042		3 000			1 000					
2043										
2044		3 000								
2045	4 900							2 000		
2046		3 000								
2047										
2048		4 000								
2049	4 900							3 000		
2050										
New Capacity	10 800	29 000	2 500	1 500	9 484	5 437	300	10 925	500	2 600
TOTAL INSTALLED	55 658	30 860	4 696	4 412	10 958	7 417	600	14 755	999	2 600
Percentage	42.70%	23.67%	3.60%	3.38%	8.41%	5.69%	0.46%	11.32%	0.77%	

THE END

THANK YOU