

The Honourable Minister Jeff Radebe  
Minister of Energy  
Department of Energy  
Care of the Acting Director General  
Per email: [tseliso.maqubela@energy.gov.za](mailto:tseliso.maqubela@energy.gov.za)  
[thembeke.zuma@energy.gov.za](mailto:thembeke.zuma@energy.gov.za)

Copy to:  
Mr. Tseliso Maqubela  
Acting Director General  
Department of Energy  
Per email: [tseliso.maqubela@energy.gov.za](mailto:tseliso.maqubela@energy.gov.za)  
[thembeke.zuma@energy.gov.za](mailto:thembeke.zuma@energy.gov.za)

28 February 2018

Dear Honourable Minister Jeff Radebe

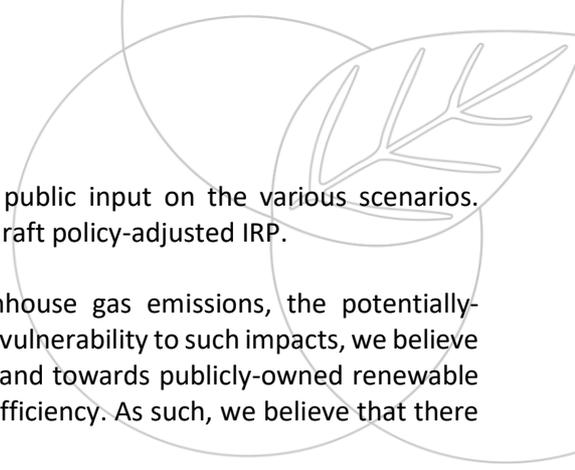
## **INTRODUCTION TO THE LIFE AFTER COAL CAMPAIGN AND REQUEST FOR A MEETING REGARDING SOUTH AFRICA'S ENERGY FUTURE**

### **Introduction**

1. We address you on behalf of the **Life After Coal/Impilo Ngaphandle Kwamalahle** Campaign (made up of the Centre for Environmental Rights (CER), groundWork (gW), and Earthlife Africa, Johannesburg (ELA)).<sup>1</sup> We and our clients all work with communities throughout South Africa who are impacted by coal. The campaign aims to discourage investment in new coal-fired power stations and mines; accelerate the retirement of South Africa's coal infrastructure; and enable a just transition to renewable energy systems for the people.
2. The Life After Coal Campaign writes to congratulate you on your appointment as Minister of Energy. We believe that the Energy Ministry is of critical importance in determining future energy security for all the people in our country, and supporting the just transition to a low-carbon future; specifically how South Africa meets the need to provide clean, healthy and affordable energy to the poor, while ensuring that South Africa reduces its greenhouse gas emissions. We believe these two objectives are complementary and we look forward to a robust engagement with you on these and other issues.
3. We also write to request a meeting with you in order to discuss the importance of the Integrated Energy Plan (IEP) and Integrated Resource Plan for Electricity (IRP), and the energy trajectory of the country.
4. As you are aware, the country's first energy plan (the IEP), and a much-delayed update of the country's electricity plan (the IRP) are already underway. To date, there has only been one opportunity for the public to provide input into the IEP and IRP, which were made available for comment in November 2016 – on the draft base case and assumptions for the IRP and on the draft IEP. It is submitted that, similar to the approach followed when the IRP 2010 was published, a revised base-case – which has regard to the public comments - must be made available for

---

<sup>1</sup> Website available at <https://lifeaftercoal.org.za/>.



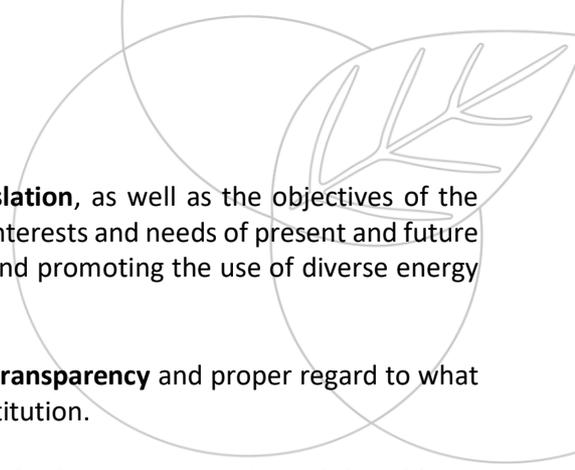
public comment; whereafter, there must also be an opportunity for public input on the various scenarios. Thereafter, there should also be an opportunity for public input on the draft policy-adjusted IRP.

5. Given South Africa's exceptionally high contribution to global greenhouse gas emissions, the potentially-catastrophic implications of climate change, and South Africa's particular vulnerability to such impacts, we believe that urgent steps to ensure a rapid, but just transition away from coal and towards publicly-owned renewable energy are required, combined with serious efforts to improve energy efficiency. As such, we believe that there are eleven key principles that the IRP should adhere to, **at a minimum**:
  - 5.1 It must **promote the realisation of the fundamental human rights in the Constitution**, in particular the rights: to an environment not harmful to health or well-being, and to have the environment protected for the benefit of present and future generations (section 24); to equality (section 9); to human dignity (section 10); to life (section 11); of access to information (section 32); and to access to food and water (section 27). In this regard, there must be a full assessment into the impacts of different technology and energy source choices on these constitutional rights.
  - 5.2 The Base Case scenario should be **the least cost combination of technologies** to achieve South Africa's electricity requirements. After that, policy adjustments and constrained scenarios can be run, but any deviation from the least cost should be made public and fully explained, so that policy-makers and the public are able to make a value-for-money assessment of the deviation.<sup>2</sup>
  - 5.3 It must take **full account of the external costs** of the different technologies, ensuring that all external costs to human health, the environment, and the climate are factored into cost calculations in respect of different technology options.<sup>3</sup>
  - 5.4 It must be **based on only the latest, accurate projections and input data**, including data on South Africa's GDP, electricity demand (with proper consideration of improved energy efficiency and grid deflection), and technology cost and price comparisons.
  - 5.5 It must clearly indicate and **explain all assumptions on which all modelling is based**, and it must verify and reference all sources of information, findings and conclusions; including those regarding job creation; GDP forecasts; energy-intensity; learning rates; and costs of different technology options.
  - 5.6 It must **not arbitrarily constrain or limit renewable energy projections and investments**.
  - 5.7 It must be **based on the latest scientific information and international best practice**, including the latest scientific conclusions on climate change, which clearly indicate that keeping global temperature rise to below 1.5 degrees Celsius is critical to avoid catastrophic climate change.
  - 5.8 The electricity sector carbon constraint must be derived from **integrated, full sector energy planning**. It must, at a bare minimum, take into account South Africa's mitigation commitments in its Nationally Determined Contribution (NDC) under the Paris Agreement and **be consistent with South Africa's current and likely future obligations under the Paris Agreement and the United Nations Framework Convention on Climate Change, as well as South Africa's National Climate Change Response Policy**. The NDC commitments must not be modelled as a potential future scenario, but as an **existing** commitment, with which South Africa has undertaken to comply. It must also take into account that South Africa will need to submit stricter and more rigorous mitigation commitments in its NDC every 5 years. It should take into account that decarbonising the electricity sector is the lowest cost mitigation option for the country to meet these international commitments.
  - 5.9 It must be **consistent with South Africa's other international obligations**, including the Convention on Biological Diversity, the international law obligations to avoid transboundary air pollution and regional water treaties.
  - 5.10 It must **take into account the international move away from fossil fuels and nuclear power** and the financial implications of future stranded assets, the loss of agricultural land and water resources due to coal mining, the cost of decommissioning and the rehabilitation of land of coal plants, and of nuclear decommissioning costs – including the implications of managing the long-term risk of nuclear waste – as a result of proceeding with plans for future new coal and nuclear projects.

---

<sup>2</sup> [https://cer.org.za/news/joint-media-release-what-we-expect-from-sas-integrated-resource-plan-for-electricity#\\_ftn1](https://cer.org.za/news/joint-media-release-what-we-expect-from-sas-integrated-resource-plan-for-electricity#_ftn1).

<sup>3</sup> [https://cer.org.za/news/joint-media-release-what-we-expect-from-sas-integrated-resource-plan-for-electricity#\\_ftn2](https://cer.org.za/news/joint-media-release-what-we-expect-from-sas-integrated-resource-plan-for-electricity#_ftn2).

- 
- 5.11 It must be **consistent with the requirements of national legislation**, as well as the objectives of the Electricity Regulation Act, 4 of 2006 including ensuring that the interests and needs of present and future electricity customers and end users are safeguarded and met, and promoting the use of diverse energy sources and energy efficiency.
6. We point out that decisions on our energy mix must be taken with **full transparency** and proper regard to what is in the **best interest of all South Africans**, in accordance with the Constitution.
7. In addition, there is simply **no need for new coal or nuclear power in South Africa's energy mix**, and the addition of such sources would, we argue, make the new IRP unreasonable, irrational, and unconstitutional. The Minister must give serious consideration to the negative impacts of the coal supply chain and combustion on human health, the environment (including our scarce and stressed water resources), global climate change, and the economy. Any version of the IRP Update which contains new coal or nuclear power: will not provide South Africa with least-cost electricity, will not promote social and environmental justice, will not uphold and protect the health and wellbeing of South Africans, and will not enable South Africa to meet its international climate change obligations.
8. In this regard, we bring your attention to a recent study by Meridian Economics, titled "*Eskom's Financial Crisis and the Viability of Coal-Fired Power in South Africa*" ("the Meridian study"),<sup>4</sup> which looks into several possible strategies to assist with ameliorating Eskom's critical financial challenges. The findings of the Meridian study are, *inter alia*, that:
- 8.1 Eskom's inflexible construction programme has now resulted in a significant and growing surplus of expensive generation capacity;
  - 8.2 **Eskom should accelerate the decommissioning of 3 of its older coal-fired power stations (Hendrina, Grootvlei, and Komati) and curtail the completion of Kusile units 5 and 6 in order to save costs;**
  - 8.3 **these interventions can be achieved without affecting security of supply;**
  - 8.4 **these interventions could save Eskom up to R17 billion;**
  - 8.5 these estimates do not reflect the additional large savings in the impact on human health (for example, the health costs of Eskom's coal-fired power stations has been estimated to be USD 2,372.78 million annually<sup>5</sup>), local environment, and climate change that will result; and
  - 8.6 the system analysis undertaken by the Council for Scientific and Industrial Research (CSIR) Energy Centre – used for the study's reference scenario - finds in a 34 year, least-cost optimised, power system operation and expansion plan, no new coal-fired power capacity is built after Kusile, and no new nuclear plant is built either. It states, "*new coal and nuclear plants are simply no longer competitive. When new capacity is required, demand is met at lowest cost primarily from new solar [photovoltaic] and wind*"<sup>6</sup>.
9. The Meridian study also points out that part of the savings – if Eskom were to implement the above measures - could be used to cushion the impact on workers and communities by providing support for re-training, skills development and relocation.
10. In relation to the draft IRP and the need to evolve beyond a coal-dominated electricity mix, we also highlight the formal comments submitted by the CSIR on the IRP Update Assumptions, Base Case and Observations.<sup>7</sup> Although LAC did criticise the failure of this alternative IRP to take adequate account of the health and water costs of

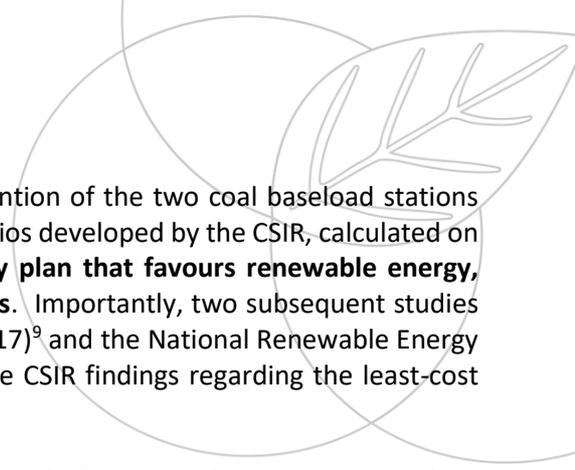
---

<sup>4</sup> A study by Grové Steyn, Jesse Burton, Marco Steenkamp, 15 November 2017, available at [http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskoms-financial-crisis-and-the-viability-of-coalfired-power-in-SA\\_ME\\_20171115.pdf](http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskoms-financial-crisis-and-the-viability-of-coalfired-power-in-SA_ME_20171115.pdf).

<sup>5</sup> P15, Health impacts of coal fired power plants in South Africa, Dr Mike Holland, available at <http://www.groundwork.org.za/Documents/AirQuality/Annexure%20Health%20impacts%20of%20coal%20fired%20generation%20in%20South%20Africa%20310317.pdf>.

<sup>6</sup> P3, Executive Summary, Meridian study.

<sup>7</sup> [https://www.csir.co.za/sites/default/files/Documents/20170331CSIR\\_EC\\_DOE.pdf](https://www.csir.co.za/sites/default/files/Documents/20170331CSIR_EC_DOE.pdf)



existing and new investments in coal,<sup>8</sup> and strongly objects to the retention of the two coal baseload stations (Thabametsi and Khanyisa) in the baseline energy model, the two scenarios developed by the CSIR, calculated on the basis of “least cost” and “decarbonised”, **both result in an energy plan that favours renewable energy, supplemented by storage and gas – with no new coal or nuclear plants.** Importantly, two subsequent studies by the Frankfurt Institute for Advanced Studies in Germany (October 2017)<sup>9</sup> and the National Renewable Energy Laboratory (November 2017)<sup>10</sup> provide independent confirmation of the CSIR findings regarding the least-cost electricity mix for South Africa.

11. **Eskom’s own IRP modelling team** compiled a “2017 IRP Scenarios Report”, which produced 5 scenarios, and **does not recommend new coal or nuclear power as part of a least-cost electricity option.**<sup>11</sup>
12. This demonstrates that, with an international move away from fossil fuels<sup>12</sup> and nuclear power, and the financial implications of future stranded assets, as well as alternative least-cost renewable energy technology available, large-scale coal-fired power stations are not in the best interest of the people of South Africa. Eskom is already dependent on tariff increases that are well-above inflation and Regulatory Clearing Account applications, quite apart from the capital injections Medupi and Kusile will require during their respective lifespans, and the on-going costs of mandatory maintenance for stations and retrofits required for emission abatement. We believe that Eskom should actively plan, together with its workers, for a just transition to renewable energy, rather than risk stranding the workforce, along with redundant coal-fired plants and associated coal mines.
13. We contend that a rapid, but just transition from coal to renewable energy is urgently needed in South Africa. In addition, we would like to see Eskom transformed into a thriving organ of state that promotes clean, healthy, affordable energy for everyone – becoming the owner of significant renewable energy assets in the interest of all, of cheap, clean electricity for South Africans, including increased free basic electricity, and support for local and community ownership of renewable energy facilities.
14. We look forward to engaging with the National Planning Commission’s Energy document, and both gW and CER have been invited to attend the first Just Transition Social Partner dialogue.

## Conclusion

15. We appreciate the enormity of the important task before you. We would appreciate an opportunity to meet with you, at your convenience, to discuss the content of this letter. To this end, please provide us with possible dates and timeslots for such meeting.
16. We are also in a position to provide you with further information on any aspect of this correspondence.
17. We look forward to your response.

---

<sup>8</sup> <https://cer.org.za/news/joint-media-release-cost-of-health-and-water-impacts-of-coal-still-missing-from-energy-plans>

<sup>9</sup> Investment and operation co-optimization of integrating wind and solar in South Africa at high spatial and temporal detail, by Jonas Hörsch and Joanne Calitz, available at <https://arxiv.org/pdf/1710.11199.pdf> .

<sup>7</sup> <http://www.ee.co.za/article/alarmed-picture-emerges-eskoms-liquidity-dries.html>.

<sup>10</sup> Preliminary Findings of the South Africa Power System Capacity Expansion and Operational Model Study Erol Chartan, Tim Reber, and Gregory Brinkman available at <https://www.nrel.gov/docs/fy18osti/70319.pdf>

<sup>11</sup> <http://www.ee.co.za/wp-content/uploads/2017/12/Eskom-IRP-2017-study-report-for-DoE-November-2017.pdf>.

<sup>12</sup> For example, the French government is one of the countries to announce a plan to shut down all of its coal-fired power plants to be coal-free by 2021. See <https://futurism.com/france-officially-shutting-coal-fired-power-plants-three-years/>

Yours sincerely

The Life After Coal Campaign (made up of groundWork, the Centre for Environmental Rights and Earthlife Africa, Johannesburg)

per:



**Robyn Hugo**  
**Attorney and Programme Head:**  
**Pollution & Climate Change**  
Centre for Environmental Rights  
[rhugo@cer.org.za](mailto:rhugo@cer.org.za)

**Makoma Lekalakala**  
**Director**  
**Earthlife Africa Johannesburg**  
[makoma@earthlife.org.za](mailto:makoma@earthlife.org.za)

**Bobby Peek**  
**Director**  
**groundWork**  
[bobby@groundwork.org.za](mailto:bobby@groundwork.org.za)