



# Centre for Environmental Rights

Advancing Environmental Rights in South Africa

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Our ref: RH/NL  
27 November 2017

Dear Sirs

## RELEVANT INFORMATION CONCERNING ESKOM – A STUDY BY MERIDIAN ECONOMICS

1. We address you on behalf of the [Life After Coal/Impilo Ngaphandle Kwamalahle Campaign](#)<sup>1</sup> (made up of the [Centre for Environmental Rights \(CER\)](#), [groundWork](#) and [Earthlife Africa Johannesburg](#)).

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<sup>1</sup> 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.

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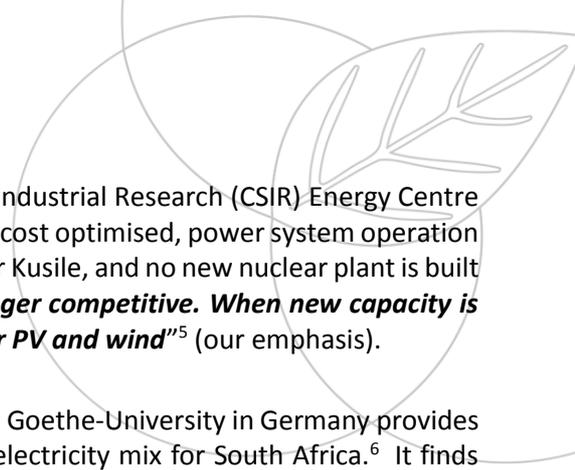
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2. We write to you following the air quality colloquium hosted by the Portfolio Committee in September 2017, as well as the 2 day workshop on compliance with the minimum emission standards (MES) held on 7 and 8 November 2017.<sup>2</sup>
  3. During both meetings, some of the following issues were discussed and brought to the attention of the Portfolio Committee:
    - 3.1. Eskom's postponements for compliance with the MES and Eskom's plans to apply for further postponements;
    - 3.2. exceedances and non-compliance with the ambient air quality standards, particularly in the Highveld Priority Area, and the significant impacts of this air pollution on people's health and constitutional rights. See, for example, the Broken Promises report and the report of Dr Mike Holland commissioned by groundWork; and
    - 3.3. the decommissioning of Eskom's ageing power stations, which are now nearing the ends of their 50 year life-spans. Despite this, you will recall that Eskom indicated that it intends to extend the plant lives to 60 years.
  4. We wish to bring to your attention the findings of a recent study which was referred to in the CER's presentation at the MES workshop. The study, by Meridian Economics, is titled "Eskom's Financial Crisis and the Viability of Coal-Fired Power in South Africa" ("the Meridian study"),<sup>3</sup> which looks into several possible strategies to assist with ameliorating Eskom's critical financial challenges. It investigates two questions:
    - 4.1. should Eskom cancel part of its power station construction programme to reduce costs; and
    - 4.2. should Eskom bring forward the decommissioning of some of its older coal power stations to reduce costs?
  5. The findings of the Meridian study are *inter alia* that:
    - 5.1. Eskom's inflexible construction programme has now resulted in a significant and growing surplus of expensive generation capacity;
    - 5.2. 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;**
    - 5.3. these interventions can be achieved **without affecting security of supply;**
    - 5.4. these interventions could **save Eskom up to R17 billion;**
    - 5.5. these estimates **do not reflect the additional large savings** in the impact on human health (you will recall that groundWork study by Dr Holland estimated the health costs of Eskom's coal-fired power stations to be USD 2,372.78 annually<sup>4</sup>), local environment and climate change that will result; and

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<sup>2</sup> The meeting notes and presentations are available here <https://pmg.org.za/committee-meeting/25436/> (day 1) and <https://pmg.org.za/committee-meeting/25456/> (day 2).

<sup>3</sup> A study by Grové Steyn, Jesse Burton, Marco Steenkamp, 15 November 2017, available at [http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskom-s-financial-crisis-and-the-viability-of-coalfired-power-in-SA\\_ME\\_20171115.pdf](http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskom-s-financial-crisis-and-the-viability-of-coalfired-power-in-SA_ME_20171115.pdf).

<sup>4</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>.

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- 5.6. 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 PV and wind**”<sup>5</sup> (our emphasis).
6. A further new study by the Frankfurt Institute for Advanced Studies at the Goethe-University in Germany provides independent confirmation of the CSIR findings regarding the least-cost electricity mix for South Africa.<sup>6</sup> It finds that an electricity system based on wind and solar PV can supply electricity demand at 10%-30% more cheaply than based on new coal and nuclear – this is the case even when investments in the grid and transmission of electricity are taken into account. This study places it beyond any scientific doubt, from a cost perspective: no new coal or new nuclear should ever be built in South Africa again.
7. Both studies emerge amidst recent reports on Eskom’s present dire financial circumstances.<sup>7</sup> Meridian finds that an even greater curtailment of Eskom’s construction programme might be necessary if Eskom’s financial crisis continues to worsen.
8. It is also worth noting that the Meridian study finds 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.
9. In our presentation at the MES workshop,<sup>8</sup> we explained that there is good reason to believe that Eskom – in respect of some of its stations - is presently not complying with even the postponed emission standards. It is also evident that Eskom plans to seek further postponements for compliance with the MES. We again emphasise that if Eskom cannot comply with the MES or the standards in its atmospheric emission licences (AELs), then it must decommission those stations (at the very least, it should have a plan for decommissioning, which it does not).
10. The Meridian study shows that decommissioning Hendrina, Komati, and Grootvlei and abandoning 2 units of the new Kusile plant under construction would not only have no impact on South Africa’s security of electricity supply, but it would also save Eskom up to R17 billion. Decommissioning these 3 power stations would undoubtedly result in a significant improvement of the air quality on the Highveld and therefore on the health and wellbeing of those people living there. It is of the utmost importance that serious consideration be given to the findings of the Meridian study and that these recommendations be put into effect.
11. In the MES workshop of November 2017 it was stated that a follow-up workshop would be arranged for February 2018. We look forward to receiving further details on this and hope to have a further opportunity to present to the Portfolio Committee on these critical issues.
12. Please advise should you require any further information on the Meridian study or otherwise, and kindly circulate this letter to all the Portfolio Committee members.

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<sup>5</sup> P3, Executive Summary, Meridian study.

<sup>6</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>8</sup> The powerpoint presentation can be accessed here <http://pmsg.org.za/files/171107CER.pptx> , and copies were provided to the Portfolio Committee at the workshop.

Yours faithfully  
**CENTRE FOR ENVIRONMENTAL RIGHTS**

per: 

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