

The Honourable Minister Edna Molewa
Minister of Environmental Affairs

Per email: minister@environment.gov.za

Copied to:

Ms Nosipho Ngcaba

Director-General

Department of Environmental Affairs

By email: dg@environment.gov.za

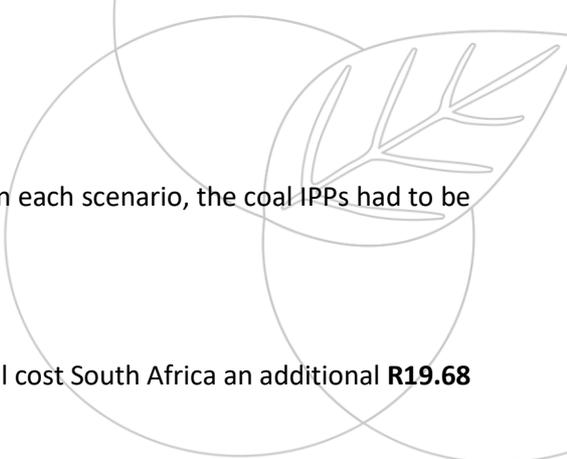
4 June 2018

Dear Honourable Minister Edna Molewa

RELEVANT INFORMATION CONCERNING THE COAL IPPS – A STUDY BY THE ENERGY RESEARCH CENTRE

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)).¹
2. The Life After Coal 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.
3. In light of these objectives, you are aware of our continued efforts to oppose – through litigation and advocacy – all new coal-fired power stations, which include the two preferred bidders under the Coal Baseload independent power producer (IPP) Procurement Programme i.e. the Thabametsi independent power producer (IPP) coal-fired power station ("**Thabametsi**") and the Khanyisa IPP coal-fired power station ("**Khanyisa**"). You will also be aware of the pending legal proceedings in the High Court challenging the environmental authorisations of both stations.
4. Our campaign's opposition is founded on the significant social, environmental and financial impacts that these projects will have, should they be allowed to proceed. To further substantiate these arguments, we refer you to an important report recently published by the University of Cape Town's Energy Research Centre (ERC) entitled "*An assessment of new coal plants in South Africa's electricity future: the cost, emissions and supply security implications of the coal IPP programme*" ("**the ERC report**"). A copy of this report is attached.
5. The ERC report models several scenarios for an assessment of the effects of building the two coal IPP preferred bidders – Thabametsi (at 557MW) and Khanyisa (at 300MW) – compared to a future electricity build plan that excludes them. The modelling investigates: supply security; the cost implications of the inclusion of the coal IPPs on the system relative to cheaper alternatives; and the emission 'lock-in' from the plants and the effects this has on South Africa meeting its long-term climate change commitments. According to the report, since a least-cost

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



electricity build plan for South Africa **does not include new coal plants**, in each scenario, the coal IPPs had to be forced into the model in order to compare the effects on the system.

6. The findings of the ERC report are, *inter alia*, that:
 - 6.1 the proposed Thabametsi and Khanyisa coal-fired power stations will cost South Africa an additional **R19.68 billion** in comparison to a least-cost energy system;
 - 6.2 the coal IPPs are not needed to meet South Africa's medium-term electricity demand, as alternate electricity sources i.e. wind, solar, and flexible gas generation are more economical; and
 - 6.3 the coal IPPs will increase greenhouse gas (GHG) emissions by **205,7Mt CO₂eq** over the 30 year period of the power purchase agreements. This would **negate the government's GHG emission mitigation plans and efforts, including the expected savings of the entire Energy Efficiency Strategy to 2050. Even in a best-case scenario for the coal IPPs (with GHG emissions curtailed as far as possible), the two coal IPPs would still negate the emissions saved under the carbon tax** and frustrate South Africa's commitments under the Paris Agreement, through **raising the costs of mitigation technology and requiring significant GHG emission reductions in the power and other sectors.**
7. In short, the ERC report finds that the inclusion of the coal IPPs in South Africa's electricity build plan raises the total system costs compared to a scenario without the coal IPPs. Similarly, in all scenarios, the coal IPPs increase GHG emissions. These increases, both in costs and in GHG emissions, are significant. We note that the Department is currently in the process of developing numerous climate plans and policies to mitigate GHG emissions. The ERC report shows that **these two coal-fired power stations could severely undermine and jeopardise these plans and efforts – effectively rendering them redundant.**
8. The ERC report includes a scenario that assesses the impact of building the coal IPPs in a case where South Africa also meets the low-PPD emissions constraint to 2050 at the lowest system cost. Meeting low-PPD requires even more rapid decarbonisation of the electricity sector, as well as increased mitigation in other sectors. According to the report, “[w]hen the coal IPPs are forced into the electricity build plan, this results in decreased use of existing coal plants (which are also cheaper than the coal IPPs), which puts raises costs overall and puts Eskom at risk. As more of the emissions ‘budget’ is used in the electricity sector, this requires either increased mitigation in the power sector through stranding existing coal assets in the later years of the modelling horizon, or increased mitigation in non-electricity sectors (where mitigation is typically costlier than in the power sector)”.² When this scenario is applied, Eskom's Kusile power station is stranded by 2050.³ The report states that “substantial savings come from the electricity sector, which has relatively cheaper mitigation options compared to other sectors (such as industry). It is important to note that, to meet the low-PPD budget with current technology options already requires that the existing coal plants are run at lower load factors to 2050, i.e. there is stranded capacity in the sector”.⁴
9. Also in relation to Eskom, the ERC report states that “(n)ot only are the coal IPPs not required to meet demand, and not only do they raise costs, and increase emissions, but they also **result in increasing pressure on Eskom. Building new coal plants in a situation of low demand means reducing the output of Eskom's fleet, potentially accelerating the ‘utility death spiral’ in which Eskom already finds itself and putting the electricity supply industry – and thus the South African economy – at risk**” (emphasis added).⁵
10. ERC concludes that “the implications of these findings are clear. South Africa is currently facing a large surplus in generation capacity, in particular inflexible base supply capacity. Eskom is facing a financial crisis and rising

² P17, ERC report.

³ P30, ERC report.

⁴ P30, ERC report.

⁵ P8, ERC report.

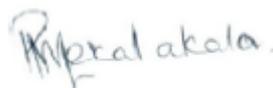
electricity prices will drive consumers away from the utility. Investments that unnecessarily increase costs in the electricity sector should be avoided”.

11. The ERC report is further evidence of the position held by Life After Coal Campaign – that Thabametsi and Khanyisa are highly risky and harmful projects, both financially and environmentally. To further elaborate:
 - 11.1 both power stations will have significant and irreversible impacts for water, air, and our climate. They will use large volumes of scarce water needed by communities and also put South Africa’s already-vulnerable water resources at a high risk of pollution;
 - 11.2 due to the technology proposed for both plants – these projects are incredibly GHG-emission intensive, with an emission intensity almost 60% higher than Eskom’s Medupi and Kusile;
 - 11.3 these coal IPP projects do not provide a non-replaceable economic benefit. If and when additional electricity is needed, it would be preferable – and reasonable – to procure more renewable energy capacity, which would provide more jobs and clean and cheap electricity; and
 - 11.4 South Africa does not need new coal-fired power capacity. These power stations will simply increase the costs of electricity for consumers. The coal IPP price of R1.03 per kilowatt hour is significantly more expensive than the latest renewable IPPs.
12. In light of the findings above, as well as the significant health impacts of coal-fired power stations, we wish to reiterate that issuing environmental authorisations and licences to these projects is not reasonable or justifiable and will continue to be met with significant opposition from civil society.
13. We would be happy to discuss these findings in further detail, or to provide any additional information that you may require in relation to the ERC report.

Yours faithfully



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