



# Centre for Environmental Rights

Advancing Environmental Rights in South Africa

**Honourable MP Mapulane**

**Chairperson**

Portfolio Committee on Environmental Affairs

c/o Ms Tyhileka Madubela

Coordinator: Portfolio Committee on Environmental Affairs

By email: [tmadubela@parliament.gov.za](mailto:tmadubela@parliament.gov.za)

Our ref: RH/NL

22 May 2018

Dear Honorable Mapulane

## RELEVANT INFORMATION ON THE COAL INDEPENDENT POWER PRODUCERS (IPPS)

1. We refer to the scheduled briefing of the Portfolio Committee by the Department of Environmental Affairs (DEA) on *"the approval of two independent coal producers and implications thereof for the attainment of NDCs"* scheduled to take place tomorrow, 23 May 2018.
2. We wish to place relevant information on the coal IPPs before the Portfolio Committee, in particular the 2 coal IPPs, which have been appointed preferred bidders under the first bid window of the Coal Baseload IPP Procurement Programme, these being Thabametsi (1200MW to be based near Lephalale, Limpopo) and Khanyisa (600MW to be based near eMalahleni, Mpumalanga).
3. These 2 IPPs are among about 14 coal IPPs, which have, in the last few years, applied for environmental authorisations. As it stands, 6 IPPs have been issued with environmental authorisations by DEA, of which we are aware. It is not yet known if and when a further bid window will be opened by the Department of Energy (DoE), within which these additional coal IPPs could bid.
4. We, on behalf of clients Earthlife Africa<sup>1</sup> and groundWork<sup>2</sup> have opposed the environmental authorisations and other licence applications for some of these IPPs, and have instituted review proceedings in the High Court to challenge the environmental authorisations for 3 of them, namely Thabametsi, Khanyisa, and KiPower (600MW to be based near Delmas, Mpumalanga).
5. In terms of the Coal Baseload IPP Procurement Programme Request for Proposals, any legal disputes in relation to the required environmental authorisations must be resolved in order for a preferred bidder to reach commercial

---

<sup>1</sup> Earthlife Africa Johannesburg is a registered non-profit company with registration number 2017/449921/08 that seeks to encourage and support individuals, businesses and industries to reduce pollution, minimise waste and protect natural resources. See more information at: [www.earthlife.org.za](http://www.earthlife.org.za).

<sup>2</sup> groundWork is a non-profit environmental justice campaigning organisation working primarily in South Africa, in the areas of Climate & Energy Justice, Coal, Environmental Health, Global Green and Healthy Hospitals, and Waste. See more information at: [www.groundwork.org.za](http://www.groundwork.org.za).

Cape Town: 2<sup>nd</sup> Floor, Springtime Studios, 1 Scott Road, Observatory, 7925, South Africa  
Johannesburg: 9th Floor, Southpoint CNR, 87 De Korte Street, Braamfontein, 2001, South Africa  
Tel 021 447 1647 (Cape Town) | Tel 010 442 6830 (Johannesburg)  
Fax 086 730 9098  
Email [info@cer.org.za](mailto:info@cer.org.za), [www.cer.org.za](http://www.cer.org.za)

and financial close.<sup>3</sup> Preferred bidders also require a water use licence (WUL), an atmospheric emission licence (AEL), and a licence to generate electricity from the National Energy Regulator of South Africa (NERSA), amongst others, in order to reach commercial and financial close. All of the requisite licences will be met with continued public opposition.

6. We presume that tomorrow's briefing will focus only on Thabametsi and Khanyisa – as the 2 preferred bidders appointed by the DoE, which would be required to commence operations by 2021. Both of these coal plants would have devastating and irreversible impacts for climate, health and the environment, given the exceptionally high greenhouse gas (GHG) emissions they are predicted to emit as a result of the proposed plant technology that will be used for the plants (and by virtue of being coal-fired power stations), and given that they will both be located in designated air quality priority areas (where health-based ambient air quality standards are already being exceeded), and in areas where water is either severely limited (in Thabametsi's case) or already highly polluted (in Khanyisa's case).
7. This comes at a time when South Africa has committed internationally to reducing its GHG emissions, and has acknowledged, in its own climate change response policy, that it is extremely vulnerable to the impacts of climate change.<sup>4</sup>
8. The impacts of these projects are made even more unjustifiable by the fact that the electricity capacity that they would provide is not needed. In fact, these coal plants will cost the South African economy billions each year (see reference to the Energy Research Centre research below), burdening consumers with expensive electricity. This would not be in the public interest.
9. We provide details on each power station below, and further explain why these power stations are not necessary.

### **Thabametsi**

10. The Portfolio Committee is no doubt aware of the court case in relation to Thabametsi, instituted by our client Earthlife Africa, and heard in March 2017.<sup>5</sup> The Pretoria High Court ordered the Minister of Environmental Affairs to reconsider Earthlife's appeal of the authorisation of the Thabametsi plant, because the plant was authorised without an assessment of its climate change impacts.
11. The subsequent climate change impact assessment for Thabametsi showed staggering climate impacts,<sup>6</sup> and that – once built – Thabametsi would be one of the worst GHG emitters in the country and the world – with an emission intensity only slightly better than Eskom's oldest stations, but on average worse than Eskom's fleet.
12. Thabametsi's final climate change impact assessment which consists of a Summary Report and annexures, including a GHG Assessment Report (appendix D to the Summary Report); Climate Resilience Assessment Report (appendix E to the Summary Report); and a Water Resource Report (appendix E1 to the Summary Report) - finds, *inter alia*, that:<sup>7</sup>

---

<sup>3</sup> RFP, Volume 2, Part 5, Preferred Bidder Documents at paras 5.5.4 and 5.5.5.

<sup>4</sup> South Africa's National Climate Change Response White Paper acknowledges that South Africa is extremely vulnerable to the impacts of climate change; these impacts include: drying trends and increased droughts; temperature increases; degradation of soil quality (which in turn affects land productivity); and increased frequency and intensity of extreme weather events – which will disproportionately affect the poor. See page 8.

<sup>5</sup> The court papers can be accessed here <https://cer.org.za/programmes/pollution-climate-change/litigation/the-proposed-thabametsi-ipp-earthlife-africa-johannesburg-v-department-of-environmental-affairs-thabametsi-power-project-pty-ltd-and-others>.

<sup>6</sup> See <https://cer.org.za/news/media-release-thabametsi-climate-impact-assessment-reveals-staggering-greenhouse-gas-emissions>.

<sup>7</sup> The relevant CCIA reports can be accessed at <https://cer.org.za/programmes/pollution-climate-change/key-correspondence>. The other documents that make up the CCIA, as well as the PIA and EMPr, can also be made available on request.

*“the Project’s GHG emissions are estimated to be 5 186 749 t CO2e annually during operations on completion of Phase 1, and 9 879 522 t CO2e annually on completion of Phase 2. Using benchmarks of international lender standards with respect to the magnitude of annual emissions from a development ... the **magnitude of this Project’s GHG emissions is considered to be ‘Very Large’**” – the highest possible rating, which translated to an overall significance rating of “High (Negative)” (emphasis added).<sup>8</sup>*

13. Short of implementing carbon capture and storage, which is neither technically nor commercially feasible for South Africa (nor is it proposed for Thabametsi or Khanyisa), there is no way to substantially and materially reduce the GHG emissions of a coal-fired power station.
14. Subsequently, a peer review of Thabametsi’s climate change impact assessment<sup>9</sup> commissioned by the Minister found that Thabametsi’s climate change impact assessment actually understated the “very high” climate impacts. Despite this, the Minister decided to uphold the authorisation for Thabametsi.<sup>10</sup> In her decision, the Minister acknowledged the very high climate impacts but advised that the harm was “*outweighed by the benefit to the country of having the additional energy generation capacity.*” The Minister’s decision further states, “*[h]aving carefully balanced all relevant factors (including the threat of climate change), the final IRP 2010 – 2030 does not prohibit the establishment of new coal-fired power stations. Rather, It permits that 6.3 GW of new generation capacity may be derived from coal.*”
15. The Minister relies entirely on the outdated Integrated Resource Plan for Electricity (“IRP 2010”) to justify her decision that Thabametsi should go ahead. This despite Murphy J’s judgement of March 2017 in the Thabametsi case, which held that the mere existence of policy calling for new coal-based electricity (such as the IRP) does not exempt the decision-maker from exercising its independent discretion on the assessment of the impacts. Judge Murphy stated that the “*assertion that the instruments constitute binding administrative decisions not to be circumvented to frustrate the establishment of authorised coal-fired power stations is unsustainable, as is the notion that their mere existence precludes the need for a climate change impact assessment in the environmental authorisation process. Policy instruments developed by the Department of Energy cannot alter the requirements of environmental legislation for relevant climate change factors to be considered*” (emphasis added).<sup>11</sup>
16. Review proceedings were instituted, on behalf of Earthlife Africa and groundWork, in the High Court in March 2018 to review and set aside the Minister’s decision to allow Thabametsi to go ahead despite the “very high” and harmful climate impacts.<sup>12</sup> We await the delivery of the record so that our clients have an opportunity to supplement their papers.
17. From a climate impacts perspective, not only would Thabametsi emit large quantities of GHGs, but its own water supply is also extremely susceptible to threats from climate change. Thabametsi’s Climate Resilience Assessment Report (forming part of the climate change impact assessment) highlights water availability as the main, as well as a high, risk.<sup>13</sup> It also states that “*[c]oncern exists amongst some residents that limited water resources are being diverted away from communities and farms to industrial users including mines and power plants. Water infrastructure issues exist in some communities and farms have suffered from drought impacts in the past. There*

---

<sup>8</sup> Please refer to page 18 of the Summary Report.

<sup>9</sup> Available at <https://cer.org.za/wp-content/uploads/2018/01/Final-Peer-Review-Thabametsi-Power-Station-CCIA-14-Dec-2017.pdf>

<sup>10</sup> See <https://cer.org.za/news/thabametsi-coal-plant-given-go-ahead-despite-staggering-climate-impacts> for further information.

<sup>11</sup> See paras 95 – 96, Thabametsi judgment.

<sup>12</sup> The court papers can be accessed at <https://cer.org.za/programmes/pollution-climate-change/litigation/the-proposed-thabametsi-ipp-earthlife-africa-johannesburg-v-department-of-environmental-affairs-thabametsi-power-project-pty-ltd-and-others>

<sup>13</sup> Please refer to pages XI and XII, Climate Resilience Assessment Report.

*is a risk that, under a scenario of increasing water stress in the region, industrial users are increasingly ‘blamed’ for water shortages, and this may threaten the social license (sic) to operate for industrial users in the region...’*<sup>14</sup>

18. A report<sup>15</sup> of Brad Udall, Senior Water and Climate Research Scientist/Scholar at the Colorado Water Institute in Colorado State University, confirms that climate change is very likely to reduce flows in the water catchments that would supply Thabametsi, putting it at risk of becoming a stranded asset, and of utilising limited water required by communities and the environment. Even without the effects of climate change, there is a strong likelihood that there will not be sufficient water to meet Thabametsi’s water needs for the expected duration of the power station’s lifespan. Thabametsi is expecting to receive water from the Mokolo Dam, where demand is predicted to exceed supply by 2019, 2 years prior to when Thabametsi is expected to be operational. Thabametsi’s water security depends entirely on the successful and timely implementation of the Mokolo-Crocodile Water Augmentation Project Phase 2 (“MCWAP2”) — which would transfer water from the Crocodile West to the Mokolo River catchment. However, MCWAP2 is long-delayed and faces considerable technical, financial, and environmental risks. MCWAP2 has not yet obtained an environmental authorisation; and, if it does, such authorisation is likely to be challenged. It is not certain that the project will be approved, much less by 2019, thus potentially threatening current and future water allocations in the catchment, including Thabametsi’s potential supply.
19. Thabametsi still requires a WUL – objections<sup>16</sup> to this application were submitted by groundWork and Earthlife on 5 March 2018<sup>17</sup> – and an AEL. An atmospheric impact report (AIR), as part of the AEL application is currently available for comment by 31 March 2018. In this regard, we have advised Thabametsi’s environmental assessment practitioner that the AIR does not make up the full AEL application and it is therefore non-compliant with the public participation requirements in section 38(3)(iiA) of the Air Quality Act, 2004. Thabametsi also still requires a licence to generate electricity from NERSA. Public hearings were held on 27 March 2018 and Earthlife Africa has submitted objections<sup>18</sup> and supplementary written objections<sup>19</sup> against the application to NERSA.

## **Khanyisa**

20. The proposed Khanyisa coal-fired power station obtained its environmental authorisation on 31 October 2013. Our clients only became aware of the project after this time and did not appeal the environmental authorisation when it was issued. In any event, following the successful Thabametsi case in 2017, which confirmed the need for a climate change impact assessment as part of an environmental impact assessment (EIA) for a coal-fired power station, our client groundWork sought leave to appeal Khanyisa’s environmental authorisation on the grounds that the project proponent, ACWA Power Khanyisa Thermal Power Station RF (Pty) Limited, had not adequately assessed the climate impacts of the power station.
21. The Minister refused to condone the late filing of an appeal of Khanyisa’s environmental authorisation. High Court proceedings to review this decision and the environmental authorisation (on similar grounds to the first Thabametsi case – for failing to adequately assess its climate impacts) were instituted in September 2017 and are currently pending.<sup>20</sup>
22. Khanyisa, like Thabametsi will use circulating fluidised bed combustion (CFB) technology which will result in exceptionally high emissions of the GHG nitrous oxide (N<sub>2</sub>O), meaning that Khanyisa too will have high climate

---

<sup>14</sup> Page XI, Climate Resilience Assessment Report.

<sup>15</sup> Available at <https://cer.org.za/wp-content/uploads/2018/05/Udall-Olifants-River-Analysis-FINAL.pdf>.

<sup>16</sup> See <https://cer.org.za/wp-content/uploads/2018/03/Thabametsi-IWUL-IWWMP-Objections-5-3-18.pdf>. These objections can also be made available on request.

<sup>17</sup> See <https://cer.org.za/programmes/pollution-climate-change/key-correspondence>.

<sup>18</sup> Available here <https://cer.org.za/wp-content/uploads/2018/05/ELA-NERSA-Objections-of-15-December-2016.pdf>

<sup>19</sup> Available at <https://cer.org.za/wp-content/uploads/2018/05/Thabametsi-NERSA-objections-27.pdf>

<sup>20</sup> The court papers can be accessed here <https://cer.org.za/programmes/pollution-climate-change/litigation/groundwork-acwa-power>.

change impacts. Again, short of implementing carbon capture and storage, which is not feasible, it is not possible to significantly reduce the power station's GHG emissions. We point out however, that it is fundamental that a comprehensive climate change impact assessment be conducted and the environmental authorisation be set aside, or at least suspended, and reconsidered by DEA once a proper climate impact assessment has been conducted and subjected to public participation.

23. Khanyisa will be based in the heavily-polluted Highveld Air Quality Priority Area – home to 12 of Eskom's polluting coal plants, Sasol's Secunda refinery, hundreds of mines, and multiple other industries, and in which air pollution's health impacts are a significant burden on communities in the area. A report of Dr Mike Holland – an air quality and health expert based in the United Kingdom – found that emissions from tiny particles of particulate matter (PM<sub>2.5</sub>) from Eskom's coal plants alone are responsible for some 2200 equivalent attributable deaths on an annual basis.<sup>21</sup>
24. The Portfolio Committee will be aware – from colloquiums held in 2017 and earlier in 2018 – that despite the Highveld being a declared Priority Area for more than 10 years (since November 2007), there has been no improvement in the ambient air pollutant concentrations and historically-disadvantaged communities remain exposed to dangerous and illegal levels of atmospheric pollution – which carries with it dire health impacts, and consequent violations of the constitutional environmental right. It is highly concerning (and unlawful) that DEA is authorising the construction and operation of another coal-fired power station in the already highly-polluted and toxic Highveld. The cumulative air emission impacts of Khanyisa will bring the air quality further out of compliance with the national ambient air quality standards.
25. Khanyisa will be adjacent to the already highly-polluted Olifants River,<sup>22</sup> and will pose significant risks of further pollution (through its coal ash dump) to the Olifants River, which is already exposing ecosystems and people living on the river to unacceptable risks.
26. We point out that Khanyisa (like Thabametsi) is not yet able to reach financial close, as various licences are the subject of dispute or are outstanding. Khanyisa's provisional AEL is subject to an appeal,<sup>23</sup> and its WUL (recently issued, but ACWA and the Department of Water and Sanitation (DWS) have not made it available to interested and affected parties despite a legal requirement and requests to do so) will also be challenged by groundWork. Similarly to Thabametsi, Khanyisa still requires a generation licence from NERSA. Public hearings were held on 27 March 2018 and groundWork has submitted objections and supplementary written objections<sup>24</sup> against the application to NERSA.

### **There is no need for new coal-fired power**

27. As pointed out to the Minister of Energy, in our letter of 28 February 2018,<sup>25</sup> South Africa does not need new coal. 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 (at 62c per kilowatt hour). Eskom is required to purchase more expensive electricity (which is not needed) from the coal IPPs, and the high costs will be passed on to consumers.
28. Research by the Council for Scientific and Industrial Research (CSIR) and Meridian Economics shows that, in fact, **South Africa does not need any new coal capacity**, not only because demand projections illustrate that such

---

<sup>21</sup> See <https://lifeaftercoal.org.za/wp-content/uploads/2017/04/Annexure-A4.pdf>.

<sup>22</sup> Available at: [https://cer.org.za/wp-content/uploads/2017/09/Annexure-J-Final\\_Report\\_Lower\\_Olifants\\_31March2014\\_FINAL.pdf](https://cer.org.za/wp-content/uploads/2017/09/Annexure-J-Final_Report_Lower_Olifants_31March2014_FINAL.pdf)

<sup>23</sup> See [https://cer.org.za/wp-content/uploads/2017/07/gW-Appeal-iro-Khanyisa-AEL-transfer\\_13-Nov-201](https://cer.org.za/wp-content/uploads/2017/07/gW-Appeal-iro-Khanyisa-AEL-transfer_13-Nov-201).

<sup>24</sup> Available at <https://cer.org.za/wp-content/uploads/2018/03/Khanyisa-Affidavit-1.pdf>

<sup>25</sup> See <https://cer.org.za/news/south-africas-energy-future-at-stake-life-after-coal-campaign-writes-to-new-energy-minister-jeff-radebe>.

capacity is not required now, nor in the foreseeable future, but also because **it is, in fact, cheaper (and better for the economy) not to build more coal**, but to invest in renewable energy instead.<sup>26</sup>

29. A presentation<sup>27</sup> given by the University of Cape Town's Energy Research Centre (ERC) at the NERSA hearings for the generation licence applications for Thabametsi and Khanyisa showed that compared to a least cost electricity build plan, the coal IPPs (Thabametsi and Khanyisa):
- 29.1. **increase** overall emissions by approximately **155-177 Mt CO<sub>2</sub>eq to 2050**;
  - 29.2. result in **additional costs** in the electricity sector every year of up to **R4 billion to 2025-2027** to be borne by consumers;
  - 29.3. increase the **overall system costs by R19.3 - R24.5 billion** in present value terms; and
  - 29.4. **make DEA's planned mitigation measures redundant**: eg the National Energy Efficiency Strategy saves 214Mt CO<sub>2</sub>-eq to 2050.
30. This ERC research will shortly be completed and will be made available.
31. These coal IPP projects do not provide a non-replaceable economic benefit. If and when the additional electricity is needed, it would be preferable in all respects to simply procure more renewable energy capacity, which would provide jobs benefits with cheaper electricity, instead of new expensive and polluting coal capacity.
32. There is no reason why the Minister of Environmental Affairs and DEA should be allowing such harmful and unnecessary projects. Such decisions, we submit, are reckless, risky, and contravene the right to an environment not harmful to health and wellbeing as enshrined in the Constitution of the Republic of South Africa, 1996. These plants will lock South Africa into decades of expensive pollution, high water use, and climate change, burdening consumers with expensive, unnecessary electricity, and exposing people and the environment to irreversible harm.
33. We ask that this letter be circulated among the members of the Portfolio Committee for tomorrow's meeting.
34. Please let us know if you have any questions or would like any further information.

Yours sincerely

**CENTRE FOR ENVIRONMENTAL RIGHTS**

per: 

**Nicole Loser**  
**Attorney**

Direct email: [nloser@cer.org.za](mailto:nloser@cer.org.za)

---

<sup>26</sup> Please refer to page 3 of the Executive Summary, Meridian study available at [http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskom-financial-crisis-and-the-viability-of-coalfired-power-in-SA\\_ME\\_20171115.pdf](http://meridianeconomics.co.za/wp-content/uploads/2017/11/Eskom-financial-crisis-and-the-viability-of-coalfired-power-in-SA_ME_20171115.pdf).

<sup>27</sup> Available at: <https://cer.org.za/wp-content/uploads/2018/05/NERSA-coal-IPP-hearing-Burton-260318-3.pdf>. Please see page 31.