



Centre for Environmental Rights

Advancing Environmental Rights in South Africa

Nomalanga Sithole

Acting Chief Executive Officer
National Energy Regulator SA
By email: Nomalanga.Sithole@nersa.org.za

Jacob Modise

Chairman
National Energy Regulator SA
By email: Jacob.modise@nersa.org.za

Copied to:

Dennis Seemela

National Energy Regulator SA
By email: Dennis.Seemela@nersa.org.za
info@energy.gov.za

David Scrooby

State Attorney
By email: DScrooby@justice.gov.za

Bernard Magoro

Chief Executive Officer
Independent Power Producers Office
By email: Info@ipp-projects.co.za
projectoffice@ipp-coal.co.za

Our ref: CER34.25/NL
30 October 2020

URGENT

Dear Ms Sithole and Mr Modise

DETERMINATION FOR NEW GENERATION CAPACITY FROM RENEWABLES, STORAGE, GAS AND COAL IN TERMS OF SECTION 34 ELECTRICITY REGULATION ACT 2006

1. We address you on behalf of our client, groundWork.¹
2. We refer to the determination under section 34 of the Electricity Regulation Act, 2006 (**ERA**) and the Electricity Regulations on New Generation Capacity,² published by the Department of Mineral Resources and Energy on 25 September 2020,³ with the concurrence of the National Energy Regulator of South Africa (**NERSA**) (“the

¹ 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.

² Published in Government Notice 399, GG No. 34262, dated 4 May 2011.

³ Published in Government Notice 1015, GG No. 43734.

Cape Town: 2nd Floor, Springtime Studios, 1 Scott Road, Observatory, 7925, South Africa
Johannesburg: First Floor, DJ du Plessis Building, West Campus, University of the Witwatersrand, Braamfontein, 2001, South Africa
Tel 021 447 1647 (Cape Town) | Tel 010 442 6830 (Johannesburg) | Fax 086 730 9098
www.cer.org.za

determination").⁴ This determination provides for new generation capacity to be procured from renewable energy sources (PV (photovoltaic) and wind), storage, gas and coal, in accordance with Table 5 of the Integrated Resource Plan for Electricity 2019 – 2030 ("**IRP 2019**").⁵

3. We also refer to NERSA's consultation paper of March 2020 ("**the consultation paper**") and the Life After Coal Campaign (**LAC**)⁶ comments of 7 May 2020 in response to NERSA's consultation paper in respect of the draft version of this determination ("**LAC comments**").
4. NERSA has published purported reasons for its decisions to concur with the determination on its website.⁷
5. We write this letter to request adequate reasons, including clarification on specific statements, from NERSA in respect of the decisions to concur in the following determinations:
 - a. 3 000 MW to be procured to be generated from **gas**, which represents the capacity allocated under the heading "Gas and Diesel", for the years 2024 to 2027, in Table 5 of the IRP 2019 ; and
 - b. 1 500 MW to be generated from **coal**, which represents the capacity allocated under the heading "Coal", for the years 2023 to 2027, in Table 5 of the IRP 2019.

Request for adequate reasons

6. Section 10 of the National Energy Regulator Act, 2004 (**NERSA Act**) states that "*Every decision of the Energy Regulator must be in writing and (a) consistent with the Constitution and all applicable laws; (b) in the public interest; (c) within the powers of the Energy Regulator ... (d) **taken within a procedurally fair process in which affected persons have the opportunity to submit their views and present relevant facts and evidence to the Energy Regulator; (e) based on reasons, facts and evidence that must be summarised and recorded; and (f) explained clearly as to its factual and legal basis and the reasons therefor***" (emphasis added).
7. We write this letter to record that NERSA's purported reasons fall short of NERSA's obligations to provide adequate reasons. Below we set out our request for adequate reasons, clarification and evidence from NERSA, in line with NERSA's obligations under section 10(e) of the NERSA Act read with section 5 of the Promotion of Administrative Justice Act (PAJA), 2000.

3000 MW gas determination

8. In relation to the 3000 MW gas determination, we request adequate reasons, clarification and/or evidence for the following statements:
 - 8.1 At paragraph 5.4.4 of NERSA's reasons, it is stated that "*According to IRP 2019 figures shown in Table 7 below, a wind plant with 3 hours' battery storage's overnight cost is R27 432/kW. A Solar thermal plant with 6 hours' storage and 51% capacity factor's overnight cost is R107 135/kW. A Gas plant with Carbon Capture and Storage (CCS) and 50% capacity factor's overnight cost is R22 262/kW. The average RFI tariff for a 20-year PPA gas plant is R1.49/kWh, R1.78/kWh for solar/wind with storage and R3.43/kWh for*

⁴ NERSA concurrence of July 2020 published at <http://nersa.org.za/wp-content/uploads/2020/09/Decision-and-Reasons-for-Decision-for-the-Concurrence-new-generation-capacity-from-Renewables.pdf>.

⁵ Published in Government Notice 1360 in GG No. 42784, dated 18 October 2019.

⁶ Life After Coal is a joint campaign by organisations Earthlife Africa, groundWork, and the Centre for Environmental Rights, which aims to: discourage the development of new coal-fired power stations and mines; reduce emissions from existing coal infrastructure and encourage a coal phase-out; and enable a just transition to sustainable energy systems for the people. See <https://lifeaftercoal.org.za/>.

⁷ At <http://nersa.org.za/wp-content/uploads/2020/09/Decision-and-Reasons-for-Decision-for-the-Concurrence-new-generation-capacity-from-Renewables.pdf>.

storage. When considering both the capital cost and RFI tariff, gas generation is cheaper than the other technologies and therefore more attractive”.

8.1.1. Did NERSA take any steps to verify the accuracy of these cost estimations?

8.1.2. If so, kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.

8.2 At paragraph 5.4.5, NERSA states that *“the Inter-Connected Power System could still need more flexible gas generation that can be run for extended periods as midmerit/baseload plants, thus providing more continuity of supply, unlike battery storage, which has to recharge from time to time.”*

8.2.1. Did NERSA consider other options, other than batteries, for flexible generation as alternatives to gas?

8.2.2. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.

8.3 At paragraphs 5.4.10 to 5.4.11 NERSA states that *“The policy-adjusted IRP 2019 considered the economic development needs of the country besides the technical least cost optimisation for new generation resources. Development of the LNG terminal and related infrastructure has other benefits to the country in addition to producing electricity as per the Department of Trade and Industry (DTI) Gas Industrialisation Policy and Gas Infrastructure plan. The gas infrastructure investments will have a multiplier effect to other economic sectors (industrial heating, petrochemicals, transport, etc.). ... It is therefore recommended that the PPA should consider the imported gas price to be a pass-through cost to the consumer to maximise efficiencies from international gas price and exchange rate fluctuations. Furthermore, if domestic gas extraction projects materialise, this would stimulate the growth of gas use because the indigenous gas price will not be overly exposed to international market forces”.*

8.3.1. What documents and evidence did NERSA consider in reaching the conclusion that *“gas infrastructure investments will have a multiplier effect to other economic sectors”*?

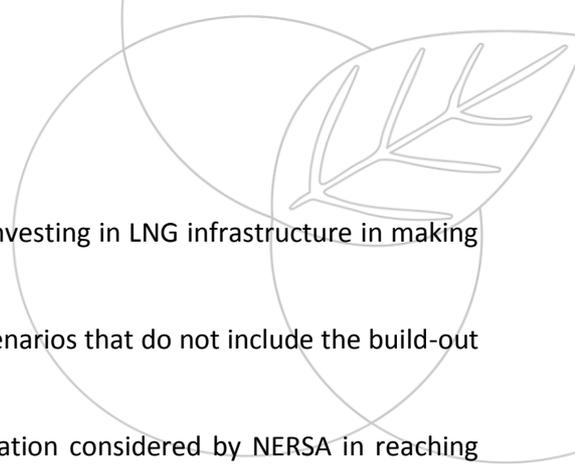
8.3.2. How did NERSA reach the ultimate conclusion to recommend that the PPA should consider the imported gas price to be a pass-through cost to the consumer, particularly in light of paragraph 5.4.2 of the reasons, stating that *“The majority of stakeholders raised concerns about the procurement of gas power when there are alternatives in the market, such as battery storage, that can play the same role in the power system without the risk of uncertain imported Liquefied Natural Gas (LNG) prices”*?

8.3.3. What did NERSA consider in concluding that domestic gas extraction projects would stimulate the growth of gas because the indigenous gas price will not be overly exposed to international market forces? Did NERSA consider other factors in reaching this conclusion?

8.3.4. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.

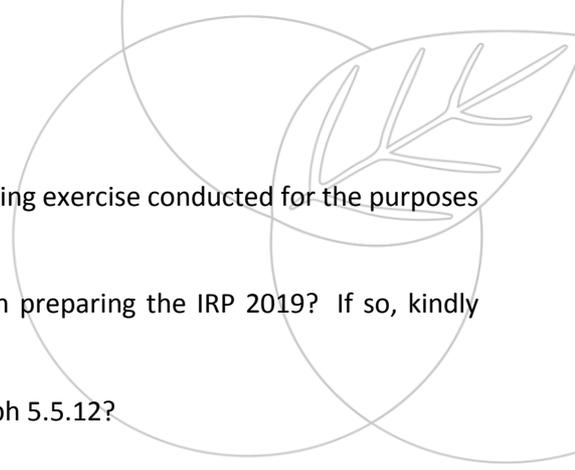
8.4 At paragraph 5.4.14 it is recommended that *“to meet the 2024 deadline for grid connection of the first 1000MW, temporary LNG infrastructure could be used (e.g. cryogenic containers using road/rail transport). Liquefied Petroleum Gas (LPG) could also be used while permanent LNG infrastructure is under construction”.*

8.4.1. How did NERSA reach the conclusion to recommend permanent LNG infrastructure?

- 
- 8.4.2. Did NERSA consider the costs, viability and impacts of investing in LNG infrastructure in making this recommendation? If so, what did it consider?
 - 8.4.3. Did NERSA consider this in comparison to alternative scenarios that do not include the build-out of permanent LNG infrastructure?
 - 8.4.4. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.
- 8.5 At paragraph 5.4.2.1 and 5.4.2.2 NERSA states that *“The IRP placed a carbon dioxide (CO₂) emissions constraint for the period 2020 to 2030, based on South Africa’s commitments to reduce emissions in the Paris Agreement ... The IRP model achieved this by applying the CO₂ constraints and choosing cleaner electricity generation options even if they are options that are more expensive. The extent of the gas contained in the IRP is within the imposed emissions reduction trajectory, which was provided by the Department of Environmental Affairs (DEA) and is in line with the country’s policy”* and *“The issues of the environmental impact of gas extraction projects will be handled by the DEA and other relevant bodies. The potential shortage of market capital to fund polluting gas power projects is a risk best handled by IPPs after taking into account the IRP commercial operation deadlines so as not to endanger the country’s electricity security of supply”*.
- 8.5.1. Did NERSA conduct or commission its own independent modelling exercise to verify that the addition of 3000 MW of new gas would be consistent with a Peak-Plateau-Divide trajectory and would not exceed the emissions limit?
 - 8.5.2. If not, on what basis does NERSA believe that the modelling exercise conducted for the purposes of IRP 2019 was accurate?
 - 8.5.3. On what basis did NERSA decide that the environmental impacts of gas extraction projects should not be considered in its deliberations and should be deferred to the DEA and other relevant bodies?
 - 8.5.4. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.

1500MW coal determination

9. In relation to the 1500 MW coal determination, we request adequate reasons, clarification and/or evidence for the following statements:
- 9.1 At paragraph 5.5.11, it is stated that *“In the IRP model, a CO₂ emissions constraint, Peak-Plateau-Divide was placed for the entire horizon of the plan. This is based on South Africa’s commitments to reduce emissions in the Paris Agreement. This constraint ensured that the energy mix does not exceed the set annual limit. It therefore ensures that emitting technologies are limited and cannot violate the emissions limit (see page 36 and 37 of 98 of the IRP 2019).”* At paragraph 5.5.12 it is further stated that *“The extent of the coal contained in the IRP is within the imposed emissions reduction trajectory, which was provided by the DEA and is in line with the country’s policy.”*
 - 9.1.1. Did NERSA conduct or commission its own independent modelling exercise to verify that the addition of 1500MW of new coal would be consistent with a Peak-Plateau-Divide trajectory and would not exceed the emissions limit?



- 9.1.2. If not, on what basis does NERSA believe that the modelling exercise conducted for the purposes of IRP 2019 was accurate?
- 9.1.3. Did NERSA have sight of the underlying models used in preparing the IRP 2019? If so, kindly supply these models.
- 9.1.4. What is the “*the country’s policy*” referred to in paragraph 5.5.12?
- 9.2 At paragraph 5.5.14, it is stated that “*NERSA is satisfied that environmental emissions were already considered as stated above*”.
 - 9.2.1. Did NERSA conduct its own assessment of the climate change and health impacts of “*environmental emissions*” from coal-fired power stations? If not, why?
 - 9.2.2. On what basis does NERSA contend that the IRP 2019 gave proper consideration to the “*environmental emissions*”? What further documentation and studies, if any, did NERSA consider in making this assessment?
- 9.3 At paragraphs 5.5.13 and 5.5.14, NERSA states “*it is therefore recommended that HELE coal technologies, including underground coal gasification, integrated gasification combined cycle, carbon capture utilisation and storage, and ultra-supercritical, super critical and similar technologies, be deployed for the exploitation of South African coal resources. Decision 6 of the IPR (sic) 2019 also confirms that all new coal power projects must be based on HELE technologies and other cleaner coal technologies*” and “*it is NERSA’s position that any new coal must make use of HELE technologies*”.
 - 9.3.1. Did NERSA conduct its own investigation into the need, desirability and local feasibility of each of the HELE coal technologies identified above?
 - 9.3.2. On what basis did NERSA conclude that HELE technologies would be feasible?
 - 9.3.3. In addition to the above, kindly provide any further evidence and supporting documentation considered by NERSA in reaching these conclusions.
- 9.4 At paragraph 5.5.15, it is stated that “*NERSA believes that any coal power plant must be dispatchable, load following and be able to provide ancillary services, especially now that there is an energy mix with renewable energy power plants that are not able to provide these services. Furthermore, the planned decommissioning of Eskom’s older power stations leaves the transmission system with an inadequate ancillary services reserve and dispatchable reserves, making the operation of the power system very difficult.*”
 - 9.4.1. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.
- 9.5 At paragraph 5.5.22 NERSA states that it “*agrees that carbon tax and stricter emissions legislation will make coal more expensive than the current prices, and this must be factored into the decision. This, however, was considered during the development of the IRP2019 to determine the optimum energy mix for the country. The decision must, however, also cost the benefit of coal, including the socio-economic benefits.*”
 - 9.5.1. What information did NERSA take into account in determining the alleged benefits of coal?
 - 9.5.2. What are the socio-economic benefits NERSA refers to?

9.5.3. What negative impacts of coal did NERSA consider in conducting this assessment?

9.5.4. Kindly provide the further evidence and supporting documentation considered by NERSA in reaching these conclusions.

9.6 At paragraphs 5.5.27 and 5.5.28, NERSA states that *“The Minerals Council of South Africa highlighted that South Africa has coal resources that should last for over 100 years. They should be used to the benefit of South Africa. It would therefore be problematic to abandon coal for electricity generation due to the mandate to reduce GHG, while still exporting coal to other parts of the world where it is still producing GHG in its processing and/or use. 5.5.28. The employment of HELE technologies seems to be a reasonable compromise. Every country uses its resources for the betterment of its economy. Over 90% of Saudi Arabia’s electricity generation is from gas, as it has abundant gas resources”*.

9.6.1. On what basis did NERSA come to the conclusion that HELE technologies *“seem to be a reasonable compromise”*? Are these the same HELE technologies identified above in paragraphs 5.5.13 and 5.5.14?

9.6.2. What information did NERSA take into account in assessing South Africa’s coal export market?

9.6.3. Kindly provide the evidence and supporting documentation considered by NERSA in reaching these conclusions.

Absence of public hearings

10. At paragraphs 3.5 and 3.6 NERSA states, *“it was envisaged that the process would include public hearings, however the COVID-19 pandemic made it difficult for this to be possible. The Energy Regulator made a decision to suspend its public hearings until government indicates that it is safe to conduct them. Furthermore, due to the comprehensive submissions from stakeholders and the detailed questions in the consultation paper, NERSA ensured that the written comments were sufficient to assess the information from stakeholders”*.

10.1 Kindly provide NERSA’s reasons for declining to hold a public inquiry, in terms of section 4(4) of PAJA.

10.2 What steps, if any, did NERSA take to consider the views of affected communities that were unable to submit written comments?

Conclusion

11. We hereby **request adequate written reasons for the decision to concur in the determination**, in terms section 5 of Promotion of PAJA and section 10 of the NERSA Act. We seek these reasons for the decision in its entirety but request that they specifically address the points stipulated in paragraphs 8 - 10 above. We request that the adequate reasons be provided **within 30 days**.

12. Our client’s rights are fully reserved.

13. We await your response by no later than **1 December 2020**.

Yours faithfully
CENTRE FOR ENVIRONMENTAL RIGHTS

per:



Timothy Lloyd
Attorney: Pollution and Climate Change
Direct email: tloyd@cer.org.za

