

**APPENDIX C7**  
**COMMENTS RECEIVED**



Proof to be included in  
final Environmental Impact Assessment Report

## SCOPING PHASE

## Organs of State



## Savannah Public Process

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**From:** John Geeringh <GeerinJH@eskom.co.za>  
**Sent:** Friday, 12 November 2021 14:04  
**To:** Savannah Public Process  
**Subject:** RE: [CAUTION:EXTERNAL EMAIL] - SE2662: RICHARDS BAY GAS-TO-POWER 3 2000MW Background Information Document and Notification of Availability of Scoping Report  
**Attachments:** Eskom requirements for work in or near Eskom servitudes.doc

Please send me KMZ files of the development area and proposed grid connection. Please find attached Eskom general requirements for works at or near Eskom infrastructure and servitudes.

Kind regards

John Geeringh (Pr Sci Nat) Reg. EAP (EAPASA)  
Senior Consultant Environmental Management  
Grid Planning: Land and Rights  
Eskom Transmission Division  
Megawatt Park, D1Y42, Maxwell Drive, Sunninghill, Sandton.  
P O Box 1091, Johannesburg, 2000.  
Tel: 011 516 7233  
Cell: 083 632 7663  
Fax: 086 661 4064  
E-mail: [john.geeringh@eskom.co.za](mailto:john.geeringh@eskom.co.za)

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**From:** Savannah Environmental Public Process <publicprocess@savannahsa.com>  
**Sent:** Friday, 12 November 2021 13:59  
**To:** John Geeringh <GeerinJH@eskom.co.za>  
**Subject:** [CAUTION:EXTERNAL EMAIL] - SE2662: RICHARDS BAY GAS-TO-POWER 3 2000MW Background Information Document and Notification of Availability of Scoping Report

**PROPOSED DEVELOPMENT OF THE RICHARDS BAY GAS-TO-POWER 3 2000MW COMBINED CYCLE POWER PLANT,  
RICHARDS BAY IDZ ZONE 1F, RICHARDS BAY, KWAZULU-NATAL PROVINCE  
(DEFF Reference No.: To be Issued)**

Dear Stakeholder and Interested & Affected Party,

Phakwe Richards Bay Gas Power 3 (Pty) Ltd (PRBGP3) proposes the development of a combined cycle (CC) gas to power plant, with a capacity of up to 2 000MW, on various erven within the Richards Bay IDZ Phase 1F, Richards Bay. The proposed project is to be known as the Phakwe Richards Bay Gas Power 3 CCPP. The project site is located approximately 5km north-east of Richards Bay and 1km north of the suburb of Alton, within the jurisdiction of the City of uMhlathuze Local Municipality and the King Cetshwayo District Municipality, KwaZulu-Natal Province. The power plant will operate at mid-merit to baseload duty.

Savannah Environmental has been appointed as the independent environmental consultant to undertake the Environmental Impact Assessment (EIA) for the project to identify and assess all potential environmental impacts associated with the projects and recommend appropriate mitigation measures in the Environmental Management Programme (EMPr). A Scoping & EIA and public participation process will be conducted for the application.

Please find attached for your perusal the following:

- Background Information Document
- Registration and Comment Form
- Notification letter informing you of the availability of the Scoping Report for your review and comments.

The Scoping Report is available for downloading from our website [CLICK HERE](#).

Please do not hesitate to contact us should you require any additional information and/or clarification regarding these projects. Our team welcomes your participation and look forward to your involvement throughout the Environmental Impact Assessment Process.

Kind regards,

[Unsubscribe this type of email](#)



t: 011 656 3237

f: 086 684 0547

**Nicolene Venter**

Public Process

e: [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com)

c: +27 (0) 60 978 8396

[SAWEA Award for Leading Environmental Consultant on Wind Projects in 2013 & 2015](#)

NB: This Email and its contents are subject to the Eskom Holdings SOC Ltd EMAIL LEGAL NOTICE which can be viewed at [http://www.eskom.co.za/Pages/Email\\_Legal\\_Spam\\_Disclaimer.aspx](http://www.eskom.co.za/Pages/Email_Legal_Spam_Disclaimer.aspx)

## TO WHOM IT MAY CONCERN

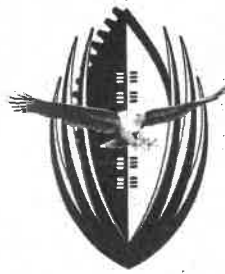
### Eskom requirements for work in or near Eskom servitudes.

1. Eskom's rights and services must be acknowledged and respected at all times.
2. Eskom shall at all times retain unobstructed access to and egress from its servitudes.
3. Eskom's consent does not relieve the developer from obtaining the necessary statutory, land owner or municipal approvals.
4. Any cost incurred by Eskom as a result of non-compliance to any relevant environmental legislation will be charged to the developer.
5. If Eskom has to incur any expenditure in order to comply with statutory clearances or other regulations as a result of the developer's activities or because of the presence of his equipment or installation within the servitude restriction area, the developer shall pay such costs to Eskom on demand.
6. The use of explosives of any type within 500 metres of Eskom's services shall only occur with Eskom's previous written permission. If such permission is granted the developer must give at least fourteen working days prior notice of the commencement of blasting. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued in terms of the blasting process. It is advisable to make application separately in this regard.
7. Changes in ground level may not infringe statutory ground to conductor clearances or statutory visibility clearances. After any changes in ground level, the surface shall be rehabilitated and stabilised so as to prevent erosion. The measures taken shall be to Eskom's satisfaction.
8. Eskom shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the servitude area by the developer, his/her agent, contractors, employees, successors in title, and assignees. The developer indemnifies Eskom against loss, claims or damages including claims pertaining to consequential damages by third parties and whether as a result of damage to or interruption of or interference with Eskom's services or apparatus or otherwise. Eskom will not be held responsible for damage to the developer's equipment.
9. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the developer must give at least seven working days' notice prior to the commencement of work. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued by the relevant Eskom Manager

Note: Where and electrical outage is required, at least fourteen work days are required to arrange it.

10. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with.
11. Under no circumstances shall rubble, earth or other material be dumped within the servitude restriction area. The developer shall maintain the area concerned to Eskom's satisfaction. The developer shall be liable to Eskom for the cost of any remedial action which has to be carried out by Eskom.
12. The clearances between Eskom's live electrical equipment and the proposed construction work shall be observed as stipulated by *Regulation 15* of the *Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993)*.
13. Equipment shall be regarded electrically live and therefore dangerous at all times.
14. In spite of the restrictions stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), as an additional safety precaution, Eskom will not approve the erection of houses, or structures occupied or frequented by human beings, under the power lines or within the servitude restriction area.
15. Eskom may stipulate any additional requirements to highlight any possible exposure to Customers or Public to coming into contact or be exposed to any dangers of Eskom plant.
16. It is required of the developer to familiarise himself with all safety hazards related to Electrical plant.
17. Any third party servitudes encroaching on Eskom servitudes shall be registered against Eskom's title deed at the developer's own cost. If such a servitude is brought into being, its existence should be endorsed on the Eskom servitude deed concerned, while the third party's servitude deed must also include the rights of the affected Eskom servitude.

John Geeringh (Pr Sci Nat)(EAPASA)  
Senior Consultant Environmental Management  
Eskom Transmission Division: Land & Rights  
Megawatt Park, D1Y42, Maxwell Drive, Sunninghill, Sandton.  
P O Box 1091, Johannesburg, 2000.  
Tel: 011 516 7233  
Cell: 083 632 7663  
Fax: 086 661 4064  
E-mail: john.geeringh@eskom.co.za



CITY OF  
**UMHLATHUZE**  
VISION INTO ACTION

5 Mark Strasse Civic Centre  
Business District  
Private Bag X1004  
Richards Bay 3900  
E: [reg@umhlathuze.gov.za](mailto:reg@umhlathuze.gov.za)  
T: 035 907 5000  
F: 035 907 5444/5/6/7  
Toll Free No: 0800 222 827

[www.umhlathuze.gov.za](http://www.umhlathuze.gov.za)

Your ref: SE2662

Contact: B Strachan

Our file ref:

In response to DMS No: **DMS 1501382 &  
DMS 1506056**

Date: **9 December 2021**

Savannah Environmental  
[publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com) / [nicolene@savannahsa.com](mailto:nicolene@savannahsa.com)

Attention: Ms Nicolene Venter

Dear Madam

### **SCOPING REPORT: COMMENTS ON PROPOSED 2000MW PHAKWE COMBINED CYCLE POWER PLANT AT RBIDZ 1F**

The City of uMhlathuze has reviewed the Scoping Report, dated November 2021, in respect of the above application and have attended the Focus Group Meeting (FGM) on 25 November 2021 as well as the Stakeholder Workshop on 9 December 2021 and submit following comments for due consideration.

#### **General:**

- i. It is noted from the documentation submitted, and based on comments made during the FGM that the infrastructure for the supply of gas as well as the evacuation infrastructure is not part of this process and will be subject to another process. Also, no gas will be supplied via trucks to the site.
- ii. Whereas the socio-economic benefits of the proposed development are well understood. It is understood that semi-skilled locals will benefit from employment opportunities during the construction phase. An indication is needed of benefits to semi-skilled locals during the operational phase as well. Furthermore, care must be taken to mitigate detrimental impacts on the existing developments, the environment and ensure no adverse impacts on the health of communities residing in the vicinity of the proposed development.
- iii. A number of similar applications have been submitted in recent months within a 10km radius of Richards Bay. The complexity of these proposed developments warrants an integrated and cumulative assessment and engagements are needed with relevant government stakeholders. Impacts identified should not be site specific; surrounding land use and environmental conditions needs to be considered and include climate change as gas to power projects are associated with methane gas emissions. As such, the Municipality reserves the right to amend our comments on the application in the event of being presented with further information.



ALL CORRESPONDENCE MUST BE ADDRESSED TO THE MUNICIPAL MANAGER

- iv. It is noted that various specialist investigations are preliminary and in some instances, based on desktop assessments, and that will require more detailed investigations during subsequent phases.

More sectoral specific comments are provided herewith:

#### Air Quality:

- i. During the construction phase, there may be direct impact of elevated  $PM_{10}$  which may result in a non-compliance with NAAQS daily  $PM_{10}$  concentration. It should be noted that according to 2020 State of Air Report, PM is still the greatest national cause for concern in terms of air quality due to numerous pollution sources and climatic conditions being also a major factor.
- ii. It is noted that **nuisance dustfall** may also be elevated during construction phase. The project construction phase also has the potential to elevate **ambient gaseous concentration** that are detrimental to human health.
- iii. It is recommended that mitigation measures are outlined and included in the process going forward to address the above.
- iv. **Ambient air pollutant concentrations** could be elevated during the operation phase that has a detrimental effect to the human health. It is also recommended that mitigation measures are outlined and included in the process going forward to address the above.
- v. Furthermore, there are at least three schools located in close proximity (1,8 km South East) of the proposed development, i.e. Little Junior, Batesda Primary School and Batesda High School.
- vi. During the EIA process going forward, due attention should be given to cumulative impacts and the other industries, not just the 11 referenced in the Scoping Report, should be considered. The King Cetshwayo District AEL (Atmospheric Emission License) team should be consulted for assistance with a comprehensive list of industries around Richards Bay.

#### Waste and Disaster Management:

- i. It has to be clear which streams of waste are expected from this operation and the management thereof to curb water contamination, littering and illegal dumping has to be outlined.
- ii. The proposed development can be classified as an MHI (Major Hazardous Installation). More details are needed, specifically with regard to management thereof, disaster response preparedness etc. More information/control measures on the potential health risks associated with the operating of similar facilities elsewhere in the world to mitigate such potential health risks is requested.

#### Transport

- i. The Traffic Impact Assessment (TIA) only considered the construction stage and not the normal operations phase and details are needed on traffic generation when the plant is operational. It also has to be confirmed conclusively how gas will be transported to the proposed development in the TIA.



ALL CORRESPONDENCE MUST BE ADDRESSED TO THE MUNICIPAL MANAGER

- ii. The load on the roads must be limited to standard axle loads. A trolley with additional axles must be used to distribute the load evenly to allowable axle loads.
- iii. Any damages to infrastructure must be repaired by the developer. Before and after inspections must be arranged with the Municipality on the transport route to be taken.
- iv. It has to be confirmed whether the developer will provide in the local power needs of the City as a priority and then feed into the national grid (Eskom).
- v. Two routes to be used for the development are preferred, i.e. the R34 / Alumina Allee and R619 / Alumina Allee. The route options through the Richards Bay CBD/town are not supported.
- vi. Transportation of Abnormal Loads must not be done during peak times.
- vii. Authorization of route clearance must be obtained from Municipal Traffic Section, Roads Section and Traffic Signal Section.
- viii. It has to be confirmed whether the trip generation during normal operations will be in line with the original TIA estimations. If not, the influence on intersections with mitigating factors must be indicated.

**Biodiversity: Freshwater and Terrestrial:**

- i. Whereas freshwater and terrestrial scoping studies were undertaken it is noted that these were completed at a desk top level and that more functional/detailed assessments are to be undertaken.
- ii. It is also noted that a wetland offset strategy is proposed to identify and quantify the wetland offset target. The environmental authority has to be engaged on this matter in context of the Environmental Authorization obtained during September 2016 for the installation of bulk infrastructure at Richards Bay IDP Phase 1F.

**Land Use Management:**

- i. The property is zoned as Noxious Industry and the proposed land use is permissible as free entry (primary right). Compliance with all relevant legislation and policy framework is required, amongst others, the submission of building plans in line with National Building Regulations, Building Control Bylaw and uMhlathuze Green Building Guidelines.
- ii. By definition, "Industry-Noxious" means the use of any building, land or other premises to conduct an activity/ies that is/are deemed to be noxious, offensive or harmful or injurious to public health, safety or physical well-being including the production and bulk storage of gaseous and liquid fuels, as well as petrochemicals from crude oil, coal, gas or biomass and other trade in connection with the processing of by-products or petroleum refining. It is important to note that the above definition is reliant on outcomes of relevant legislation and frameworks such as the Occupational Health and Safety Act No.85 of 1993, as amended, the National Environmental Management: Air Quality Act No.39 of 2004 as amended, the Explosives Act 2003, No. 15 of 2003, as amended etc.

**Electrical:**

The submission of technical design drawings for consideration by the City Electrical Department are noted.



**Water quality:**

- i. Discharge of effluent from Water Treatment Plant: Water quality status of the effluent will have to be shared with Water Quality Management Section of the Municipality in order to establish if there is a need for a discharge permit and the possibility of discharging into the Council sewer system. The comment is, amongst others, motivated by the presence of brine in the effluent and the adverse impacts the receiving environment will be prone to.
- ii. It is noted that brine discharge has an elevated water temperature with higher salinity than oceanic water. Troublesome chemicals associated with brine discharge are copper and chlorine with the potential for chronic toxicity to aquatic biota for several km's around discharge points. Dirty water may not be permitted for release into the environment.
- iii. As such, the requirement and need for water quality monitoring and discharge into a closed system (Council sewer system) is emphasized.

You are welcome to direct further queries regarding the above to Mrs. Brenda Strachan from the City Development Department on Tel.: 035 9075415 or email: [StrachanB@umhlathuze.gov.za](mailto:StrachanB@umhlathuze.gov.za)

Yours faithfully



**NONTSUNDU NDONGA Pr Pln A/080/2008**  
**DEPUTY MUNICIPAL MANAGER: CITY DEVELOPMENT**  
DMS 1506060







## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
**REPUBLIC OF SOUTH AFRICA**

Private Bag X 447· PRETORIA 0001· Environment House 473 Steve Biko Road, Arcadia,· PRETORIA

**DFFE Reference:** 14/12/16/3/3/2/2117

**Enquiries:** Ms Mathodi Mogorosi

**Telephone:** (012) 399 9388 **E-mail:** MMogorosi@dffe.gov.za

Mr Gideon Raath  
Savannah Environmental (Pty) Ltd  
PO Box 148  
**SUNNINGHILL**  
2157

**Telephone Number:** (011) 656 3237  
**Email Address:** [gideon@savannahsa.com](mailto:gideon@savannahsa.com)

### PER MAIL / E-MAIL

Dear Mr Raath

### COMMENTS ON THE DRAFT SCOPING REPORT FOR THE PROPOSED PHAKWE RICHARDS BAY GAS POWER 3 COMBINED CYCLE POWER PLANT (CCPP) AND ASSOCIATED INFRASTRUCTURE WITHIN THE RICHARDS BAY IDZ PHASE 1F, RICHARDS BAY, CITY OF UMHLATHUZE LOCAL MUNICIPALITY, KWAZULU-NATAL PROVINCE

The Application for Environmental Authorisation and Draft Scoping Report (SR) dated November 2021 and received by the Department on 12 November 2021, refer.

This letter serves to inform you that the following information must be included to the Final Scoping Report:

#### (a) Listed Activities

- (i) Please ensure that all relevant listed activities are applied for, are specific and can be linked to the development activity or infrastructure (including thresholds) as described in the project description. Only activities (and sub-activities) applicable to the development must be applied for and assessed. When including activities in the application form and Scoping Report, take note of the word OR in between the activities (sub-activities). Furthermore, kindly ensure that the latest listed activities, as amended in 2021, are applied for.
- (ii) The project description must be expanded to include thresholds, footprints and capacities of the associated infrastructure, particularly those that trigger a listed activity.
- (iii) It is imperative that the relevant authorities are continuously involved throughout the environmental impact assessment process, as the development property falls within geographically designated areas in terms of Listing Notice 3 Activities. Written comments must be obtained from the relevant authorities (or proof of consultation if no comments were received) and submitted to this Department. In addition, a graphical representation of the proposed development within the respective geographical areas must be provided.
- (iv) If the activities applied for in the application form differ from those mentioned in the final SR, an amended application form must be submitted. Please note that the Department's application form template has been amended and can be downloaded from the following link <https://www.environment.gov.za/documents/forms>.

**(b) Layout & Sensitivity Maps**

- (i) Please provide a layout map which indicates the following:
  - Positions of the proposed facility as well as all associated infrastructure;
  - Permanent and temporary laydown area footprints;
  - All supporting onsite infrastructure e.g. roads (existing and proposed); and
  - All existing infrastructure on the site.
- (ii) The above map must be overlain with a sensitivity map which indicates the following:
  - The location of sensitive environmental features on site e.g. CBAs, NPEAS focus areas, heritage sites, wetlands, drainage lines etc. that will be affected;
  - Buffer areas; and,
  - All “no-go” areas.
- (iii) Provide a map of the Richards Bay Gas Power 3 CCGP facility in relation to the existing electrical grid and gas pipeline infrastructure (the potential connection points and distances), to support the feasibility of the facility.
- (iv) A cumulative map showing the development in relation to similar neighbouring industrial/energy developments and air pollutant emitters must also be provided.  
Google maps will not be accepted.

**(c) Alternatives**

- (i) Design and layout alternatives must also be considered under the alternatives section of the SR.

**(d) Public Participation Process**

- (i) Please ensure that all issues raised and comments received during the circulation of the SR from registered I&APs and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the Final SR.
- (ii) Proof of correspondence with the various stakeholders must be included in the Final SR. Should you be unable to obtain comments, proof must be submitted to the Department of the attempts that were made to obtain comments.
- (iii) The final SR must provide evidence that all identified and relevant competent authorities have been given an opportunity to comment on the proposed development and SR, particularly, this Department’s Climate Change; Air Quality, Biodiversity Conservation; and Protected Areas Directorates, the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, the relevant Atmospheric Emissions Licence (AEL) Authority, the Department of Agriculture, Rural Development and Land Reform; Department of Water and Sanitation, Ezemvelo KZN Wildlife, AMAFA, SAHRA, SANRAL and the District and Local Municipalities.
- (iv) The Public Participation Process must be conducted in terms of the approved public participation plan and Regulation 39, 40 41, 42, 43 & 44 of the EIA Regulations 2014, as amended.
- (v) Proof of the newspaper advertisement must be included in the final SR.
- (vi) A comments and response trail report (C&R) must be submitted with the final SR. The C&R report must incorporate all comments received (pre and post submission of draft SR) for this development. The C&R report must be a separate document from the main report and the format must be in the table format which reflects the details of the I&APs and date of comments received, actual comments received, and response provided. Please ensure that comments made by I&APs are comprehensively captured (copy verbatim if required) and responded to clearly and fully. Please note that a response such as “Noted” is not regarded as an adequate response to I&AP’s comments.

**(e) Specialist Assessments**

- (i) Specialist studies to be conducted must provide a detailed description of their methodology, as well as indicate the locations and descriptions of the development footprint, and all other associated infrastructures that they have assessed and are recommending for authorisations.
- (ii) The specialist studies must also provide a detailed description of all limitations to their studies. All specialist studies must be conducted in the right season and providing that as a limitation, will not be accepted.
- (iii) Please note that the Department considers a 'no-go' area, as an area where no development of any infrastructure is allowed; therefore, no development of associated infrastructure including access roads is allowed in the 'no-go' areas.
- (iv) Should the specialist definition of 'no-go' area differ from the Department's definition; this must be clearly indicated. The specialist must also indicate the 'no-go' area's buffer if applicable.
- (v) **All specialist studies must be final, and provide detailed/practical mitigation measures for the preferred alternative and recommendations, and must not recommend further studies to be completed post EA.**
- (vi) Should the appointed specialists specify contradicting recommendations, the EAP must clearly indicate the most reasonable recommendation and substantiate this with defensible reasons; and where necessary, include further expertise advice.
- (vii) It is further brought to your attention that Procedures for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation, which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. "the Protocols"), and in Government Notice No. 1150 of 30 October 2020 (i.e. protocols for terrestrial plant and animal species), have come into effect. **Please note that specialist assessments must be conducted in accordance with these protocols.** Please indicate whether the protocols were applied.
- (viii) Please note that the protocols require certain specialist's to be SACNASP registered. As such, the Specialist Declaration of Interest forms must also indicate the scientific organisation registration/member number and status of registration/membership for each specialist.
- (ix) Please include a table in the report, summarising the specialist studies required by the Department's Screening Tool, a column indicating whether these studies were conducted or not, and a column with motivation for any studies not conducted. Not all of the studies identified by the screening tool have been included in Table 7.4 of the final SR (e.g., the Geotechnical Assessment, Hydrological Assessment, Air Quality Impact Assessment and Ambient Air Quality Impact Assessment).
- (x) Please note that if any of the specialists' studies and requirements/protocols recommended in the Department's Screening Tool are not commissioned, motivation for such must be provided in the report, inclusive of the necessary site sensitivity verification reports and specialist compliance statements.
- (xi) The terms of reference for the Climate Change Impact Assessment must assess the impacts of the development on climate change and vice versa, and accordingly must consider both mitigation and adaptation measures to climate change.
- (xii) It is noted that a number of sensitive receptors occur within 3km of the proposed gas power plant. As such, please ensure that the major hazard risks of the facility are also assessed.

**(f) Cumulative Assessment**

- (i) Should there be any other similar Gas to Power plants proposed within a 30km radius of the proposed development site, the cumulative impact assessment for all identified and assessed impacts must be refined to indicate the following:
  - Identified cumulative impacts must be clearly defined, and where possible the size of the identified impact must be quantified and indicated, i.e., hectares of cumulatively transformed land.
  - Detailed process flow and proof must be provided, to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in

the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project.

- The cumulative impacts significance rating must also inform the need and desirability of the proposed development.
- A cumulative impact environmental statement on whether the proposed development must proceed.

**(g) Specific comments**

- (i) The EAP must provide details of what the proposed facility will entail, including the associated infrastructure.
- (ii) The EAP must provide details of the specific locations in the final SR, and not provide vague locations of the proposed developments. All associated infrastructure must be clearly indicated in the final SR and its associated layout plans.
- (iii) Please provide evidence that the application for an air emissions licence has been submitted to the relevant AEL authority and that consultation with that authority has taken place, since the AEL process is to be run parallel to the EIA process. The AEL authority must have been given the opportunity to comment on the SR, including the terms of reference for the Air Quality Impact Assessment.
- (iv) Please provide an indication of what activities have already been authorised on the proposed Richards Bay Gas Power 3 CCGT site in terms of the Environmental Authorisation (EA) for the IDZ Phase 1F dated 27 September 2016 (DFFE Ref No.: 14/12/16/3/3/2/665), versus those being applied for in this application. Please confirm that the EA is still valid.
- (v) Please ensure that landowner consent is provided with the final SR.
- (vi) Ensure that the final SR includes confirmation of the availability of services from the relevant authorities.
- (vii) Under the legislation and policy section of the SR, which discusses the National Environmental Management: Waste Act No 59 of 2008, please indicate whether the proposed development will require a Waste Management Licence.
- (viii) It is noted that the electrical grid infrastructure and gas pipeline for the facility are to be applied for separately. These components should ideally be assessed holistically together with the gas power plant. The gas power plant, if approved, would therefore not be allowed to commence, without these other authorisations also being in place. The applicant is advised to take this into consideration in the planning and timing of the project.

**General**

You are further reminded to comply with Regulation 21(1) of the NEMA EIA Regulations 2014, as amended, which states that:

*“If S&EIR must be applied to an application, the applicant must, within 44 days of receipt of the application by the competent authority, submit to the competent authority a scoping report which has been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority”*

You are further reminded that the final SR to be submitted to this Department must comply with all the requirements in terms of the scope of assessment and content of Scoping reports in accordance with Appendix 2 and Regulation 21(1) of the EIA Regulations 2014, as amended.

Further note that in terms of Regulation 45 of the EIA Regulations 2014, as amended, this application will lapse if the applicant fails to meet any of the timeframes prescribed in terms of these Regulations, unless an extension has been granted in terms of Regulation 3(7).

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No. 107 of 1998, as amended, that no activity may commence prior to an Environmental Authorisation being granted by the Department.

Yours sincerely



**Mr Sabelo Malaza**

**Chief Director: Integrated Environmental Authorisations**

**Department of Forestry, Fisheries and the Environment**

**Letter signed by: Ms Fiona Grimett**

**Designation: Deputy Director (Acting): National Infrastructure Projects**

**Date: 10/12/2021**

cc:	J Tenyane	Richards Bay Gas Power 3 (Pty) Ltd	Email: thabiso@phakwegroup.co.za
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## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
**REPUBLIC OF SOUTH AFRICA**

Private Bag X 447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, Tel: +27 12 399 9000, Fax: +27 86 625 1042

**Reference:** 14/12/16/3/3/2/2117

**Enquiries:** Ms. Aulicia Maifo/Mrs. Portia Makitla

**Telephone:** 012 399 9411/9627 **E-mail:** pmakitla@environment.gov.za

Ms Nicolene Venter  
Savannah Environmental  
PO Box 148  
**SUNNINGHILL**  
2157

Telephone Number: +27 (11) 656 3237  
Email Address: [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com)

### PER E-MAIL

Dear Ms., Venter

### COMMENTS ON THE DRAFT SCOPING REPORT (DSR) FOR THE PROPOSED PHAKWE RICHARDS BAY GAS TO POWER 3 2000MW COMBINED CYCLED POWER PLANT, RICHARDS BAY IDZ ZONE 1F, KWAZULU NATAL PROVINCE

The Directorate: Biodiversity Conservation has reviewed and evaluated the report and does not have any objections to the Draft Scoping Report & Plan of Study provided that all relevant National and Provincial biodiversity guidelines will be considered in the final report.

NB: The Public Participation Process documents related to Biodiversity EIA for review and queries should be submitted to the Directorate: Biodiversity Conservation at Email; [BCAdmin@environment.gov.za](mailto:BCAdmin@environment.gov.za) for attention of Mr. Seoka Lekota.

Yours faithfully

**Mr Seoka Lekota**  
**Control Biodiversity Officer Grade B: Biodiversity Conservation**  
**Department of Forestry, Fisheries & the Environment**  
**Date:** 10/12/2021



*Batho pele*- putting people first

**Savannah Environmental**  
**First Floor, Block 2**  
**5 Woodlands Drive Office Park**  
**Cnr. Woodlands Drive and Western Service Road**  
**Woodmead, 2191**

**RE: SCOPING REPORT FOR PHAKWE RICHARDS BAY GAS POWER 3 COMBINED CYCLE POWER PLANT (CCPP), RICHARDS BAY, KWAZULU-NATAL.**

**1. GENERAL**

- 1.1. The Provincial Department of Agriculture and Rural Development: Agricultural Resource Management, Land Use Regulatory Unit acknowledges the receipt of the above mentioned application.
- 1.2. The main objective of the application is to request Provincial Department of Agriculture and Rural Development to recommend, provide valuable inputs and comments on the proposed establishment of Richards Bay Gas Power 3, Combined Cycle Power Plant.

**2. BACKGROUND**

- 2.1. Phakwe Richards Bay Gas Power 3 (Pty) Ltd (PRBGP3) proposes the development of a combined cycle power plant with a capacity of up-to 2 000MW on various erven within the Richards Bay IDZ Phase 1F, Richards Bay.
- 2.2. The properties that will be affected by this proposed development are **ERF 16820, ERF 16819, ERF 1/16674 and Subdivision of ERF 17442**. The land where CCPP is proposed is currently zoned industrial and it is vacant.
- 2.3. The submitted report is trying to unpack the potential environmental impacts of their activities, early in the development process. Hence a comprehensive environmental specialist studies will be required and are in accordance with EIA Regulations as to provide competent authority with sufficient information in order to make an informed decision.
- 2.4. The proposed CCPP and associated infrastructure is in response to the provision for gas-to-power technology as part of the energy mix within the integrated Resources Plan (IRP), 2019 and is planned to be bid into future requirement processes to be initiated by the Department of Mineral Resources and Energy (DMRE).
- 2.5. It has been identified that the proposed project will have a potential impact on the environment so an Environmental Impact Assessment is required to be completed in support of an application for Environmental Authorisation prior to construction and operation of the project.
- 2.6. This is deemed important because South Africa needs to grow its energy supply to support economic expansion and in so doing, alleviate supply bottlenecks and supply- demand deficit.
- 2.7. The power plant will operate at mid-merit to baseload duty and will include the following main infrastructure;
  - 2.7.1. Gas turbines for the generation of electricity through the use of natural gas or diesel.
  - 2.7.2. HRSG to capture heat from high temperature exhaust gases to produce high temperature and high pressure dry steam to be utilised in the steam turbines.

- 2.7.3. Steam turbines for the generation of additional electricity through the use of dry steam generated by the HRSG.
- 2.7.4. Bypass stacks associated with each gas turbine.
- 2.7.5. Dirty water Retention dams and Clean water dams
- 2.7.6. Stormwater channels.
- 2.7.7. Waste Storage facility (general and hazardous).
- 2.7.8. Exhaust stacks for the discharge of combustion gases into the atmosphere.
- 2.7.9. A water treatment plant of potable water and the production of demineralised water (for steam generation).
- 2.7.10. Water pipelines and water tanks to transport and store water of both industrial quality and portable quality
- 2.7.11. Dry-cooled system consisting of air cooled condenser fans situated in fan banks.
- 2.7.12. Closed fi-fan coolers to cool lubrication oil for the gas and steam turbines.
- 2.7.13. A gas pipeline and a gas pipeline supply conditioning process facility for the conditioning and measuring of the natural gas prior being supplied to the gas and steam turbines. It must be noted however that the environmental permitting process for the gas pipeline construction and operation will be undertaken under a separate EIA process.
- 2.7.14. Diesel off-loading facility and storage tanks.
- 2.7.15. Ancillary infrastructure including
  - Roads (Access and internal)
  - Warehousing and buildings
  - Workshop building
  - Fire water pump building
  - Administration and control building
  - Ablution facilities
  - Storage facilities
  - Guard House
  - Fencing
  - Maintenance and cleaning area
  - Operational and maintenance control centre
- 2.7.16. Electrical facilities including
  - Power evacuation including GCBs, GSU transformers, MV busbar, HV cabling and 1\*275 kV or 400kV GIS Power Plant Substation
  - Generators and auxiliaries
- 2.7.17. Service infrastructure including
  - Stormwater channels
  - Water pipelines
  - Temporary work areas during construction phase.
- 2.8. As per submitted application no generation of gas inside power plant however it will be outsourced from overseas.

### **3. COMMENTS ON PROPOSAL**

- 3.1. The proposed project will not directly affect agricultural lands but its impact might be huge in agricultural production in relation to expected emissions.
- 3.2. As this is a new project over a vacant land; Land Use Regulatory Unit assume that there will be clearance of Natural vegetation.
- 3.3. It is clear that the proposed development is under Local Town Planning Scheme that is Zone 1F of the Richards Bay Industrial Development Zone but as per KZN Land Potential Categories the land is classed



as Secondary agricultural land therefore every effort should be put in place to take care of it as per CARA regulations.

- 3.4. It is recommended that the excavated furrows be back-filled and levelled proper in order to alleviate soil erosion.
- 3.5. Vegetation clearing must be kept at minimum during site preparation and re-vegetation of disturbed areas after construction is highly recommended.
- 3.6. Proper mitigation measures should be put in place, mitigation measures must highlight how the project will avoid disturbance and pollution of agricultural natural resources.

#### 4. CONCLUSION

Please be advised that the Provincial Department of Agriculture and Rural Development: Land Use Regulatory Component **has no objection** to the activity in principle. No objection is subject to

- Assurance that possible carbon emission is going to be eliminated.
- Submission of air quality report
- The applicant has a draft plan for mitigation measures pertaining demineralised water.



\_\_\_\_\_  
FOR HEAD OF DEPARTMENT

AGRICULTURE AND RURAL DEVELOPMENT

LETTER SIGNED BY: THABEDE S. B.

DESIGNATION: Acting Scientific Manager: Land Use Regulatory Unit.

DATE: 15/12/2021

Cc Mashudu Marubini, DAFF, Fax no: 012 329 5938

## INTERESTED AND AFFECTED PARTIES

## Savannah Public Process

---

**From:** Percy Langa <Percy.Langa@rbidz.co.za>  
**Sent:** Friday, 12 November 2021 09:42  
**To:** Savannah Public Process  
**Cc:** Sethabile Gcume  
**Subject:** FW: Phakhwe RBGP3 EIA Notice

Hi Nicolene,

I hope that you are well.

I noted the notice below in yesterday's Zululand Observer. Will this application replace the existing EIA approval for RGTP 2 (400 MW)? If not, is the plan to integrate the two power plants? See map below.



What is the proposed public consultations dates? This EIA will need to be presented to our Environmental Review Committee.

Regards,  
Percy

---

**From:** Percy Langa [mailto:percylanga@icloud.com]

**Sent:** Friday, 12 November 2021 08:44

**To:** Percy Langa <Percy.Langa@rbidz.co.za>

**Subject:** Phakhwr RBGP3 EIA Notice

## Savannah Public Process

---

**From:** Michelle Koyama <mkoyama@cer.org.za>  
**Sent:** Monday, 06 December 2021 13:24  
**To:** Savannah Public Process  
**Subject:** RE: SE2662: PHAKWE RICHARDS BAY GAS-TO-POWER 3 2000MW: Scoping Report review and comment period ending soon

Dear Savannah

We note that the document for public participation is password protected. This is not in line with public participation process, where documents should be widely accessible and examined by the public without any hinderance.

Please remove the password protection so that the public can have access to the documents.

Kind regards

Michelle Koyama  
Attorney

Centre for Environmental Rights NPC

A non-profit company with registration number 2009/020736/08

PBO No. 930032226, NPO No. 075-863, VAT No. 4770260653

and a Law Clinic registered with the Law Society of the Cape of Good Hope and the Law Society of the Northern Provinces  
2<sup>nd</sup> Floor, Springtime Studios, 1 Scott Road, Observatory 7925, Cape Town, South Africa

Tel 021 447 1647

[mkoyama@cer.org.za](mailto:mkoyama@cer.org.za) [www.cer.org.za](http://www.cer.org.za)


[www.facebook.com/CentreEnvironmentalRights](https://www.facebook.com/CentreEnvironmentalRights) [www.twitter.com/CentreEnvRights](https://www.twitter.com/CentreEnvRights)



Centre for  
Environmental Rights  
Advancing Environmental Rights in South Africa

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Report violations of environmental rights to the 24-hour Environmental Crimes & Incidents Hotline on **0800 205 005**. More reports of environmental violations assist in justifying more investment in more inspectors, and more enforcement of environmental laws. Numbers matter! Take the time to report violations, even if you have done so elsewhere. For more information about this CER campaign, visit <http://cer.org.za/news/numbers-matter-join-us-in-reporting-violations-of-environmental-rights>.



---

**From:** Savannah Environmental Public Process [mailto:publicprocess@savannahsa.com]

**Sent:** 06 December 2021 13:16

**To:** Michelle Koyama <mkoyama@cer.org.za>

**Subject:** SE2662: PHAKWE RICHARDS BAY GAS-TO-POWER 3 2000MW: Scoping Report review and comment period ending soon

**PROPOSED DEVELOPMENT OF THE PHAKWE RICHARDS BAY GAS-TO-POWER 3 2000MW COMBINED CYCLE POWER PLANT, RICHARDS BAY IDZ ZONE 1F, RICHARDS BAY, KWAZULU-NATAL PROVINCE  
(DEFF Reference No.: 14/12/16/3/3/2/2117)**

Dear Stakeholder and Interested & Affected Party,

With reference to the attached notification letter sent on Friday, 12 November 2021, this e-mail serves to inform you that the review and comment period for the Scoping Report is ending on **Monday, 13 December 2021**.

As you may recall, the review and comment period for the Scoping Report commenced on Friday, 12 November 2021.

The Scoping Report is available on our website [click here](#)

Thank you to those Stakeholders and Interested and Affected Parties who submitted their written comments and those who had not yet to please do so before on **Monday, 13 December 2021**.

Kind regards,

[Unsubscribe this type of email](#)



t: 011 656 3237  
f: 086 684 0547

**Nicolene Venter**  
Public Process

e: [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com)  
c: +27 (0) 60 978 8396

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Austerville, Durban 4052  
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Fax: +27 31-468-1257  
[www.sdcea.co.za](http://www.sdcea.co.za)  
Registration No: 028-964-NPO

South Durban  
Community  
Environmental  
Alliance



13 December 2021

**Nicolene Venter**

**Savannah Environmental (Pty) Ltd**

P.O. Box 148, Sunninghill, 2157

**Tel No:** +27 11 656 3237

**Cell:** +27 60 978 83 96

**Email:** [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com)

**RE: COMMENTS FOR PROPOSED DEVELOPMENT OF RICHARDS BAY GAS TO  
POWER 3 2000MW COMBINED CYCLE POWER PLANT, RICHARDS BAY IDZ ZONE  
1F, RICHARDS BAY**

## **Background**

The SDCEA (South Durban Community Environmental Alliance) is an environmental justice organisation based in south Durban. It is made up of 19 affiliate organisations, and has been active since its formation in 1996. It is considered successful for many reasons. One of which is that it is a vocal and vigilant grouping in terms of lobbying, reporting and researching industrial incidents and accidents in this area. It contributes to the struggle against Environmental Racism for Environmental Justice and Environmental Health. The SDCEA hosts activities such as awareness campaigns, workshops, protests and meetings; to discuss any facets of environmental justice, including community health, unsustainable development, industrial pollution and disproportionate governmental representations.

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### **SDCEA Members**

Earthlife Africa- Durban  
Clairwood Ratepayers Association  
Umkomaas Anti-Pollution Watchdogs  
Isipingo Environmental Committee  
Athlone Park Residence Association  
Airport Farmers Association  
KZN Subsistence Fishermen Forum  
Poor Flat Dwellers Association

### **SDCEA MEMBERS**

Blowatch  
Clairwood Social Forum  
Project Steering Committee  
Active Citizens Movement Umbilo  
City of Love Ministeries  
Merebank Civic Committee  
Urban Futures Centre DUT  
Chatsworth Civics

### **SDCEA Members**

Silverglen Civic Association  
Wentworth Development Forum  
Treasure Beach Environmental Forum  
Christ the King Church  
Ubunye Bama Hostela  
Bluff Ridge Conservancy  
Merebank Ratepayers Association



## **Documents**

The documents provided online are only in English. The documents need to be available in isiZulu, so that the majority of communities in and around the area can understand and provide sound comment on the proposed project. The isiZulu documents need to be entirely accessible to the public, therefore hard copies will have to be distributed. Many community members do not have access to the internet therefore they cannot download the documents off the internet to make meaningful comment as data costs money which rural communities do not have given the current economic situation prevalent in the country at the moment. It is the responsibility of the paid independent consultants to ensure that all communities have access to the documents and COVID should not be used as an excuse to not have any hard copies distributed.

## **Meetings**

Engagement in the public participation process is also an obstacle as it is taking place online and the majority of interested and affected parties do not have access to data, computers or smartphones to engage meaningfully. Again, COVID cannot be used as a reason to not have any options for engagement with those who cannot be online.

## **Terms of Reference**

The terms of reference for the appointment of the specialists need to be made available to the public. It is crucial for us to know if these specialists and consultants are people of repute and credibility. We need to understand what process was in place in procurement to appoint these experts and consultants. How was this advertised! How many groups tendered for this project and short listed as communities are concerned with biasness and unfairness when no one follows due process and desk top studies are given as facts?

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## **Research**

The research done as part of the socio-economic study is inadequate. We want to see evidence that this development will actually create jobs pass the construction phase and will benefit the community long term. Will training be provided to the community to upskill them to be employed? What level of real investment in the community is going to actually take place?

## **Accidents, explosions, gas leaks and disaster management plans**

Richards Bay is already a development chemical cocktail. With the addition of this development the current risk increases exponentially. Where there are gas plants of any nature there is always great risk of accidents, and explosions. Several large pipeline failures in the past few years, leading to massive damage and even loss of life, have highlighted this risk. Pipelines can break open and leak. When this happens, the liquid or gas which leaks out can explode and cause fires. Or it could poison water, crops, land and air. When a person is near a leak from a pipeline, he or she may feel tiredness, dizziness, headaches, nausea and/or vomiting and difficult breathing. A person may lose consciousness, and could even die. Gas from leaking pipelines may over a long time even cause diseases like cancer and leukaemia. We demand that a proper health study be conducted, there also needs to be a risk assessment done and a proper and adequate disaster management plan which must include a contingency plan.

## **Conclusion**

Gas power plants are not the energy infrastructure that South Africa needs if it wants to build a clean energy future. Gas plants and gas pipelines will simply add to climate change and commit the country to several more decades of destructive dependence on the oil and gas industry. The concept that natural gas offers a bridge to a low-carbon future is false. If South Africa wants to incorporate a Just Transition, then we need to move away completely from fossil fuels, because according to The International Panel on Climate Change, *“there is only a dozen years for global warming to be kept to a maximum of 1.5C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for*

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*hundreds of millions of people* (2018). The recommendation is that there must be a transition to renewable energy which South Africa has a vast potential for. And although this development claims to be a move towards a just transition, as it starts off as an energy mix, that 'MAY' eventually reach zero emissions, there is no guarantee that it will reach 100% on green hydrogen as stated, and until then the effects of gas on the environment are far more detrimental than coal.

SDCEA is at the coal-face of the largest oil refinery complex in Africa. We have witnessed countless explosions, leaks and other pipeline accidents. For the sake of local air, water and land quality, and for future generations whose lives are threatened by the climate emergency, the developers and authorities owe South Africa far higher levels of consciousness about the risks of massive gas developments in this, the most unequal society on earth.

***Please note: We reserve the right to submit additional comments within 48 hours.***

Submitted by:



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Desmond Mathew D'Sa

SDCEA Coordinator

Goldman Environmental Prize winner: Africa 2014

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Bluff Ridge Conservancy  
Merebank Ratepayers Association

**YOUR REF: SE2662**

**Nicolene Venter**

Savannah Environmental

By email: [publicprocess@savannahsa.com](mailto:publicprocess@savannahsa.com); [info@savannahsa.com](mailto:info@savannahsa.com);

**Sithembiso Soyaya**

Acting Executive Manager: Corporate Affairs: Transnet National Ports Authority

By Email: [Sithembiso.Soyaya@transnet.net](mailto:Sithembiso.Soyaya@transnet.net)

**Kami Sithole**

Port Manager – Transnet National Ports Authority

By Email: [thami.sithole@transnet.net](mailto:thami.sithole@transnet.net)

13 December 2021

Dear Savannah Environmental Representatives

**COMMENTS ON: SCOPING REPORT FOR THE PROPOSED PHAKWE RICHARD'S BAY GAS POWER COMBINED CYCLE POWER PLANT (CCPP) PROJECT WITHIN THE RICHARDS BAY INDUSTRIAL DEVELOPMENT ZONE (IDZ), KWAZULU NATAL**

1. groundWork submits these comments on the Scoping Report (the “SR”) of the proposed gas Power Combined Cycle Power Plant (the “project”) located at the Richards Bay (KwaZulu Natal) Industrial Development Zone (the “IDZ”).
2. groundWork has a particular interest and expertise in environmental justice issues, and a long-standing history of working with, and representing, the interests of historically disadvantaged communities within South Africa



3. Our concerns related to the Scoping Report (hereinafter the 'SR') and Specialist Reports fall into the following categories:

4. Need and consideration of alternatives
5. Costs
6. Climate change impacts
7. Air quality impacts
8. Marine impacts
9. Noise impacts
10. Socioeconomic impacts
11. Participation and landowner consent
12. Severe hazard risks
13. Risks of failure

4. Need and consideration of alternatives

4.1. A 2000MW gas plant is not needed. All our energy requirements can be met with a fast build out of new renewables, connected to the existing grid infrastructure, while building storage capacity and more grid infrastructure, according to Meridian Economics' final report *Accelerating renewable energy industrialisation in South Africa, 2020*. This is not only the least cost pathway, but a cleaner, safer pathway that can create more and better jobs. What is glaringly lacking is the political commitment to renewable energy in South Africa.

4.2. Gas is resource heavy and suitable cleaner alternatives were not considered in the SR. Infinite resources such as the sun's radiation, wind and wave action are sustainable. South Africa averages more than 2500 hours of sunshine per year with average solar radiation levels of 4.5 to 6.5kW hours per square metre per day. The global solar radiation average is much higher compared with parts of the USA and Europe, making South Africa one of the most favourable countries for solar energy production in the world. The feedstock resource for gas is finite and, worst of all, dependent on extremely high quantities of clean water throughout its lifecycle from extraction to production to combustion. This strain on water resources intensifies vulnerabilities such as displacement of communities, community livelihoods and works against water conservation and ecosystem strategies



required to build climate resilience.

- 4.3. The proposed project is not essential to the Just Transition. Gas is expensive, hazardous, destructive to people and ecosystems and a climate change accelerator. Gas infrastructure plans do not fit into the goal of a just transition to a low carbon economy and it is not needed. There are better pathways to achieve a just transition. With the prioritisation of community driven and owned renewable energy systems, the energy trilemma of addressing energy sustainability, energy security and energy equality can be met, ensuring that we are well on our way to a fair and equitable just transition for all.
- 4.4. It is a legal requirement that alternatives must be considered as a part of the Scoping process. In terms of alternatives, the Environmental Impact Assessment Regulations, 2014 require that it must address not only the location alternatives, but that it must consider alternatives in terms of the type, design, layout and technology of the activity, and different means of meeting the general purpose, including not implementing the activity.<sup>1</sup> Despite this there are only consideration of alternative sites, and there are no details of alternative technologies having been considered in terms of the alternatives to gas (type and technology). As will be indicated below, gas and the pipelines associated with it poses significant risk not only in terms of health, environment and climate change, but significant financial risk, as this project is proposed as a long-term gas project. Moreover, there are alternative renewables which are cost efficient with lower risk in terms of long-term energy procurement.
- 4.5. The no-go option: The SR fails to consider the possibility that renewable alternative energy technologies with far fewer social and environmental impacts could be used to respond to this rising energy demand. It also fails to consider the cost savings that these alternatives would provide in comparison with the project option over ten to twenty years.
- 4.6. The country's energy 'emergency' has been created through poor decision-making skewed towards fossil fuels development. Attempts to resolve the 'emergency' through additional fossil fuel investments, dependent on the whims of global energy markets, will dig a yet deeper hole and put a just transition to a low carbon economy further out of reach. Procuring gas power and building gas infrastructure is effectively locking in gas for a longer period than is required, crowding out space for ever cheaper and more reliable clean

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<sup>1</sup> EIA Regulations, 2014



energy, and exacerbating the climate crisis.

- 4.7. According to the IRP, gas is not meant to be considered as the main source of energy, but only complement other sources. This will result in the hardwiring of expensive power at higher rates. Gas generators are expected to burn LNG for much longer periods of time which equates to huge throughput of gas in comparison to peaker plants, which run at less than 5% of the time to supplement the energy deficit. Other analyses, such as work published by Meridian Economics in 2020, reiterate the lack of need and desirability of gas-powered energy such as this 2000MW gas plant in terms of both cost and climate impacts, particularly in the time frames and with the contractual obligations of these projects.<sup>2</sup>
- 4.8. The proposed project is not needed to provide 'baseload' to the South African grid. The rest of the world is moving into a different paradigm that makes this concept of baseload altogether obsolete. Utilities are increasingly abandoning this terminology and requirements for this kind of energy – requirements that, in today's world of ever-cheaper renewables and storage, were driving electricity prices unnecessarily upward for customers. Renewable energy projects, which include wind, solar and battery storage, will meet baseline criteria within shorter timeframes. Moreover, having a series of such projects would offer more reliable and resilient power to the grid.
- 4.9. The energy production of the project for the grid is not clear. Given the supposed criticality of this electricity for the grid, it would be important to clarify the actual energy production capacity of this plant.
- 4.10. The green hydrogen pathway proposed in the SR is vague and does not contain specified timelines, or consideration of technologies to be used, including conversion requirements from gas to hydrogen or cost implications indicating that it is in fact any kind of viable option. It is largely unproven and untested technology requiring a large build out of renewable energy to support its green hydrogen production in any case, as well as a large water resource input. The socio-economic impacts including high local content job

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<sup>2</sup> A Roff *et al.*, *A Vital Ambition: Determining the cost of additional CO<sub>2</sub> Emission Mitigation in the South African Electricity System*, Meridian Economics with CSIR Energy Centre, (2020), <https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf>.





creation over highly specialized jobs is not considered. It is not a solution to the South African energy problem as it does not assess the affordability of this technology to all South Africans, nor their access to energy using this technology, nor its ability to create local, safe, clean and sustainable jobs and livelihoods. To build a gas plant with the ‘vision’ to include to green hydrogen technologies without a concrete plan is nothing but an empty promise and should not mislead the public into thinking that this will in fact happen.

## 5. Costs

- 5.1. The proposed gas plant is not a least cost option. They are designed to be a short-term resource to fill a narrow gap in case of true emergencies, such as large amounts of critical power being knocked offline by a storm. The application of this technology for a long term contract is quite distinct, and this lock-in will result in higher tariffs and less affordable and accessible energy – quite the opposite of what is intended for the social goals of these procurement processes.
- 5.2. A far more cost-effective solution would be for the system operator to balance the system to bring on least-cost solar and wind during their production times and complement these in renewable trough production hours with flexible resources such as pumped storage and utility scale batteries. Gas leads to much higher electricity prices for all by favoring more expensive and volatile power systems, and therefore to less reliable power as customers, utilities, and governments cannot pay these high costs.<sup>3</sup>
- 5.3. Inadequate cost analysis of the project compared with other renewable energy options over the proposed operation period, including revenue and tax implications.<sup>4</sup> The cost of renewable energy generation will provide local content, as well as reduce the cost of energy over time.

## 6. Climate change

- 6.1. The 2017 judgment in the case of *Earthlife Africa Johannesburg v the Minister & Others* (“**the Thabametsi case**”) confirmed that a Climate Change Impact Assessment (CCIA) is a

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<sup>3</sup> See, for example, S. Nicholas, *Ghana: Reliance on LNG means increased fuel price risk and further unaffordable generation contracts*. IEEFA (March 30 2021), Available at: <https://ieefa.org/ieefa-ghana-reliance-on-lng-means-increased-fuel-price-risk-and-further-unaffordable-generation-contracts/>

<sup>4</sup> A Vital Ambition





necessary component of an EIA for projects with climate impacts. In this case, the court acknowledged the need for a CCIA much broader than a mere assessment of anticipated emissions. It confirmed the need for a comprehensive assessment, which assesses, *inter alia*, the impacts of climate change on the project and the ways in which the project might aggravate the impacts of climate change in the area.<sup>5</sup> The Pretoria High Court concluded that “[w]ithout a **full assessment** of the climate change impact of the project, there was no rational basis for the Chief Director to endorse these baseless assertions” (emphasis added).<sup>6</sup>

#### 6.2. A CCIA must analyse the following:

- the indirect and full life-cycle emissions, these being the GHG emissions arising from extraction of gas; transportation of gas; construction of the plant, operation, and decommissioning;
- cumulative emissions (the additive contribution of the project to pre-existing GHG emissions for South Africa); and
- the environmental and social cost of the GHG emissions, that is, the contribution of the project’s GHG emissions to South Africa’s climate costs and impacts;
- the ways in which the project area will be impacted by climate change and the extent to which the project would aggravate these impacts. In other words, the project’s impacts on the area’s climate resilience and ability to adapt to a changed climate. Given that this is a long-term and large-scale project, consideration must be given to the ways in which climate change will impact on the area and communities where the project will be based, and how the project’s own impacts will affect the area’s resilience or vulnerability to the effects of climate change as they intensify; and
- the ways in which the effects of climate change will impact on the project itself, and its ability to operate optimally and efficiently for its full anticipated lifespan.

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<sup>5</sup> See para 44, Thabametsi judgment.

<sup>6</sup> Para 101, Thabametsi judgment. The “baseless assertions” to which reference is made are the statements in Thabametsi’s EIR - on which the Chief Director relied exclusively - that the climate change impacts of the project were relatively small and low.



6.3. The SR fails to adequately address these impacts. Of particular concern are the following gaps:

- 6.3.1. Emissions from gas production, gathering, processing, initial transport, and LNG liquification are not considered in the emissions assessment. Given that a range of studies have shown that these upstream emissions, a result of methane leaks and venting, as well as the energy needed to transport and liquefy gas, make gas equivalent to or worse than coal for the climate, this omission is highly problematic.<sup>7</sup>
- 6.3.2. The current primary exporters of LNG – Qatar, Australia, the United States, and Malaysia, are all over 10,000 km long distance from South Africa. There are not only many emissions generated by the ship to travel this distance, but large quantities of LNG boil off over this distance. Many LNG carriers vent much of this boiled off methane to the atmosphere to control pressure in the ship tanks.
- 6.3.3. At minimum, the climate change assessments should compare emissions from the gas-to-power plant to both coal and renewables alternatives.
- 6.3.4. The latest IPCC report concludes that methane has between 28 and 36 times the global warming potential of CO<sub>2</sub> over a 100-year time scale. Given that this has been established since 2013 the study should rely on the 2007 IPCC Assessment Report's figures.<sup>8</sup> Moreover, there is good reason to use the 20-year global warming potential for methane, given the short-lived gas's contribution to warming that could unlock major climate tipping points in the next twenty years.<sup>9</sup>
- 6.3.5. Mitigation measures need to be proposed for the *significant* greenhouse gas impacts of these plants. Carbon offsets are notoriously inadequate at successfully offsetting fossil fuel emissions, with problems of faulty baselines, lack of additionality, impermanence, and leakage plaguing almost all forms of carbon offset projects<sup>10</sup>.

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<sup>7</sup> S. Roman-White *et al.*, *Life cycle greenhouse gas perspective on exporting liquefied natural gas from the United States: 2019 update* 54 (2019).

<sup>8</sup> Intergovernmental Panel on Climate Change, Working Group 1, *Chapter 8 - Anthropogenic and Natural Radiative Forcing*, in *Climate Change 2013 - The Physical Science Basis, Fifth Assessment Report of the IPCC* 659–740 (5th ed. 2014), <http://www.ipcc.ch/core/books/working-group-1/working-group-1-report-1-2013-the-physical-science-basis/anthropogenic-and-natural-radiative-forcing/63EB1057C36890FEAA4269F771336D4D>.

<sup>9</sup> T. M. Lenton *et al.*, *Climate tipping points — too risky to bet against*, 575 *Nature* 592–595 (2019), <http://www.nature.com/articles/d41586-019-03595-0> (last visited Apr 24, 2020).

<sup>10</sup> C.f. M. Cames *et al.*, *How additional is the Clean Development Mechanism?* *Oko-Institute* (2016), [https://www.infras.ch/media/filer\\_public/11/0f/110fae5f-d1ff-4e8f-9f97-f83a34c86dd1/clean\\_dev\\_mechanism\\_en.pdf](https://www.infras.ch/media/filer_public/11/0f/110fae5f-d1ff-4e8f-9f97-f83a34c86dd1/clean_dev_mechanism_en.pdf)



6.3.6. The increasing frequency of powerful coastal storms and their likely impact on these facilities<sup>11</sup> is not covered in the SR. The “protection” supposedly afforded by the bays is clearly insufficient in the face of a cyclone, for example.<sup>12</sup>

## 7. Air quality

7.1. The SR lacks adequate pollution controls.

7.2. The location of the plant means that communities living closeby will be exposed to the emissions from the plant at all times that the predominant onshore wind is blowing, which is typically during the day and therefore exactly when these plants will be generating power.

7.3. While it is often assumed that the coastal location of these facilities will reduce their degradation of local air quality because of more breeze along the coast, these areas are also subject to strong inversion layers, particularly during June and July.<sup>13</sup> These inversions trap air pollutants so that they cannot disperse, severely degrading local air quality.

7.4. In this context, the Atmospheric Impact Report has several glaring flaws:

7.4.1. Air toxics emitted by natural gas combustion in the plants, including carcinogenic formaldehyde and acetaldehyde<sup>14</sup>, are not evaluated or quantified in the Report.

7.4.2. Toxic volatile organic compounds (VOCs) emitted by natural gas leaks, likely to occur in one or multiple parts of the chain of gas connections between the plants and the mainland, also go unmentioned in the Report.

7.4.3. Hazardous secondary pollutant formation as a result of NO<sub>x</sub>, SO<sub>2</sub>, and VOC emissions from the plant, particularly ground-level ozone, is also not evaluated in the report.

7.4.4. The CALPUFF models used do not include emissions from other proposed facilities within the Richard’s Bay port and surrounding area, but rather add the plant’s emissions only to current air quality monitoring data, thereby leaving out critical

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<sup>11</sup> E.L. Molua *et al.*, *Economic vulnerability to tropical storms on the southeastern coast of Africa*, 12 Jamba (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7669996/>.

<sup>12</sup> J. Fitchett, *Southern Africa must brace itself for more tropical cyclones in future*, The Conversation, 2018, <http://theconversation.com/southern-africa-must-brace-itself-for-more-tropical-cyclones-in-future-103641>.

<sup>13</sup> H. Tularam *et al.*, *Harbor and Intra-City Drivers of Air Pollution: Findings from a Land Use Regression Model, Durban, South Africa*, 17 Int J Environ Res Public Health (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7432936/>.

<sup>14</sup> A.R.B. Pereira *et al.* *Experimental evaluation of CO, NO<sub>x</sub>, formaldehyde and acetaldehyde emission rates in a combustion chamber with OEC under acoustic*

*excitation*, Energy Reports (2019), <https://www.sciencedirect.com/science/article/pii/S2352484719301556>



cumulative impacts of emissions from other industrial activity in the future (*e.g.* Mondi, other gas plants and fuel storage tanks)

- 7.4.5. The report therefore fails to assess the worst-case scenario adequately, in which these cumulative emissions are emitted on a day when a temperature inversion prevents dispersion of these hazardous pollutants.
- 7.5. The risks of an explosion resulting from the plant in busy and economically important port areas are not to be taken lightly, nor are the air quality impacts that would follow such an explosion. Nonetheless, these scenarios are not considered in the air quality assessment reports.
- 7.6. While the SR makes reference to the decision not to use Heavy Fuel Oil (HFO) in these dual-fuel engines, it also references impacts of HFO use, leaving doubt about the claim that HFO will not be used such as in the event that LNG is not available. Air quality and climate impacts would be even greater in the case of the use of HFO.
- 7.7. These engines require constant rotating maintenance. Without this, they will run much less efficiently and emit more pollutants per MW of power. Direct, continuous emissions monitoring both on stacks and at the border (typically called “fenceline monitoring”) of the plant should be required, both to assess standard emissions levels, and to detect any anomalies in emissions.
8. Marine Ecology Impacts
- 8.1. There is no information on the source and discharge points of water, quantities of water required and permissions required for the usage of water within the IDZ
- 8.2. There is no information on the temperature of the water to be discharged into the receiving environment, both from the plant and storage facility, and the LNG carrier supplying the plant.
- 8.3. The impacts of waste and discharge of water from the generators and cooling of the generators has not been adequately assessed and only modelling was used to determine the effects of discharge of heated water on the receiving environment. Nor how it will be monitored and reported during operations in South African ports.
- 8.4. The Marine Ecology Impact Assessments screen out a series of important impacts that a regularly visiting LNG carrier, is likely to have on the local marine environment in the port



over the duration of the project.

- 8.5. Dredging activities, piling and impacts on water flow for the installation of pipelines, transmission lines and storage facilities are not adequately described or addressed.
- 8.6. Plant and vessel management practices, oil spill contingency plans and other relevant considerations for operating within the port and IDZ are not adequately addressed
- 8.7. The risk of an LNG or gas spill to local marine life is not addressed. Research suggests that methane not only dissipates into the atmosphere, but can also dissolve in water, changing the chemistry and affecting marine life.<sup>15</sup>

## 9. Noise

- 9.1. There is no information provided on actual noise levels of similar operations in South Africa or other parts of the world, including the CCPP and servicing LNG vessel. No mitigation options are considered for the benefit of workers. And cumulative noise impacts of the IDZ are not considered
- 9.2. Underwater noise studies are not suggested in the noise assessments for the inland and marine environments, despite the significant impacts that this noise has on many species, and marine mammals in particular.

## 10. Socio-economic impacts

- 10.1. The costs of this energy relative to renewable sources over the operating time-frame is not considered in the Socio-Economic study.
- 10.2. Half of the jobs associated with the project are expected to be short term site establishment construction jobs, while the long-term production ones are high-skilled positions likely to be filled by foreigners. The precise job numbers in the socio-economic impact assessments are not provided. The renewable energy sector with local content creates, not just more jobs, but decent jobs. The International Labour Organisation (ILO) in a recent brief 'Green jobs and renewable energy: low carbon, high employment' stated that renewable energy has a *demonstrated job creation effect*. And that energy created through solar photovoltaic cells, for example, have a higher number of jobs created per

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<sup>15</sup> S. B. Joye et al., *Magnitude and oxidation potential of hydrocarbon gases released from the BP oil well blowout*, 4 Nature Geoscience 160–164 (2011), <https://www.nature.com/articles/ngeo1067>.



unit of energy than energy produced through fossil fuels. The positive job creation effect of renewable energy is the result of longer and more diverse supply chains, higher labour intensity, and increased net profit margins, while providing the benefit of less hazardous working conditions.

10.3. Gas on the other hand requires a limited number of highly specialised jobs throughout its lifecycle, subject to market volatility

10.4. There are also several communities that can be potentially harmed from the power plant, including fishing and farming communities. Land use changes to gas operations will impact on subsistence fishers, recreational fishers, and fishers that depend on fishing for their livelihoods. The socio-economic impacts assessment must comprehensively assess the potential risks and costs of the power plant to these and other local communities that subsist on natural resources nearby to the project site.

## 11. Public participation

11.1. Online Scoping Report documentation was password protected, preventing people from accessing and assessing the documentation. This issue was raised with Savannah Environmental on previous occasions and they chose to dismiss our concerns and continue to password protect documentation that is meant to be in the public domain and with impacts to the public.

11.2. Public participation has not been sufficient, and information related to the project has not been easily accessible to affected communities. The tribal authorities and communities of Dube and Mkhwanazi near the Richard's Bay port were not identified as potentially impacted communities and were not notified or included in the public participation processes.

11.3. Informal settlements and land users that include market gardeners in the affected areas have not been notified or included in the list of potentially affected parties. The market gardeners that work their gardens along the canal in Richard's Bay for example have not been notified and included in the decision-making process.

11.4. Fisher communities, and especially subsistence fishers that are dependent on the oceans for their livelihoods and food security were not notified and made aware of the proposed development.

11.5. Adequate notice must be given to reach out to people in the affected areas. Public



participation is a two-way process and should allow for engagement and understanding of the impacts of the proposed developments. The pandemic should not be used to fast track development while excluding and restricting people's ability to participate. It is violating people's right as public trustees to the environment and their role in maintaining a healthy and vibrant democracy.

11.6. Many communities were also excluded from any online and digital consultation as they are unable to afford the technology and data to access this information.

11.7. The landowner consent documentation for sites were missing and we seek confirmation of the plant's compliance in relation to conducting the environmental impact assessments with the correct authorising bodies and their representatives.

## 12. Explosion Risks

12.1. LNG carriers and Storage Regasification Units (SRUs) are essentially hazardous bombs, composed of huge quantities of latent energy. The dangers of having these directly beside an active port and IDZ that contains many other fuel sources, chemicals storage and stores fertilizers, are significant, and cannot be underestimated. These risks come from:

12.1.1. Accidents

12.1.2. Severe storms, which are also poised to become more common with climate change

12.1.3. Terrorism

12.2. There is very little consideration of these possibilities within the SR, however, or assessment of what such an explosion would mean for workers or communities.

## 13. Risks of failure:

13.1. The company does not have a track record of running for long periods and it is largely unproven technology. Attempting to shore up a national grid on the back of technology that has not been proven for the purpose for which it is intended, and which is dependent on global gas markets over that period questions the consistent provision of this power.

13.2. An LNG fuel disruption during the operational period may result in ships being either inoperable or granted "emergency" exemptions that enable Heavy Fuel Oil (HFO).

There is no indication of how will fuel usage be monitored, reported and regulated.

13.3. Risk of one line being affected

13.4. Risk of plant failure – no track record



In conclusion, the proposed 2000MW gas plant does not fit into the presidential commitment to a just transition towards a low carbon, inclusive, climate change resilient economy and society. It is not the best technology available, but rather, it is expensive, dangerous, exclusionary and will lock South Africa into gas which will increase our carbon and greenhouse gas emissions and fast track the effects of climate change. The gas plant is not needed. There are better alternatives that will meet our electricity demand are cleaner, safer, cost effective, inclusive and will improve our climate resilience in the just transition. These alternatives were not considered in the Scoping Report.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Avena Jacklin'.

**groundWork**

Avena Jacklin

Climate and Energy Justice Campaign Manager