

Our Ref: J27035

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Attention: Mr CDH BARRATT
Chairman - St Francis Kromme Trust

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ESKOM ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944) FOR A PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE: COMMENTS ON THE REVISED PLAN OF STUDY FOR EIA

Your correspondence to Ms. Jaana-Maria Ball of Arcus GIBB (Pty) Ltd entitled "ENVIRONMENTAL IMPACT STUDY: ESKOM NUCLEAR POWER STATION: PROJECT NO J27035: EIA 12/12/20/944" refers.

Arcus GIBB acknowledges receipt of the above-mentioned letter. We thank you for your valuable comments and your participation in the Eskom Nuclear Power Station (NPS) Environmental Impact Assessment (EIA) process to date. Your questions concerning the Nuclear-1 EIA process have been noted.

Responses to your comments / questions are as follows:

Your comment (1)

Referring to the above, we believe that the total Environmental Impact Assessment is completely null and void for the following reasons:

- The change from the initial terms of reference to the new terms of reference i.e. a change for scoping alternative to establish which one of five proposed nuclear sites to reducing this to three without any reasons arising from the assessment to accepting that three nuclear stations will now be constructed

Response (1)

During public participation and in related documentation it was communicated that Eskom's longer term plan was to develop a nuclear programme of 20 000 MW and that all three sites, if environmentally feasible, would be utilised in the future. Eskom has notified the public of its intention to apply to the Department of Environmental Affairs (DEA) to have all three sites approved during this process. Therefore although this EIA is for a nuclear power station with a maximum capacity of 4 000 MW, should it be deemed feasible, Eskom would make the necessary applications to the respective government departments to construct additional nuclear power stations on the various sites, which have been identified for nuclear development.

Eskom has indicated its intention to apply for authorisation for all three sites currently been assessed as part of the Impact Assessment Phase of the EIA. The final decision as to any potential amendments to the current application would depend on the promulgation of the amended Regulations as well as the Department of Environmental Affairs (DEA's) approval of Eskom's combined application, if and when it is submitted to the Department. Interested and Affected Parties (I&APs) will be informed of Eskom's decision in this regard and allowed to further comment on this decision. Such a decision, undertaken by the DEA will be made after the Department has considered all information provided to it for consideration, including your comments and concerns.



Your comment (2)

- the fact that alternatives are not being assessed

Response (2)

As described above it is clear that alternatives have been considered during the Scoping Phase of the EIA, whereby as a result of technical issues two alternatives (Brazil and Schulpfontein) were excluded. The remaining three sites have been taken forward into the Impact Assessment Phase of the EIA phase as they were deemed feasible, by DEAT, following the Scoping Phase for the potential construction of a nuclear power station and subsequently required to be subjected to additional detailed specialist assessments.

The consideration of alternatives is not only limited to site alternatives nor is it a requirement to continue any alternative once it is deemed not to be feasible as a result of assessments and information derived from the EIA process.

In light of the above, Arcus GIBB considers that site alternatives have been assessed and evaluated. The Draft Environmental Impact Report will continue to evaluate and/or discuss various other alternatives including layout, technologies, plant types and mitigation strategies etc.

Your comment (3)

- No mention is made of what the “associated infrastructure” is. Obviously this can affect the scoping process

Response (3)

Associated Infrastructure is discussed in Chapter 4 of the Final Scoping Report, and includes: a fuel building; reactor building; safeguard building; diesel building; turbine building; waste building; nuclear auxiliary building; the electrical building; access building and the office building.

The following additional infrastructure will or could potentially be required: internal road network as well as the potential for upgrading of existing roads in or around the proposed site; pipelines, for example water and sewer; transmission network including substations and power lines; construction village; cooling water intake basin and outflow structure; sewage treatment facilities; desalinisation plant; contractors yard for laydown of materials and other equipment; and security infrastructure.

The EIA application covers all activities identified above.

Your comment (4)

- Mention has been briefly made of the construction of a harbour – this require a full EIA on its own

Response (4)

Eskom does not propose to construct a harbour. Various alternatives, including a typical intake basin (similar to that of the Koeberg nuclear power station) and intake pipelines to extract the water required for cooling purposes and outfall tunnels, which will be used to discharge the water back into the ocean, are being considered. The potential impacts associated with such structures will be assessed in the Impact Assessment Phase of the EIA and reported in the Environmental Impact Reports (EIRs).

Your comment (5)



- It is inappropriate to change the scope of the project in the Plan of Study at such a late stage.

Response (5)

Please refer to responses 1 & 2 above.

Your comment (6)

- It is irregular for a Plan of Study to make assumptions that on new regulations which have not yet been promulgated.

Response (6)

Your comment is noted. Eskom has only indicated their intention to apply for authorisation for all three sites currently been assessed as part of the Impact Assessment Phase of the EIA. The final decision as to any potential amendments to the current application would depend on the final promulgation of the required regulations as well as DEA approval of Eskom's combined application, if and when it is submitted to the Department. Such a decision, undertaken by the DEA will be made after the Department has considered all information provided to it for consideration, including your comments and concerns.

Your comment (7)

- No other assessment in the country would be allowed to make application in this manner and it is completely out of order.

Response (7)

Your comment is noted.

Your comment (8)

- With the change to three nuclear stations scoping has not taken into account the disposal of waste from the full programme as well as the related infrastructure.

Response (8)

The disposal of waste was discussed in the Scoping Report. Refer to section 4.8 "*Radioactive Waste (Radwaste)*".

The disposal of non radioactive and radioactive waste will be discussed in the Environmental Impact Report as well as the Environmental Management Plan (EMP). Although such discussions will occur with specific reference to the respective sites the total potential amount of radioactive waste should all three sites be developed will be discussed.

Waste disposal and transportation will be further addressed in the EIR (as requested in DEAT letter dated 19 November 2009).

With respect to the various streams of radioactive waste, the management of radioactive waste falls under the jurisdiction of the Minister of Minerals and Energy in terms of the Nuclear Energy Act, and is also subject to a licensing process under the jurisdiction of the NNR.

Your comment (9)



- Over the period that the existing process has been in place confusion has arisen over the five/three sites being assessed simultaneously. Separate EIAs should be implemented.

Response (9)

The original application¹ submitted to the DEAT in May 2007, and the amended application dated July 2008, was an application to commence with an EIA process for the proposed construction, operation and decommissioning of a single NPS, referred to as Nuclear-1. During the Scoping Phase of the environmental authorisation process, five sites were assessed as alternative sites and were compared in order to identify a single preferred site for the location of Nuclear-1. As discussed in various responses above, the scoping report concluded that Duynefontein, Bantamsklip and Thyspunt were considered to be feasible to be taken into the Impact Assessment Phase, whereby full detailed assessments were to be conducted on all three sites

The Revised Plan of Study for EIA serves as a mechanism to communicate that Eskom intends to amend the original application for environmental authorisation submitted to the DEAT in May 2007, and amended again in July 2008. The intended changes pertain to Eskom's decision to pursue their strategy to develop a fleet of Nuclear Power Stations (NPSs), as originally identified during the public participation meetings relating to the Scoping Phase of the EIA. It is Eskom's intention that the amended application comprise a combined application for environmental authorisation to develop three NPSs on all three sites regarded as suitable for further consideration during the detailed Impact Assessment Phase of the environmental authorisation process.

Your comment (10)

- The assessment of alternative layouts on a particular site is totally different from the original that alternative sites will be assessed.

Response (10)

As stated in Response (1) & (2), DEAT indicated that they were satisfied with the site alternatives, since DEAT applied their minds to what was reasonable and feasible with respect to the original five alternatives. Regulation 385, Section 8 (v) requires that the competent authority take the following into account when considering applications: "*any feasible and reasonable alternatives to the activity which is the subject of the application and any feasible and reasonable modifications or changes to the activity that may minimise harm to the environment*".

In terms of Regulation 385 (in terms of Chapter 5 of NEMA), alternatives in relation to a proposed activity, means different ways of meeting the general purpose and requirement of the activity. This may include alternatives to: the property or location; the type of activity; the design or layout of the activity; the technology to be used in the activity; and the operational aspects of the activity.

Your comment (11)

- An assessment of the related infrastructures is missing from the PoS.

Response (11)

See Response (3).

¹ The submission of an application to the competent authority is the first step in the EIA process. The application is made in order to register the project with the competent authority and obtain permission to proceed with the Scoping and Detailed Impact Assessment phases of the EIA process.



Your comment (12)

WE SUBMIT THAT THE PROJECT IS TOTALLY DIFFERENT FROM THAT ORIGINALLY INTENDED IN THE SCOPING REPORT AND REQUEST THAT THE ENVIRONMENTAL PROCESS SHOULD BE STARTED AFRESH.

Response (12)

As indicated in responses (1), (20) and (9) the scope of the EIA has not deviated from what was originally intended.

In addition to the above the following is relevant:

- Eskom throughout the process has always communicated its intention to utilise all sites as part of the greater nuclear program, should they be deemed feasible.
- The scoping report clearly indicated that all three sites would be subjected to a detailed impact assessment
- The proposed activities to be constructed on the site(s) have remained unchanged

Your comment (13)

In addition to the above the following are requested to be included in any assessment

- We need to know where the transmission lines will be located and their impacts,

Response (13)

The EIAs for the Transmissions Lines for the Bantamsklip, Thyspunt and Duynfontein sites constitute separate EIAs. I&APs are invited to visit the various sites for the three Transmission Line EIAs on www.eskom.co.za and register as I&APs for these particular EIAs. The identification of significant issues to be addressed in the Tx Line EIAs, as well as the assessment of potential impacts can be obtained by referring to the Tx Line Scoping and Impact Assessment Reports, which are also available on the website referred to above. Cumulative impacts will be investigated in both the EIA process for the transmission power lines as well as the EIA for the Nuclear-1 power station.

Your comment (14)

- Full details of waste disposal and transport routes to disposal sites

Response (14)

See Response (8) above. Waste disposal and transportation of waste will be covered in the Nuclear-1 EIA.

Your comment (15)

- Full details of transport requirements during the construction phase (i.e. proposed routes, additional requirements such as roads, bridges etc) and thereafter

Response (15)

Your comment is noted. This will be passed on to the Transport Specialist.

Your comment (16)

- Housing associated with the construction and operation phases

Response (16)



See Response (3). A village to accommodate staff could potentially form part of the “associated infrastructure” for the power station. This will be assessed as part of the Impact Assessment Phase of the EIA.

Your comment (17)

- The impact of movement of people during the construction phase and settlement after construction

Response (17)

The Terms of Reference for the Social Specialist as laid out in the Revised Plan of Study, includes the prediction of the: *“social impact of large-scale, uncontrolled influx of unemployed and unskilled job-seekers; the likelihood of their remaining in informal settlements; the pressures arising on health, educational, housing, police and other services; and responsibility for mitigation”*.

Your comment (18)

- The listed potential adverse impacts must also address potential loss of tourism

Response (18)

The Terms of Reference for the Tourism Specialist as laid out in the Revised Plan of Study, includes the assessment of: *“the probable effect on the tourism economy arising from both routine and accident conditions, on the local, provincial and Garden Route regions”*.

Your comment (19)

- How the potential creation of a conservation area can be shown under “beneficial impacts” as this area is frozen from development and may not be managed for biodiversity

Response (19)

Your assumption that the area forming part of the Emergency Planning Zone (EPZ) will not be permitted to be managed as a conservation area are incorrect. Taking the Koeberg nuclear power station as an example the entire owner controlled boundary, which falls within the 5 km radius is currently managed as a conservation area. The conservation area is open to the public and is a popular nature reserve which is utilised by many of the surrounding residents including hiking and biking trails. Should a positive decision be issued by the DEA Eskom wishes to consider the opportunity to create a conservation area.

Furthermore any biodiversity offset areas, where the criteria for the identification of suitable offset areas will be determined by the relevant specialists, will also be managed in such a manner.

Your comment (20)

We have only commented briefly on the above as we believe the facts warrant, at least, a full revision of the scoping report.

Your response is awaited. In view of the magnitude of the problem as well as the effect on the areas concerned we have forwarded a copy of this letter to the Department of Environmental Affairs and Tourism.

Response (20)

Your comment is noted.



In conclusion, the project team would like to assure you that Interested and Affected Parties comments are important to us and that your continued involvement in this process as an I&AP is valued. Your comments/questions will be captured in the Draft EIR that will be placed in the public domain for comment.

Please do not hesitate to contact us at any stage should you require any additional information regarding this proposed project.

We thank you for providing us the opportunity to respond to these questions and look forward to your ongoing involvement in the project.

Yours sincerely
For and on behalf of Arcus GIBB (Pty) Ltd

Jaana-Maria Ball
EIA Project Manager