



Submission re Nuclear-1 EIR final draft

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Attention: Department of Environment Affairs, Mr Wayne Hector, whector@environment.gov.za
Copied to: GIBB Public Participation office, nuclear1@gibb.co.za

Table of Contents

[1. Introduction](#)

[2. Uniqueness and importance](#)

[2.1. Time span](#)

[2.2. Elapsed time since EIA began](#)

[2.3. Cost of project](#)

[2.4. Risk and potential consequences](#)

[3. Issues not dealt with adequately](#)

[3.1. Content issues](#)

[3.1.1. Seismic risk analysis](#)

[3.1.2. Nuclear Waste](#)

[3.1.3. Demand data](#)

[3.1.4. Objective scoring system](#)

[3.2. Process issues](#)

[3.2.1. Time frame and extensions](#)

[3.2.2. Issues with minutes, non-responsiveness and document naming](#)

[4. Conclusion](#)

[5. Appendix 1: Further details about each issue](#)

[5.1. Content issues](#)

[5.1.1. Seismic risk analysis](#)

[5.1.2. Nuclear Waste](#)

[5.1.3. Demand data](#)

[5.1.4. Objective scoring system](#)

[5.2. Process issues](#)

[5.2.1. Time frame and extensions](#)

[5.2.3. Issues with minutes, non-responsiveness and document naming](#)

1. Introduction

Koeberg Alert Alliance (KAA) is a civil society grouping of South African citizens with reservations about the use of Nuclear Energy in South Africa. We are particularly concerned with the actual and potential risks to the health of citizens, to the environment, related to nuclear waste, to the economy, and to future generations.

KAA submitted detailed comments on all three previous Nuclear1 EIR draft versions of this report, from 2010 to 2015, and many of the issues raised remain unresolved.

Below we first discuss why this EIA is unique and important, and then briefly list some issues that we believe GIBB have not dealt with adequately. In the appendix, we go into further detail on these issues. For full details, please refer to the KAA submissions for the first draft in June 2010, the second draft in August 2011, and the third draft in December 2015.

2. Uniqueness and importance

This EIA process is unique in several ways.

2.1. Time span

Firstly it is about a project that would affect the South African people for tens of thousands of years. This is because an inevitable consequence of fission nuclear power is high level waste, or spent fuel, which by international agreement cannot be exported and will remain dangerous to human life for many generations. For this reason, a very high standard needs to be applied, and the usual time frame of less than a hundred years cannot be applied.

2.2. Elapsed time since EIA began

This EIA has taken place over more than six years during which the landscape of both electricity generation and nuclear power as well as some scientific best practices have changed significantly.

2.3. Cost of project

This would be the most expensive infrastructure project ever contemplated in this country, which means for economic reasons meticulous attention needs to be given to need and desirability factors.

2.4. Risk and potential consequences

Finally, the consequences of a nuclear accident are completely different to those of any other industrial accident. While the risk of a catastrophic accident such as at Fukushima may be low, the consequences would include large areas of land left uninhabitable for generations, as has happened in Japan and near Chernobyl. This adds to the importance of close attention to the need and desirability analysis, particularly for a site such as Koeberg which is so close to densely populated areas.

3. Issues not dealt with adequately

We believe the following are some issues which have not been dealt with adequately. This is a summary and further details substantiating each issue can be found in the appendix attached. Full details can be found in our previous three submissions to GIBB.

3.1. Content issues

3.1.1. Seismic risk analysis

This specialist report is inadequate in that it uses outdated methodology, which was not best practice even when it was submitted in March 2011. GIBB have acknowledged this, but have not updated this study since, and passed the responsibility of redoing this study to their client (the applicant).

3.1.2. Nuclear Waste

The issue of high level nuclear waste, or spent fuel, is not dealt with adequately.

3.1.3. Demand data

In the Need and Desirability chapter outdated peak demand data is presented, which supports the proposed project more than the correct data does. GIBB rejected our request to add the known correct data to this graph.

3.1.4. Objective scoring system

The scoring system used in summarising the impacts is suspect.

3.2. Process issues

3.2.1. Time frame and extensions

GIBB provided contradictory information about the time allowed for submissions, despite us asking at the start of the comment period for clarity on the timeline.

3.2.2. Issues with minutes, non-responsiveness and document naming

There have been various issues with release of meeting minutes, non-response from the consultants and extensive and arbitrary renaming of documents and folders between versions.

4. Conclusion

We believe this EIR should not receive a positive decision in its current form. Should there be any doubt in your mind, we would very much like to make a short presentation to you at your convenience. Please contact us on peter@koebergalert.org to let us know.

5. Appendix 1: Further details about each issue

5.1. Content issues

The sections below provide some substantiation of the issues raised above. For full details, please refer to the KAA submissions to GIBB in response to the previous three draft EIRs.

5.1.1. Seismic risk analysis

The seismic hazard study in the first draft of this EIR was of a very poor quality in that it was based on a methodology that was considered outdated before 2008. GIBB acknowledged this and wrote in reply *“a new PSHA [Probabilistic Seismic Hazard Analysis] will be undertaken for all three sites, following a SSHAC Level 3 process. Such a PSHA was to start in 2009 and preparations for this work were already made in 2008, but unfortunately it had to be postponed due to financial constraints.”*

To date, no such new study has been revealed to us, and yet the EIR is considered final by GIBB and has been submitted to the DEA. The specialist study submitted with the final EIR in 2016 is still dated March 2011, and relies on work done by De Beer published in 2007.

GIBB also wrote *“The requirement Eskom puts upon itself to undertake a new PSHA, following an approach corresponding to the latest international best practice, should therefore be seen as a proactive step in ensuring conformance with this best practice.”*

In summary, GIBB has produced a poor quality report, and when this was pointed out, said their client promised to fix it later. We believe this indicates an undue bias on the part of GIBB to the applicant.

5.1.2. Nuclear Waste

Without a site or a design for the eventual waste repository for spent fuel it is not possible to consider the possible environmental and public health impacts.

The DEAT wrote to GIBB on 19 November 2008 [Reference 12/12/20/944]:

“2.8 The possible contamination of key water resources must be discussed in the EIR” and

“2.11 The long term storage of high level waste must be addressed in the EIR”

The specialist report which purports to deal with this, appendix E29, is vague and speaks mainly to policies and frameworks. For example, one section deals with an *“overview of the radioactive waste management practices envisaged being part of the Radioactive Waste Management Programme for the Nuclear-1”*. There seems to be no guarantee that these envisaged practices will actually be implemented.

This specialist study should include possible sites for the final repository, with relevant data such as groundwater movements in the area. Failure to do this would lead to incremental

decision making, as it would be impossible to examine the 'no go' case for a repository once the waste is already being produced.

As a final point on this issue, we have noted some proponents of nuclear power put forward the hypothesis that at some time in the future a use will be found for nuclear waste, and so no long term plan is really needed. In the absence of any evidence that such reprocessing will be economically viable, we believe a plan based on currently known technology and economics must be presented.

Indeed, all international studies to date indicate that reprocessing is not economically viable [<https://inldigitallibrary.inl.gov/sti/4536700.pdf>].

5.1.3. Demand data

When the EIA process started, data from the IRP2010 was used, including projected electricity demand for the period covering 2010-2016. When this final draft was prepared, actual data for these years was obviously available. Despite this, page 3 of the Need and Desirability report displays a large graph showing this incorrect data.

We asked GIBB to include the known actual data for demand on this graph, but they refused.

We believe this indicates bias on the part of the consultants, in that they are graphically presenting outdated and incorrect data prominently which supports the applicants stated goal.

GIBB have responded that since no IRP has been finally released since 2010, they will use data from that 2010. We do not find this an acceptable reason to not present more recent data when it is highly pertinent and readily available from the applicant, such as actual peak demand data.

We also note that other governmental bodies, such as NERSA in their meeting minutes (as revealed during the recent legal action by SAFCEI and Earthlife Africa Jhb), have referred to the draft IRP2013, and specifically the more up to date peak demand data therein. It is therefore invalid for GIBB to argue that they cannot use that data in this EIR.

5.1.4. Objective scoring system

We noted in our submission to GIBB that should they have found there was a 55% chance of a catastrophic nuclear explosion within the first year of operation of the nuclear plant, the scoring system would result in a final recommendation that the project can go ahead.

According to the first table on page 26 of the Main Report, this would be classified as 'likely'. In terms of a residual risk, such an event would be classified as 'High'. According to the second and third tables, this combination would result in a final recommendation to the decision maker that "Project can go ahead but with strict conditions..."

The scoring system was developed during the process of compiling the report, which means it would have been possible to construct it to favour a positive outcome. The hypothetical example above supports the view that the scoring system downplays the potential negative impacts, and so is not objective.

Other such as Dr Reed of UCT have written submissions to GIBB outlining how a scoring/weighting system should be constructed.

5.2. Process issues

5.2.1. Time frame and extensions

During the three rounds of public participation for this EIA, there has been a consistent pattern of initially specifying a public participation period which is unreasonably short given the complexity and length of the document. Subsequently, GIBB would announce a longer period would be allowed.

Immediately on being notified of the planned participation period for the latest draft, we wrote to GIBB (publicparticipation@gibb.co.za) as follows:

"Dear Sir/Madam

I wish to object in the strongest possible terms to the comment period being limited to 60 days. In the past, the period has been extended to 90 days, as it is obviously unreasonable to expect the public to be able to go through this voluminous report in 60 days. By announcing 60 days, and then allowing appeals to eventually change your mind to 90 days, you could be seen as playing a game, and abusing the process. This wastes our time as we first schedule for 60 days, and then have to replan when more time is made available.

Please don't do that this time around! We appeal to you to announce the period as 90 days immediately.

--

*Kind regards,
Peter Becker"*

No response was received.

In response to another request for a longer period, Ms Nortje of GIBB wrote:

"Thank you for your correspondence - I hereby confirm receipt. Your request has been noted and considered. The review period will however not be extended and will run until 25 November 2015 as has previously been communicated."

GIBB then wrote on 20 November:

*"Dear Interested and Affected Party
Please note that the comment period for the Revised Draft EIR (Version 2) has been extended until Thursday, 10 December 2015.
Yours faithfully
The Nuclear-1 Public Participation Office"*

These contradictory responses have the effect of upsetting the planning of analysing of the draft report by members of the public and organisations, and hence providing meaningful submissions. This is due to the fact that it takes time to assemble a team of suitably qualified

volunteers, and then draw up a schedule to analyse the various specialist reports, taking into account the limited time available to the volunteers, due to their jobs etc. The short period allowed necessitates omitting the analysis of some aspects of the EIR from the plan. An extension granted towards the end of the initially specified period does not allow time for the planning to be revisited.

5.2.3. Issues with minutes, non-responsiveness and document naming

The draft minutes of the public meetings in Cape Town were made available for comment in December 2016. We wrote to the consultants on 23 December as follows:

*Good day. Thank you for supplying the minutes to the meetings.
We would like to notify you that we have found errors and omissions in the minutes.
However, we have not had the time to document all of these over this time of year.
We ask that you extend the period allowed for minute corrections to the end of January, to allow us to complete this process, as it is not reasonable to expect us to be able to do this over the Christmas period.*

No response was received. We emailed them again on 25 January 2016 as follows:

Good day. I have not seen any response to my email below.

In the absence of communication from yourselves, I assume that you have not extended the date for comments on the minutes, and therefore there is no point in us spending time to correct them.

I would like to again state that the time allowed for this was insufficient, in that it overlapped significantly with the end of year holiday period, and also that the minutes of the Milnerton and Kenilworth meetings were in places inaccurate, and incomplete.

Once again no response was received.

During these meetings several things were said which were not reflected in the minutes, including Eskom staff downplaying the issue of nuclear waste and repeated assurances that all matters deferred to the NNR would undergo the same process as the EIA. (Whereas the NNR hearings are not the same as EIA participation of I&APs.)

Between versions, documents and directory structures have been arbitrarily renamed, even when the document itself is identical (for example the Seismic study report).

In many cases, a space was inserted before the .pdf in the filenames. GIBB also failed to provide a list showing the previous and new document and folder names despite being asked to provide a change log. We have been told by insiders that this obfuscation of filenames is a common technique to obstruct the public participation process. Whatever the motivation was in

this case, the result was making public participation harder, whereas it is the duty of the EAP to make public participation accessible and meaningful.

If it is required or useful, we can present much more detail on these issues including copies of correspondence and transcription of meeting recordings.

Contributors to this submission and previous submissions include:

Peter Becker B.Sc (Cape Town), B.Sc. Hons (UNISA)

Robert Isted M.Sc. Eng (Cape Town)

Andreas Spath M.Sc. (Cape Town), PhD Geology (Cape Town)