

Our Ref: J27035

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Attention: DJJ de Villiers (*Strandveld Tourism & Conservation Association*)

Johannesburg

14 Eglin Road
Sunninghill 2191
PO Box 2700
Sunninghill 2128

Tel: +27 11 519 4600
Fax: +27 11 807 5670
Web: www.gibb.co.za

Dear Sir

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

Your correspondence to Ms. Bongi Shinga of ACER (Africa) refers.

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

Responses to your comments / questions are as follows:

We refer to your e-mail of 6 May 2010. Thank you for the opportunity to comment on the draft Environmental Impact Assessment Report concerning the application by Eskom to construct a nuclear power station.

The draft report with its attachments comprise a few thousand pages. We are sure that you will appreciate that with the limited resources available to an organisation like the Strandveld Tourism and Conservation Association it is impossible to comment on everything contained in the report and more specifically on the specialist reports. Our failing to do so does not imply that we agree with any of the information, methodologies, statements or conclusions contained in this report or any of the specialist reports attached to it

Your comment (1)

In previous correspondence we have pointed out that the Environmental Impact Assessment for a proposed nuclear power station is flawed for a number of reasons. Although you have responded to our correspondence you have not convinced us otherwise. Notwithstanding our reservations about the validity of the process, we are pleased to note in your conclusion that Bantamsklip was not selected as the preferred site for the nuclear power station. It would however appear that the only reason for disregarding Bantamsklip is an economic one, the economics of Eskom. We believe that there are many other reasons why Bantamsklip should not be considered a potential site for such a development.

We limit our comments to a limited number of subjects raised in the report.

Response (1)

Your comments are noted. The reason why Bantamsklip is not the preferred site for Nuclear-1 is not solely based on the findings of the economic specialist report and the full reasoning is provided in Section 9.28 the Draft EIR.

Your comment (2)

Cumulative Impacts

In terms of Clause 24 (7) (b) of the National Environmental Management Act the assessment of the potential impact of an activity should include an investigation into the cumulative effects of such an activity. The EIA Regulations, in Clause 32 (2) (k), also states that an Environmental Impact Assessment Report must include "an assessment of each identified potentially significant impact including cumulative impacts...."

Eye

We have pointed out on many occasions that the cumulative impact of a power station and its associated transmission lines should be assessed before final conclusions can be drawn. It is however our contention that there will be no power station without lines and no lines without a power station. The logical way to have done the Environmental Impact Assessment would have been to determine the transmission line routes for each site by means of EIA processes and to then assess the sites with their accompanying transmission lines.

In the case of Bantamsklip it is stated in the Draft Scoping Report for the proposed transmission lines that: : *"If the principles of NEMA are to be adhered to it would thus appear that the proposed nuclear power station at Bantamsklip cannot be connected to the grid, unless alternative transmission line routes are found....."*¹. Since the Scoping Report for these proposed power lines has not even been finalised it is too early to make statements that *"there are no fatal flaws at any of the sites (provided appropriate mitigation is implemented) and that all three alternative sites are suitable for development of a nuclear power station in time"*.² While it may apply to other sites as well, such a statement about the Bantamsklip site is untrue or at least premature.

Response (2)

Your comments are noted. Cumulative impacts have been discussed in the Draft EIR for the proposed nuclear plant where relevant. All specialists were required to assess the potential for cumulative impacts, and these are discussed throughout Sections 9.3 to 9.27, where relevant. Potential cumulative impacts are expressly discussed with regards to the selection of site alternatives, particular with respect to the decision to remove Bantamsklip from consideration as a site alternative in Section 9.28(b) of the Draft EIR.

Your comment on the transmission line EIAs has reference. Although it would be ideal to consider the cumulative impacts of the power station and all transmission lines holistically, the time frames of the power station and transmission line EIAs do not overlap (neither do the time frames of the individual transmission EIAs) and therefore, practically, it would only be possible to assess all cumulative impacts in detail after studying the findings of the transmission EIA reports. Potential cumulative impacts of the power plant will, however, be assessed in the EIAs for the power lines as they will be completed after the EIA for the power plant. Cumulative impacts of the transmission line EIAs are, however, assessed in general terms. Cumulative impacts have been explicitly included in the decision not to consider Bantamsklip as an alternative for Nuclear-1.

The EIA's for the Tx lines were initiated as soon as possible after the Plant EIA, Issues from the scoping phase of the Tx EIA's have been considered. It is planned that at least the Duynefontein and Thyspunt Tx EIA reports will be submitted within a month or two of this EIA and therefore will be before the DEA for consideration prior to the final decision on this EIA.

¹ Page 34 of the Botanical Scoping Assessment dated 24 November 2008 attached to the DSR for the Bantamsklip Power Lines.

² Page 10-8 of the Draft EIR

Your comment (3)

In the Draft EIR the following statement is made: *“Apart from cost, if the cumulative environmental impacts of the transmission corridors are considered, the potential impacts of construction of a nuclear power station at Bantamsklip would likely be much more significant than the other two site alternatives, considering the length of the transmission lines and the difficult mountainous terrain through which the Bantamsklip transmission lines would have to pass.”*³ By making such a statement you are recognising that the cumulative impact of power station plus lines should be assessed. However, you continue in the same paragraph stating that this aspect is *“not considered a fatal flaw and do not disqualify Bantamsklip as an alternative site for a nuclear power station in the future.”*

In response to our submission of 14 October 2009 on the Revised PoS for Nuclear-1 you mention that any decision on either the nuclear site or the transmission line EIA’s are not mutually dependent. You also state that “The DEA could issue a negative or positive decision on either of the applications with a complete opposite decision been issued on the other.” We are in full agreement with this statement but the implication thereof is surely that at this stage a statement that there are no fatal flaws at Bantamsklip is either untrue or premature. A site without the possibility to connect the power station with the power grid would surely qualify as a fatal flaw and should have been scoped out as a non-feasible alternative during the process. The implication of this should have a direct bearing on the Transmission EIA for Bantamsklip, which should therefore be discontinued based on the transmission conclusions in the Draft EIR.

Response (3)

No fatal flaws have been identified for the site and although complex no fatal flaws have been identified for the Tx line. The feasibility of the Tx line can only be determined during the EIA phase. It is therefore not appropriate to state that this is a fatal flaw.

Your comment (4)

Radiological Impacts

We note that an agreement has been concluded between the Department of Environmental Affairs (DEA) and the National Nuclear Regulator (NNR) in respect of the assessment of radiation issues. This agreement states that any environmental authorisation granted for a nuclear installation would be conditional on the nuclear licence being in place. The prime responsibility to assess environmental impacts remains that of the DEA but they have in effectively “our-sourced” the assessment of radiological impacts to the NNR. Since the Draft EIR made available to the public for comment does not assess all the environmental impacts it is supposed to in terms of the regulations, statements containing the words “no environmental fatal flaws” cannot be made. The radiological impact relate to all three legs in EIA decision making, environment, social and economic, and it is therefore irrational not to weigh it in the EIR.

On page 2 of the “Assessment of the Potential Impacts on Human Health Environmental Impact Report” (which is attached as Appendix E 24 to the Draft EIR) it is stated that the draft regulations in terms of the National Nuclear Regulator Act requires the applicant for a nuclear installation licence to submit a Site Safety Report comprising of a number of critical issues including data and assessments. These assessments are partly based on site-specific information, from there the terminology used in the name of the report. We cannot make pronouncement regarding other sites but in the case of

³ Page 9-257 of the Draft EIR

Bantamsklip the required studies and assessments have not been made and therefore to state that there is no fatal flaw at the Bantamsklip site is unacceptable.

The Draft EIR also states that *“a proper evaluation of design Basis Accidents can only be completed once the actual reactor design has been selected”*. On page 9-238 of the Draft EIR, it is stated that *“provided that the NNR’s statutory limits are adhered to, and that Eskom can demonstrate to the NNR that the design of the proposed Nuclear-1 will not exceed these statutory constraints, then there should be no impact on human health during normal operations.”*⁴ Since the choice of technology and specific type of nuclear reactor have not been made by Eskom it would appear to us that the validity of the conclusions drawn in a number of assessment reports including that on Human Health, Marine Biology, Air Quality and Emergency Response should be questioned. We believe that these assessments should be redone after a firm commitment is made by Eskom regarding the specific type and make of nuclear reactor they intend using and a firm decision has been made on the specific site on which the reactors will be constructed. In the meantime any statement about the absence of “fatal flaws” is premature.

Response (4)

Your comments are noted. All assessments and specialists studies conducted as part of the Nuclear-1 EIA have been so in terms of an envelope of criteria which is based on the specifications of all possible PWR III generation vendors and represents a conservative set of criteria that provides a “worst case scenario” in terms of the footprint of the proposed plant.

Eskom’s application to the NNR for licensing of the proposed power station has not yet commenced and will only commence once the vendor has been selected.

The NNR’s licensing process does make provision for public hearings and is subject to the provisions of the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000), as are all authorisation processes to which the public has access. The NNR’s process is therefore required to be an open and transparent process.

The agreement between the DEA and the NNR indicates that the DEA would not “make a pronouncement on the acceptability” of radiological safety issues, and that this issue falls firmly within the ambit on the NNR licensing process. However, at the DEA’s request, information relevant to radiological safety issues has been included in the Draft EIR.

The emergency preparedness report also falls within the ambit of the NNR licensing process and the public will be granted insight into further details about emergency planning through the public hearing process that forms part of this process.

Your comment (5)

Seismic Suitability

The draft EIR concludes that there is *“significant uncertainty regarding the seismo-tectonic model for Bantamsklip”*⁵ and that additional geo-scientific investigations may be required if a nuclear power station were to be located at the Bantamsklip site. Although the opinion is expressed that the only possible implication following these additional investigations could be additional design and construction costs, we believe that there is enough uncertainty to justify scrapping the statement that Bantamsklip have no fatal flaws.

Response (5)

⁴ Page 9-238 of the Draft EIR

⁵ Page 9-12 of the Draft EIR

Your comment is noted.

Your comment (6)

Bantamsklip Protected Status – Present & Future

It is with disbelief that we read in section 9.8 of the Draft EIR (Impacts on flora and ecosystem functioning) that the No-Go alternative in the case of Bantamsklip may be “*more costly than the development of a nuclear power station.*”⁶ This statement is based on the fact that the site currently have no “formal protected status” and that the construction of such a power station will result in the establishment of such a protected area.

It is common knowledge that “Groot Hagelkraal” (Bantamsklip site) is a registered South African Natural Heritage Site and that the Agulhas Plain is a protected area, part of the Cape Floristic Region World Heritage Site. The Agulhas Plain is also the site of a world renowned sustainability study focussed on the integration of conservation and development and in addition, it was selected by the South African Government in 2002 to serve as a model for the innovative approach to conservation and human development.

“Groot Hagelkraal” borders on the Agulhas National Park and is considered by conservationists as the foremost conservation priority in the Cape Floristic Region being regarded internationally as a major biodiversity “hot spot”. We can give you the assurance that this property will continue to enjoy formal protected status if Eskom is prepared to relinquish ownership.

Bantamsklip as a potential site for a Nuclear Power Station

We believe that the Bantamsklip site (“Groot Hagelkraal”) should be entirely removed from the list of potential sites for a nuclear power station. We also suggest that Eskom seriously consider donating the property to SANParks for incorporation into the adjacent Agulhas National Park. If they are not prepared to donate the property the conservation community in the area will make an offer to purchase the property for conservation purposes.

As additional motivation for the removal of Bantamsklip as a potential nuclear power station site the following:

- Thyspunt and Duynfontein have been identified as more suitable sites, mainly because they are closer to major load centres.
- Government Energy Policy will only become clear after the promulgation of the Integrated Resource Plan (IRP2010), currently being developed. If this plan includes nuclear power generation, the construction of two 4000 MW nuclear power stations, one at Thyspunt and one at Duynfontein, will satisfy local demand at the major load centres.
- If there is a need to generate more electricity from nuclear sources than is required in the Western and Eastern Cape that should take place at, or close to locations where it is consumed.
- The original study carried out by Eskom in the 1980’s into potential nuclear power station sites, was conducted with the purpose of identifying a site or sites for the generation of electricity to satisfy coastal demand. Bantamsklip (amongst others) was identified and the property was acquired. The export of electricity to the major inland electricity market in South Africa was never contemplated. If such exports were contemplated, it would have made much more sense to consider sites on the Kwazulu-Natal north coast which, apart from being on the doorstep of Durban with a large electricity market, are also relatively close to the major electricity market on the Highveld and the Reef.

⁶ Page 9-38 of the Draft EIR

- It was confirmed to us on two occasions at public meetings that Eskom are busy with, or will shortly commence, studies to identify potential sites along the Kwazulu-Natal coast.

Response (6)

Eskom has no intention of developing the Groot Hagelkraal property. This is indicated by the present envelope for development as proposed for Nuclear-1 with all developments on the southern side of the R43 road.

The Bantamsklip site remains part of three nuclear sites owned by Eskom for the potential development of future nuclear power generation. Eskom will continue to manage these properties as potential sites for future nuclear power generation and to the benefit of the environment into the future.

It is acknowledged that SANParks recently bought the property Waterford that is bordering onto the Bantamsklip site on the northern boundary. Eskom will engage with SANParks on the conservation opportunities associated with the sites.

Your comment (7)

Tourism

The following statements are made in the Specialist Report on Tourism:

- *“Tourism by nature is complex and diverse but, due to time and budgetary constraints...”*
- *“Specific tourism visitations or value statistics are neither systematically collected in, nor available for...”*
- *“These concepts are very difficult to quantify...”*

These statements are an admission by the specialist responsible for the study of an incomplete, unacceptably superficial piece of work. We pointed out in our submission on the Draft Scoping Report for the Bantamsklip Transmission Lines that, because of the importance of eco-tourism in the area, that a detailed professional study on the Tourism industry in the Greater Hermanus/ Strandveld/ Agulhas region is required. Such a study should recognise that there is a distinct difference between “tourism” and “nature-based tourism”. It should further recognise the important difference between the requirements of a normal South African tourist and an international tourist.

We are sorry to say that the Tourism Impact Assessment Study conducted by Imani Development (SA) (Pty) Ltd is totally lacking in credibility. Without going into too much detail we can point out the following:

- The study makes no provision for the future growth in tourism that would take place if no nuclear power station is constructed. It is important to take into account what tourism growth opportunities will be negatively affected by the presence of such a power station.
- The use of bed-nights as a measure of the value of tourism is an oversimplification and there are many other mechanisms, admittedly requiring more time and effort, that could be used.
- International visitors rate natural environment more highly than local tourists as confirmed by many studies already conducted in South Africa.
- To draw a conclusion that at Bantamsklip the long term effects of a Nuclear Power Station will be positive for tourism⁷ is beyond belief. And then to go further and state that since the *“natural attractions of the site is currently inaccessible to tourists the opening of the reserve areas”* that surround the Nuclear Power Station will result in an additional eco-tourism asset is a clear example of the blatant bias of the authors of the report.
- Mention is made of the “field visits” during which “prominent tourism stakeholders” were identified and interviewed. Data obtained during these visits was used to calculate the value of

⁷ Page 25 of the Tourism Impact Assessment Study

the marine based eco-tourism industry set out in table 4.4⁸ as R56.4 million per annum. We believe that this figure substantially understated the value, importance and potential of this industry. The Minister of Tourism mentioned in parliament in June last year that Tourism is now a larger earner of foreign exchange for South Africa than gold mining and the Minister of Environmental Affairs at the same time made mention of the decision to add Whales and the Great White Shark to the “Big Five” to establish the “Big Seven” wild life experiences available for international tourists in South Africa. It has been calculated by reliable sources that shark diving generates almost R290 million per annum⁹ which is a far cry from the R56.4 million mentioned in this report.

Response (7)

Your comments are noted. Please find the response from the Tourism specialist below.

Imani’s team interviewed a representative cross-section of tourism establishments as well as the whale-watching and shark-cage-diving enterprises. We also consulted a tourist specialist at the university in Port Elizabeth who had tried with limited success to collect statistics at various resorts along the Cape coast. The fact is that the norm in localised tourism destination areas is that statistical data (market-related and expenditure characteristics) are either sparse or else non-existent. Most operators are unwilling to disclose their business performance. We failed to see what differences there could be between local and international tourists so far as the construction and operation of a nuclear power station are concerned.

Imani reject totally the contention that our work lacks credibility – as stated above, we believe we interviewed the major enterprises in the tourism industry at Bantamsklip.

Bullet Points:

1. Not true. We used whatever data existed as well as our interviews to project the existing trends so as to obtain “with” and “without NPS” growth rates.
2. Bed-nights is an internationally accepted measure of tourism activity, and is the only way of comparing the three sites. In addition to bed-nights, we took into account expenditure on other tourism activities such as whale-watching and shark-cage-diving.
3. Your comment is noted.
4. The size of the tourism sector at Bantamsklip is small. An influx of 1,000 permanent residents would stimulate activities such as restaurants, public transport, schools and health facilities as well as the retail sector. As a comparison, the Medupi coal-power station in Lephalale in the Limpopo province presently under construction has led to the doubling of accommodation in Ellisras in the last two years and bookings have to be made at least two weeks in advance. In addition, the experience around Koeberg Nuclear Power station in the last 30 years – the development of Melkbosstrand and the leapfrogging of up-market developments to the north of Koeberg – clearly illustrate that a nuclear power station per se is not a deterrent to the growth of tourism. We have pointed out examples of nuclear power stations overseas which are themselves tourism attractions. These are not examples of bias – they are statements of fact. The area around the Bantamsklip site is at present closed and cannot be enjoyed by tourists. If a NPS is built, the area would be opened to tourists (as it is at the Koeberg Nuclear Power Station), hence there would be an additional eco-tourism asset. That is also a statement of fact.
5. The figure of R290 million at 2010 prices is for the South African coast as a whole. Our figure for Bantamsklip calculated on the basis of data supplied by the operators of shark-cage-diving tours (at 2008 prices) shows that, adjusted for inflation, Bantamsklip would account for about

⁸ Page 24 of the Tourism Impact Study

⁹ Cape Argus 1/5/2010

25% of South African shark-cage-diving which is not unreasonable. Our report does not underestimate the importance of shark-cage-diving to the local economy.

Your comment (8)

Conclusions

1. For the reasons set out above it is our contention that the conclusion reached and mentioned over and over again in the draft EIR that there is no fatal flaws at any or all of the sites are invalid and should be deleted. We have no problem with you identifying the preferred site or sites for Nuclear One based on the information that you have at your disposal. However, since you do not have all the information available nor are all of the assessments of some of the information are still outstanding (to be done by the NNR), statements that there is no fatal flaws are incorrect and premature. Before you can apply for environmental authorisation we suggest that you:
2.
 - identify the preferred site for Nuclear One;
 - assess the cumulative impact of the power station plus the transmission lines at that location;
 - decide on the nuclear technology that will be utilised;
 - complete the Site Safety Report and re-do the specialist reports of impacts that will be influenced by the radiological data applicable to the technology chosen.
 - Only after this has been completed will the NNR be able to do the necessary assessments which will involve, in terms of the law, a public participation process.

Response (8)

Your comments are noted. The EIA team has followed due regulatory processes as required by legislation of the RSA.

Your comment (9)

3. Bantamsklip should be removed from the list of potential sites for a Nuclear Power Station and the "Groot Hagelkraal" property should be donated or sold to SANParks for incorporation into the Agulhas National Park. The sale of this property could be a conservation offset for Eskom's Nuclear 1 to justify the conservation impacts at the preferred site.

Response (9)

Your comments are noted. **See response 6**

Your comment (10)

4. Discontinue the EIA for the Transmission lines EIA for the proposed Eskom Bantamsklip Transmission Lines and Associated Infrastructure (DEA Reference no 12/12/20/1223 and 12/12/20/1224) the Scoping Report of which have not even yet been finalised.

Response (10)

Your comment is noted. Eskom's intention is to use all three sites for further development of nuclear generation infrastructure if the Integrated Resource Plan (due to be promulgated in November 2010) indicates that it will be part of South Africa's energy mix. The EIA for Nuclear-2 will commence very soon, hence the Tx line EIA's would therefore remain relevant.

Your comment (11)

5. The Tourism Impact Assessment Study Report by Imani Development (SA) (Pty) Ltd should be ignored in its entirety since it is not worth the paper it is written on.

Response (11)

Your comment is noted.

Your comment (12)

6. We believe that the law and regulations will make it impossible for the competent authority (Department of Environmental Affairs) to approve the EIR in its current form. For this reason we recommend that you should not even submit it to them until all the requirements are met.
7. Should you however decide to continue with your plan to submit the EIR we would suggest some amendments. At the Bredasdorp meeting of 25 March 2010 we were given the assurance that our comments on the Draft EIR will not merely be included into the "Issues and Response Report" but that real attention will be given to suggestions to change the wording of the report. We appreciate this assurance and in that spirit we would request that the words "fatal flaws" be removed from the final EIR. It is not an requirement for the consultants to evaluate their assessment in terms of "fatal flaws". It is for the authorities and I&AP's to point out if the application has fatal flaws.

Response (12)

Your comments are noted.

Should you have any queries with respect to the above please do not hesitate to contact Arcus GIBB.

Yours faithfully
For Arcus GIBB (Pty) Ltd



Jaana-Maria Ball
Nuclear-1 EIA Manager