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Dear Mr Whitelaw

RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)

Comment 1:

No-go option:

It is unfortunate that this option has not been explored. The government/ ESKOM appear to have altered its stance on solar and wind generated energy by making it a less attractive to potential investors. This is manifest by changes to pricing structures. This change has been attributed to legal niceties. If government/ESKOM is sincere about alternative energy supplies, the legislature needs to be approached to allow suppliers to receive more reliable remuneration.

We would urge ESKOM to initiate this approach:

There are indications that a number of countries are becoming more dependent on these energy sources. Several countries are moving away from Nuclear energy most notably Germany/Switzerland. The USA is making considerable strides in increasing its renewable resources. A recent article in National Geographic quoted work which suggested that solar power could supply the entire electrical demands of the USA. It also noted the significantly increased funding be directed to solar and wind generated electricity in the USA.

Response 1:

Your comments are noted. South Africa's energy landscape is changing, the IRP 2010 which provides for a more diverse energy mix. The fact that Eskom intends to develop a nuclear power station does not imply that it opposes renewable technologies Eskom is also pursuing renewable technologies.



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A list of divisional directors is available from the company secretary.



Comment 2:

Seismic Activity:

It is noted that expert opinion is of the opinion there is little chance of any seismic disturbance. There are a number of interesting points to this issue; not least that low levels of seismic activity does not necessarily mean there is no possibility of damage to a potential nuclear plant. As noted in a paper from Dais and Kikjo low level activity is more common and damage in this situation is still possible

Data from an internet site on seismic activity in South Africa documents a number of seismic events in the Western Cape.

The data in the recent EIA update does little to explore this aspect. It simply states figures related to the 3 sites. These figures may be significant to individuals who are au fait with this field. This is followed by the cryptic comment "in the light of the uncertainty relating to the revised PSHA following the SSHAC procedure, it is recommended from a seismic perspective that the site with the biggest seismic margin (Thyspunt) be selected as the preferred site".

Are we to infer that there is uncertainty about seismic activity, and the attitude adopted is that "we'll take a chance because Thyspunt seems to be the safest? The general public deserves more information and clarity on this important safety aspect.

Response 2:

Your comments and your acknowledgement of the expert nature of the input given into the Nuclear-1 EIA are acknowledged. We acknowledge that the technical nature of some of the information included in the EIA may at times be overwhelming but please note that the Geotechnical Report comes to the conclusion that there are no disqualifiers at any of the sites. Although the Peak Ground Acceleration (PGA) values of the alternative sites differ, it is concluded that it is technically possible to build a nuclear power station at any of the three alternative sites. However, the engineering design may have to be adapted for sites with higher PGA values (e.g. for Duynefontein).

The regulatory studies to be undertaken for licensing by the National Nuclear Regulator are required for detailed engineering design and are not required for EIA-level decision making on the feasibility of constructing a nuclear power station.

ADDITIONAL COMMENTS FROM INDEPENDENT NUCLEAR SPECIALIST

In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evolve over time - and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.

Comment 3:

Sea Temperature and Nuclear plant at Bantamsklip/Thyspunt:

Effects of coolant sea water returned to Walker Bay. It was noted in the original assessment that the sea water temperature of both Bantamsklip and Thyspunt was at the upper level of acceptability in terms of temperature for a nuclear plant. Would even a small increase in temperature of the sea at these sites have any effect on the safety and efficacy of any plant which might be constructed?

It has been stated that the effect of the water returned to the sea was very site specific and no definite measurements had been conducted at Bantamsklip.

Have these investigations taken place?

These could be critical for 2 reasons:

The African (Jackass) Penguin colony at Dyer Island is declining at a rapid rate. One reason is the diminishing food supply. An increase in temperature of the sea could have a deleterious effect of fish stocks which could have serious implications for the penguin population. Similarly a decline in fish stocks could have negative effect on the flourishing shark/whale watching tourism industry based at Klein Baai.

Response 3:

Your comments are noted

Section 4.2.3 of the recently revised Marine Ecology Report confirms that impacts of releasing thermal effluent remain untested for the Bantamsklip site. However comprehensive oceanographic modelling has demonstrated that the effects of elevated temperature are expected to be focused on the open water habitat. This is of particular relevance at Bantamsklip as it would help to mitigate impacts on abalone and chokka squid egg capsules respectively. It is strongly recommended that at Bantamsklip an offshore tunnel outfall be utilised for the release of warmed water in an effort to mitigate impacts on abalone. Importantly a nearshore release system at this site is considered to pose an unacceptable risk to abalone populations.

The reports further continues to state that the release of warmed cooling water is not expected to have a dramatic impact on nearshore fish species, as excess heat will be focused around a small area at the point or points of release and the warmed water will hence rise towards the surface. Many species currently caught by anglers at this site in fact breed in the warm waters of KwaZulu-Natal and so, while they may avoid the immediate point of release, where water temperatures will be highest, they are very unlikely to experience thermal stress.

Lastly the report confirms that Oceanographic modelling of the warm water plume has indicated that the temperature around Dyer Island will not be affected and that none of the marine mammals that occur in the vicinity of Bantamsklip are expected to be negatively impacted by the warmed water. This is due to the localised extent of the warmed water relative to the extensive ranges of these large species, combined with their mobility and ability to avoid undesirable conditions. As such, these species are likely to avoid the elevated temperatures immediately around the outfall, but are not expected to avoid the area in general. A similar response is likely to be demonstrated by some coastal

fish, but no species are expected to be lost to the area. In fact, exploited fish species may benefit from the development. Pelagic fisheries will not be affected by the release of warmed water, as they are focused further offshore than the outfall plume will reach.

The revised Marine Ecology Report will be made available for public comment and review as part of the Revised Draft EIR Version 2.

Comment 4:

Public Participation:

The revelation by Mr. John Williams that a small community in the immediate vicinity of Bantamsklip had not been consulted and could be seriously compromised by the construction suggests a serious blot on the entire public participation process. I trust that this will be remedied and the implications for this community, of the possible construction of a nuclear plant at this site be thoroughly investigated.

Response 4:

We believe that the author is referring to the community of Buffelsjag. As stated at the Gansbaai Public Meetings held on 23 Amy 2011, GIBB is aware of the Buffelsjag community and has met with members of this community during the Bantamsklip Transmission Lines EIA public meetings. The community is considered within the Nuclear-1 EIA and as further stated at the meeting no recommendations to move any of the communities situated within the vicinity of any of the three sites.

Also, as part of the comprehensive Public Participation process undertaken in terms of the EIA process, the progress on the project, the availability of reports for public comment and review as well as the dates of public meetings have been advertised not only in local papers in the vicinity of the community but also regional and national newspapers. As such please see Appendix D1 of the Revised Draft EIR Version 1 for proof of advertisements sent during the last round of public participation and Chapter 7 of the same report for a full description of the public participation process throughout the history of the project.

Comment 5:

Coastal Setback Lines:

The province is in the process of developing these lines in view of possible rising sea levels. Can the public be assured that these concerns were taken into account in deliberations on the siting of the potential power plants?

Response 5:

Your comments are noted. Coastal setback lines were considered in all specialist reports and in a report entitled "Estimating the 1:100 Year Floodline from the Sea" which is attached as Appendix E9 of the Revised Draft EIR Version1.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, consisting of a large, stylized 'S' shape with a small loop at the top left and a horizontal line extending to the right.

The Nuclear-1 EIA Team