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Attention: Steering Committee, STCA

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. Bongi Shinga of ACER (Africa) entitled *"ESKOM ENVIRONMENTAL IMPACT ASSESSMENT (EIA : 12/12/20/944) FOR A PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE"* 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)

The Strandveld Tourism and Conservation Association (STCA) is an organisation that was formed with the specific purpose of opposing the construction of a nuclear power station at Bantamsklip in the Strandveld. The association has 250 members comprising of landowners, residents and organisations in the area. We are responsible citizens, not necessarily anti-nuclear or anti-development but are of the opinion that to consider Bantamsklip as a potential site for a nuclear power station is ill conceived from an environmental, ecological and socio economic perspective.

We also believe that it is of paramount importance that the legal processes required to obtain authorisation for such a project are strictly adhered to by Eskom, in particular allowing full public participation.

This document is a response to the Revised Plan of Study (PoS) for Environmental Impact Assessment (EIA) which was placed in the public domain for interested and affected parties (I&APs) to review and comment upon.

We have structured our comments in three main sections. Firstly we comment on Eskom's intent to amend their application (DEAT Ref no 12/12/20/944) as advised in Section 2 of the Revised PoS. This is followed by

comments on the Final Scoping Report for the Proposed Eskom Nuclear Power Station (FSR), although we were informed in the Revised PoS that it has already been approved by the competent authority during November 2008. We end off by commenting on the environmental issues identified and the plan for the detailed impact assessment phase as set out in sections 3 and 4 of the Revised PoS.

Response (1)

The purpose and member composition of the STCA is noted.

Your comment (2)

In this document we argue that by placing the Revised Plan of Study for Environmental Impact Assessment in the public domain the entire scoping report is open for comment. We also state our opinion that the request for public comments on the terms of reference for specialist studies after these studies have already commenced, makes a mockery of the EIA process.

We point out that, in terms of the old and draft new regulations, DEAT cannot grant permission to amend the existing Eskom application, specifically since the EIA process have progressed to the stage where scoping studies and the accompanying public participation process have been completed, even if they wanted to. Furthermore, it is our contention that if Eskom rules out the assessment of site alternatives for a Nuclear Power Station at this stage of the EIA process it would be highly irregular and contradict the intent of the regulator as well as the spirit of the National Environmental Management Act (NEMA).

We express the opinion that the provisions of both the old and the draft new regulations, where it specifies the transitional arrangements between the current and the new regulations, were either disregarded or interpreted incorrectly by Eskom. We believe that if Eskom wishes to apply for authorisation to sequentially construct three power stations on three sites, it will have to be done by means of a new application in terms of the new regulations.

The impression is being created that Eskom's strategy regarding their so-called nuclear build programme is not properly defined and is in disarray. It appears as if Eskom is misusing the current EIA process as a conduit for their unclear strategic direction. We believe that the competent authority should review the procedure currently being followed to reach the environmental authorisation and consider the use of other tools that will clarify the strategic intent and consequences of Eskom's plans.

Response (2)

The Plan of Study is not and must not be construed as a request to amend the application. That application, if ever made to the Department of Environmental Affairs (DEA), would only be made in the future taking into account all relevant laws and circumstances. Eskom has stated their intention to the public in the Revised PoS for EIA, however the realisation of this intention will be dependent on the final promulgation of the NEMA regulations and consideration of public comment received on the Revised Plan of Study. If this combined application is made to DEAT, Eskom make this change in its application known to all registered I&APs on the Nuclear-1 EIA database and solicit comment on this change in application. If after the receipt of I&AP comment, Eskom then decides to pursue the submission a combined application all comments received and the responses to these comments will be submitted to the DEA with the request to submit such an application.

Your comment (3)

In our comments on the Final Scoping Report we point out that the plan to generate electricity along the Cape coast for the purpose of exporting (transmitting) it to the economic heartland of the country is preposterous. Furthermore we point out that the "Nuclear Site Investigation Programme" used in the scoping

phase of the project was originally conceived to identify the site for the next nuclear power station to generate electricity for the local Cape consumption. We conclude that the reasons for disqualifying the West Coast sites during the scoping phase were invalid at the time of conducting the study and that more recent developments have reinforced the invalid reasoning in the Final Scoping Report.

The document concludes with specific comments on the terms of reference of the specialist studies that will be conducted as part of the EIA phase of the Environmental Impact Assessment process.

Response (3)

As correctly highlighted by yourself, originally five (5) alternative sites were considered namely, Schulpfontein, Brazil, Thyspunt, Bantamsklip and Duynefontein. The Schulpfontein and Brazil sites were excluded during the Scoping Phase of the EIA. The Final Scoping Report was approved by the then DEAT on 19 November 2008. Section 2.17.1 of this letter states that "*The Department accepts the exclusion of the Brazil and Schulpfontein sites for further investigation in this EIA process, as they are not technically feasible at this stage. The Department has also however noted that these sites will be considered for future Nuclear projects."*

In terms of Section 29 (b) of Government Notice Regulation 385 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), scoping reports should include "*a description of the proposed activity and of any feasible and reasonable alternatives that have been identified*". Based on the information contained in Eskom's 20 GW Nuclear Transmission Grid Draft Impact Report (2007), which was included as an appendix to the Scoping Report it is evident that Brazil and Schulpfontein are not considered as feasible alternatives to be pursued in the EIA process for Nuclear-1.

Furthermore, your assertion that given Eskom's investigation of the potential roll out of up to 20 000 MW of nuclear power negates the time constraints originally identified as one of the reasons for the Northern Cape sites neglects to consider the remaining issues, which are preventing the development of Brazil and Schulpfontein as part of the initial phase of the 20 000 MW as indicted in the Final Scoping Report.

In this regard the Final Scoping Report states the following:

*"Thus, the Brazil and Schulpfontein sites require the construction of new power corridors and the exportation of the majority of the power to areas of demand given the limited local demand (**Figure 78**). Thus, the Brazil and Schulpfontein sites are deemed unfeasible for the proposed NPS based on the following reasoning:*

- *Optimal, strategic and cost effective utilisation of existing infrastructure associated with the Duynefontein, Bantamsklip and Thyspunt sites, with respect to local integration and exportation of power via existing power corridors;*
- *Prevention of lengthy time delays associated with the authorisation and construction of the new power corridors applicable to the Brazil and Schulpfontein sites, which will prevent Eskom from providing the power within the required timeframes;*
- *Unnecessary environmental impacts associated with the construction of new power corridors given that there is existing infrastructure; and*
- *Cost implications associated with the development of new power corridors"*

All issues identified above are considered to be relevant for nuclear development on the Northern Cape sites for the short to medium term.

Severe time constraints to the nuclear programme are still applicable. In spite of the current economic down-turn, the programme for Eskom to meet energy demands in South Africa is very stringent. The EIA for Nuclear-1 remains on the critical path of Eskom's nuclear programme.

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Your comment (4)

COMMENTS ON THE INTENT TO AMEND THE CURRENT APPLICATION

THE REASON FOR AND CONSEQUENCES OF THE CURRENT REQUEST FOR PUBLIC COMMENTS

A Plan of Study for Environmental Impact Assessment forms an integral part of any Final Scoping Report. This fact is evident from the regulations as well as the Guidelines in support of the EIA Regulations published by the Department of Environmental Affairs and Tourism. The FSR which was made available for public comment in the first half of 2008 and subsequently submitted to the competent authority contains the plan of study as Chapter 10 of a 330 page document.

On 25 June 2009 the I&APs are informed for the first time that the competent authority approved the FSR in the course of November 2008 but requested amendments to a section of the FSR being the PoS. We question the validity of approving the FSR on a piece-meal basis. In their letter of 19 November 2008 the competent authority advise that they accept the FSR subject to certain conditions. According to Regulation 31 (1) the competent authority can accept the FSR [Reg 31(1)(a)], request amendments to the FSR [Reg 31(1)(b)] or reject the FSR [Reg 31(1)(c)]. It is therefore our contention that the competent authority requested amendments to the FSR on 19 November 2009 and have not "approved of the Final Scoping Report" as stated in the second paragraph of the Revised PoS. Whether a revised FSR, including the amendments requested by the competent authority, was submitted to them for their acceptance at some later date is not clear to us.

If a revised FSR, including the amendments requested by the competent authority was in fact submitted to and accepted by the competent authority there would, in terms of the regulations, be no need to place any documents in the public domain for comment. On the other hand, if the revised FSR has not yet been submitted to and accepted by the competent authority and Eskom wish to place something in the public domain for comment it should be the entire FSR (all its chapters) and not only part of it. The fact that Eskom chose to place part of the FSR in the public domain on 25 June does indicate that the FSR has not yet been accepted by the competent authority and that any comments that we make on any of the chapters of the FSR must accompany the report when submitted to the competent authority.

Even if you were to argue that the FSR and the PoS are separate documents and that the one can be approved without the other, it can not be disputed that the two documents must speak to each other. With the Revised PoS notifying I&APs of a radical change in the nature of the application (from one for the building of one power station on one of five sites to one for the building of three power stations on three predetermined sites), the FSR in its current form is invalid and flawed.

The Revised PoS states that it is placed in the public domain for comments since "….DEAT's comments were incorporated into the revised document". It also states that it "acts as a mechanism to communicate" certain intentions of Eskom. As mentioned in the previous paragraph, there is no specific requirement for requesting public comments for a second time after amendments requested by the competent authority have been incorporated. It therefore would appear to us that the only reason for placing the revised PoS in the public domain for comment is to communicate Eskom's intentions regarding amendments they want to make to their application. This assumption is reinforced by the fact that I&APs were advised that the specialist studies that is being planned to be conducted during the EIA phase of the process have already commenced. In our view this is totally irregular and makes a mockery of the request for public comments.

In summary therefore it is our opinion that:

- by placing the Revised PoS in the public domain for comment the entire Final Scoping Report is open for public comment;
- the real purpose for placing the Revised PoS in the public domain for comment is to inform the I&APs of Eskom's intention to apply for an amendment to their application;
- a request for public comments on the terms of reference for specialist studies after these studies have already commenced and some of them are almost completed is completely irregular and makes a mockery of the EIA process.

Response (4)

As noted by the STCA, the then DEAT have approved the Final Scoping Report, in a letter dated 19 November 2008, such a decision was communicated to all registered Interested and Affected Parties (I&APs) between 18 May 2009 and 22 May 2009.

As the PoS is the only document that has changed, it makes sense that it must be subjected to comment by registered I&APs. There is no reason for I&APs to comment on the details of the Scoping Report that they have already commented on. The law requires that I&APs should have an opportunity to comment on material or substantial amendments should any report be amended. The opportunity is for commenting on new information that was not previously presented in the public domain and enables the independent EIA consultant and the competent authority to consider the I&APs comment in the process and should not be abused.

Queries pertaining to the approval of the Final Scoping Report and the request to revise the Plan of Study need to be directed to the DEA. Arcus GIBB nor Eskom is not in a position to question the decisions of the competent authority. Arcus GIBB will formally request a response from the DEA and the response will be relayed to you as soon as it is received.

It is common and good practice for specialist studies to start as early in the EIA process as possible, even before the competent authority has approved their final terms of reference contained with the PoS. This is often done to enable sampling, data collection, observations and ground-truthing to take place over the maximum period possible. For biophysical studies sampling is advisable in as many seasons as possible and over as many years as possible. In the case of the Nuclear-1 EIA the competent authority made specific comments on the specialist terms of reference in their letter date 19 November 2008. Changes to the PoS in response to these comments, as well as those received from I&APs, were reflected in the Revised PoS, and communicated to the specialists concerned. The specialist studies have not been concluded and therefore any further comments received will be incorporated into the studies' final terms of reference.

Your comment (5)

THE PROPOSED AMENDMENT TO ESKOM'S APPLICATION

In the third paragraph of the Revised PoS it is mentioned that "…Eskom intends to amend the original application for environmental authorisation…". In the fifth paragraph of subsection 2.2 of the same document it is stated that "…Eskom will request permission from DEAT to amend the application…" and in the second paragraph of section 5 the statement is made that "…the original application for environmental authorisation was revised to include a combined application." Despite this confusion and what is said about the new draft Regulations in the Revised PoS, we wish to point out that regulation 15(2) of the new draft Regulations states that the competent authority may *"grant permission for the submission of a single application in respect of all those activities, whether or not the application is submitted on one or more application forms".* The new draft regulations do not say that the competent authority can grant permission to amend an existing application, and definitely not an existing application of which the EIA process have progressed to the stage

where the Scoping studies have been completed and the Final Scoping Report has been finalised or almost finalised after a public participation process.

It is our contention that DEAT cannot grant Eskom permission to amend an existing application to reflect a combined application for environmental authorisation to sequentially develop three Nuclear Power Stations even if they wanted to. We are therefore surprised to learn that DEAT *"supported the submission of a revised application, in the event of the promulgation of the amended EIA regulations",* and would suggest that this aspect is carefully considered by both Eskom and DEAT. We have no doubt, and this is confirmed by our legal opinion, that the draft regulations as well as the current regulations would require Eskom to lodge a new application if they, at this stage of the game, wish to apply for authorisation to construct a "fleet of three power stations" on three predetermined sites.

The EIA regulations require that alternatives to a proposed activity should be considered. Guideline 5 published in the Government Gazette by DEAT mentions that *"The identification, description, evaluation and comparison of alternatives are important for ensuring the objectivity of the assessment process".* Alternatives are defined as different means of meeting the purpose and requirements of the activity which may include the site where the activity will take place, the technology used, the type of activity, the design of the activity etc. Only alternatives that are considered to be "feasible" following the Scoping Report are required to be evaluated and assessed during the EIA phase of the process.

To state that the amendment to the application that Eskom intends to seek will, if approved, not negate the need to study alternatives since alternative plant layout and on-site positioning still have to be evaluated is indeed true. However, if the need to consider alternative sites for an activity that may cause untold environmental and socio-economic damage is removed from the process going forward, and then only maintaining the requirement to evaluate the alternative of painting the plant to be constructed white or green, it would represent a total abuse of the EIA process the legislator requires a developer to follow. If Eskom pursues this perceived 'loop-hole' in the draft regulations, still to be promulgated, and the competent authority accepts the intended amendment to the application under consideration, it will no doubt result in the requirement for a court of law to rule on this important matter.

It is true that Eskom have all along stated that they intend to construct more than one nuclear power station and that they have a programme to install 20 GW nuclear generating capacity. The timing of this construction programme and how it will fit into their plans to construct coal fired power stations were never revealed. It is our contention that had this information, together with a long term strategic plan, been tabled at the onset of an Environmental Impact Assessment process associated with an application to build three nuclear power stations in the short term (with or without proper scoping being done), the inputs, comments, questions, objections or otherwise during a public participation process would have been substantially different from what actually transpired during the current public participation process.

The impression is being created that Eskom's strategy regarding their so-called nuclear build programme is not properly defined and is in disarray. It appears as if Eskom is misusing the current EIA process as a conduit for their unclear strategic direction. We believe that the competent authority should review the procedure currently being followed to reach the environmental authorisation and would suggest that consideration be given to whether a Strategic Environmental Assessment, an Environmental Risk Assessment or an Environmental Feasibility Assessment are not tools that need to be used with an application of this scale.

Response (5)

Your comment in respect of Eskom's intention to amend the application is noted. However, as no application has been made to date, it is premature to respond to your comment in this regard. If such an application is made, I&APs will have an opportunity to comment on the real situation and the above comment will also be

considered in that regard, in which case the response will be factual rather than speculative. See also Response 2 above.

See Response (3) above. Furthermore, the rationale for not considering the other two sites (Brazil and Schulpfontein) has already been approved by the then DEAT. DEAT (and now DEA) is satisfied that three sites were selected for the EIA phase from the original five alternative sites considered in the Scoping Phase. DEAT also indicated that they are satisfied with the site alternatives, as DEAT applied their minds to what was reasonable and feasible with respect to the original five alternatives.

Again, Arcus GIBB cannot respond for or on behalf of the competent authority, in this case DEAT. Arcus GIBB will formally request a response from the DEA and the response will be relayed to the STCA as soon as possible.

Your comment (6)

THE AMENDED EIA REGULATIONS TO BE PROMULGATED

The draft amended EIA Regulations published in Government Gazette no 31885 of 13 February 2009 (Notice 165 of 2009) were placed in the public domain for comments until 14 April 2009. Our information obtained from DEAT is that these regulations, with or without modifications, will most probably not be promulgated before August or September 2009. In the Revised PoS Eskom's intent to submit a "revised application" if and when the amended EIA Regulations are promulgated, is communicated to I&AP's.

The draft amended EIA Regulations, as well as the current regulations, specifically state that if an EIA process commenced under a set of regulations you have to finish it under the same set of regulations. Regulation 88(1) of the draft amended regulations reads: "*An application for authorisation of an activity submitted in terms of ….the previous NEMA regulations…. and which is pending when these Regulations take effect, must despite the repeal of those regulations be dispensed with in terms of those previous regulations as if those previous regulations were not repealed*". It is therefore clear to us that if Eskom wishes to apply for authorisation to sequentially construct three power stations at three sites that they have identified, it will have to be a new application in terms of the new regulations.

Response (6)

See Response (2) and (5) above. Arcus GIBB will formally request a response from the DEA and the response will be relayed to you as soon as possible.

Your comment (7)

COMMENTS ON THE FINAL SCOPING REPORT

The Final Scoping Report (FSR) was made available for public comment during the first half of 2008 and was subsequently submitted to the competent authority for acceptance. As argued in Section 3.1 of this document, the fact that Eskom chose to place the Revised PoS in the public domain on 25 June 2009 entitles us to comment on the contents of the FSR which is claimed to have been approved by the competent authority.

The purpose of this section of the document is to interrogate and question the conclusions reached and recommendations made in the FSR. We are not necessarily questioning the need for nuclear power in South Africa and we are mindful of the "not-in-my-back-yard-syndrome," but believe that even the consideration of the construction and operation of a nuclear power station at Bantamsklip, should be opposed unequivocally.

Response (7)

It should be noted that as per the letter dated 19 November 2009, the then DEAT approved the Final Scoping Report. All comments identified below will therefore be reviewed within the context of the Impact Assessment Phase of the EIA and documented in the Environmental Impact Reports (EIRs).

Your comment (8)

BANTAMSKLIP
Bantamsklip is situated in a region known as the Strandveld and the Agulhas Plain which is a globally recognised biodiversity hotspot in an area of irreplaceable lowland fynbos. It is also the site of a world-renowned sustainability study focussing on the integration of conservation and development. The Agulhas Plain was selected by the SA Government in 2002 to serve as a model for an innovative approach to conservation and human development. This requires that all parties which own, manage and utilise natural resources and land are included in planning and implementation. As a consequence eco-tourism in the area, land as well as ocean based, have experience phenomenal growth in the last five to ten years.

The building of a nuclear power station at Bantamsklip can be compared to a decision to build such a power station in the middle of the Kruger National Park with a comparable devastating negative effect on tourism. The Minister of Tourism, Mr Marthinus Van Schalkwyk mentioned during his budget speech in parliament on 17 June 2009 that Tourism is now a larger earner of foreign exchange for South Africa that gold mining and that the potential to expand this "new gold industry" (tourism) is almost unlimited. During International Marine Day a couple of weeks ago the new Minister of Water and Environmental Affairs, Ms Buyelwa Sonjica 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. This announcement was repeated by the Minister during her Budget debate in parliament on 17 June 2009.

In a fifty kilometer radius from the proposed Bantamsklip site you find at Dyer Island the internationally recognised best spot to watch the Great White Shark, at Hermanus and the cliffs at De Kelders the best spots in the world for watching whales from dry land and the Agulhas National Park, being established and expanded, to protect an internationally recognised botanical biodiversity hot spot. As a consequence tourism in the area has experienced a major expansion over the past 5 to 10 years and will further expand dramatically in the future. A nuclear power station will no doubt cause untold harm to this industry.

Response (8)

Your comment is noted. However, please note that the FSR will not be revised since it has been approved by the competent authority, the then DEAT. All issues raised however will be fully assessed as part of the Impact Assessment Phase of the EIA and subsequently included in the EIR. Your issues will be communicated to the relevant specialists for inclusion and assessment in their respective studies and documentation in their respective reports.

Your comment (9)

CUMULATIVE IMPACTS
The subject of the cumulative impact of the power station and the transmission lines has been raised at a number of public meetings and also in submissions that we and others have made in respect of the draft scoping report on the Bantamsklip transmission lines. It has been pointed out that Eskom Generation and Eskom Transmission are different entities and was given as the main reason for different applications. We do not accept the validity of this argument even if the two entities being part of the Eskom Group are separate legal entities.

It was further also mentioned to us that at the end of the EIA process the cumulative impacts will be looked at. 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 exercise would have been to determine the transmission line routes for each site by means of EIA processes and to then assess the five sites with their accompanying transmission lines to determine the cumulative impact of a development on each site in order to compare the alternative sites with each other. Since this was not the case during the scoping phase of the process to date we question the validity of the recommendations in the FSR.

Response (9)

The complexity of an EIA for a nuclear power station is such that the quality of the process would be compromised if there was an attempt to combine an extensive linear project with it.

Furthermore any decision on either the nuclear site or the transmission EIAs are not mutually dependent. The DEA could issue ether a negative or positive decision on either of the applications with a complete opposite decision been issued on the other.

Although the cumulative impacts arising from both the nuclear site and transmission line will not be assessed the transmission line will be discussed as part of the Nuclear-1 EIA in order to ensure a comprehensive view is maintained throughout the process. The Nuclear-1 EIA will assess cumulative impacts with respect to all existing developments in the region as well as attempt to identify any future cumulative impacts with respect future developments which may have been identified in any land development plans that may exist.

Your comment (10)

ENERGY POLICY
We realise that Eskom is not responsible for establishing the energy or the nuclear policies of the South African Government. Since the government have established a task team led by the Department of Minerals and Energy (DME) *"to develop and implement a framework for procuring a nuclear technology partner to support both the build and associated industrialisation process…"*[1], the DME now appears to be the applicant seeking authorisation to construct a nuclear power station. We therefore believe it is not out of place to comment on the Policies of the Government.

In terms of the latest available document setting out the nuclear energy policy of the government one of the objectives of the policy is the promotion of nuclear energy as an important electricity supply option for South Africa. The statement made by the Department of Public Enterprises on the same day that Eskom announced that they terminated the commercial procurement process to select a preferred bidder for the construction of Nuclear One, states that the government is committed to exploring the use of nuclear energy as part of the base-load energy generation requirement.

The target of 30% nuclear generating capacity equalling 20 000 MW within the next 20 years is not a government policy issue but appears to be an Eskom Board decision or vision. The plan to construct all this capacity along the Cape Coast it also not government policy and makes no economic sense what so ever. Particularly since the greater share of the electricity that will be generated will have to be exported to the economic heartland of the country. The cost of nuclear power generation is considerably higher[2] than that of other alternatives open to South Africa and therefore the Eskom Board must be commended for their decision in December 2008 to discontinue the commercial negotiations with Westinghouse and AREVA.

The alternatives to nuclear power are mentioned in the Scoping Report with the apparent purpose of justifying the generation of 20 000 MW nuclear electricity along the Cape Coast. On page 8-5 it is mentioned

[1] Letter from ACER (Africa) dated 18 May 2009.
[2] "Eskom chief executive Jacob Maroga has revealed that the recently cancelled 4000 MW Nuclear-1 power plant would have cost well above R300 billion, according to quotes from France's Areva and the US's Westinghouse" (Quote from African Energy News Review). The capital cost of the latest approved 5400 MW Coal-fired power station, Kusile, is quoted to be R90 billion.

that one of the disadvantages of coal is that "it is expensive and require a long lead time to construct". When nuclear options are discussed later in the report not mention of the cost of nuclear electricity generation is made. We find it very strange that alternative power generation is discussed without even a mention of the costs involved knowing the nuclear option in South Africa would be at least three times more expensive[3] than coal. Apart from costs, job creation is the most pressing problem that our government is faced with. The choice of nuclear over coal, which will provide at least ten times more job opportunities, therefore makes no sense what so ever.

We accept that for the generation of base load electricity the choices at this stage of international technological development are really only between coal, gas, nuclear and hydro. We also accept that the availability of sufficient gas in South Africa is unproven and that the country is not water rich enough to make large scale hydro power generation possible. However, the harnessing of water resources north of our borders in partnership with other SADC countries should receive more attention than is currently the case.

Nuclear power generation have the advantage of very low carbon emissions if compared with coal and will assist South Africa in reaching the goals set by the government to reduce such emissions. This is all very well, but the cost to our economy to reach those laudable goals appears to be completely disregarded. We agree that it is important that the world should work towards the reduction of greenhouse gas emissions but the onus to do so should lie more heavily on the shoulders of the developed world rather than that of developing countries like South Africa. Our government, together with governments of other developing countries, have shown their ability to stand their ground in negotiations with the developed world during international trade negotiations. This gives us confidence that they will also be able to shift the burden for a reduction in carbon emissions, in the short and medium term at least, to where it belongs.

The generation of nuclear electricity at the coast to satisfy the coastal demand may still make some economic sense, but even that is questionable. If there is a desire to generate more electricity from nuclear sources than is required in the Cape that should take place at, or close to, locations where it is consumed. To conceive a grandiose plan to establish generating capacity of 20 000 MW along the Cape coast to produce power for transmission to where it is consumed
1 500 kilometers away, seems to be completely misplaced.

In summary it is our contention that

- The grandiose plan to establish 20 000 MW nuclear power generating capacity along the Cape Coast is not government policy but an ill conceived plan of Eskom;
- The cost to the South African economy to execute such a plan compared to more rational alternatives was not taken into account at all;
- The plan to generate electricity along the Cape Coast for the purpose of exporting it to the economic heartland of the country, were it will be consumed, is preposterous;
- Since this plan forms the backbone of the Scoping Study that was conducted to evaluate the alternative sites for the construction of a nuclear power, such a scoping study is flawed.

Response (10)

Your comments are noted. However your comments have not considered the fact that the Cape currently relies on power generated in Mpumalanga and is transmitted over long distances. As one country, there will always be interdependency on the resources of the country by all citizens. Nevertheless, due to transmission of electricity over long distances, in order to sustain the integrity of the grid, production of electricity has to be spread in different areas over the country, including areas where demand is growing. The availability of land to construct power stations is a limited resource and wherever such resource exists,

[3] See footnote no 2

the output thereof must benefit all the citizens of the Republic. An extensive process was undertaken, as detailed in the Scoping Report.

Your comment recognizes that coal and nuclear are the only two real base load technologies available, Eskom is currently constructing two large coal fired in order to meet the growing demand of electricity South Africa requires the deployment of both base load technologies, renewable options and demand side management.

It is not in the national interest for South Africa to ignore climate change concerns and continue to emit carbon and greenhouse gases and expect other nations to carry the burden by themselves. The volume that South Africa can contribute by reducing carbon emission would make a difference and although this is a long term goal, South Africa has to start now to identify and implement possible opportunities. The purpose of environmental laws like NEMA is, amongst others, to minimise degradation to the environment including global warming. It is implausible that Government should choose to ignore its own laws and not implement them.

The STCA's proposal that South Africa rely on exports, can be used to supplement electricity generated in the Republic, but cannot be the solution to country's security of power supply.

Government is responsible for energy policy and Eskom is responsible for supply of electricity. Hence, Eskom has to have plans on future supply and be prepared to increase the supply when necessary. Eskom's plans are not ill conceived, there is no doubt that there is a growing demand for electricity and that more power stations must be built.

Your comment (11)

THE GENERATION OF NUCLEAR IN THE CAPE FOR EXPORT
The original studies carried out by Eskom to identify potential sites for a nuclear power station was conducted in the 1980's. The only areas considered during Phase One of this process was the Cape West and South coasts, from Alexander Bay to Port Elizabeth. The reason for this was because Eskom at that stage was embarking on a process to determine the most appropriate site for the next nuclear power station to generate electricity for local Cape consumption. Such a power station generating power closer to the point of consumption would reduce transmission losses and making the questionable economics of nuclear power more attractive.

Phase One of this nuclear site investigation programme (NSIP), summarised in Appendix D of the FSR, did not investigate potential locations for nuclear power stations producing power for export to the major electricity market in South Africa. If the investigations were contemplating such exports 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, is also relatively close to the major electricity market on the Highveld and the Reef.

Phase Two and Three of the NSIP continued to reduce the potential sites based on further more detailed investigations. Therefore, at the onset of the current EIA process in 2007 there were five potential sites on the table for one power station to generate power for the local Cape market. Although it was mentioned that all the sites may in future be considered as potential sites for power stations, there was no indication of Eskom's current grandiose plan to produce electricity along the Cape coast for export to inland locations where it will be required.

The Bantamsklip site was purchased by Eskom early in 1990 after consultation with the apartheid government of the time. Environmental issues were not very high on the agenda of the government of the day and we had to wait until after democracy for the promulgation of progressive environmental legislation. The National Environmental Management Act, promulgated in 1998, is a piece of legislation that South Africa

can be very proud of and one can only but congratulate the Department of Environmental Affairs and Tourism for their contribution in placing it on the statute-book. However, it is now important that we act according to the spirit and the letter of this legislation.

Response (11)

Your comment is noted. The STCA should note that all sites currently under consideration will be subjected to the same level of assessment as required by legislation and subsequently the DEA will issue the respective environmental authorisation based on all information contained in the FSR and FEIR as well as all comments received from the public, as well as the responses to these comments and their incorporation into the EIA process and its documentation.

Your comment (12)

ALTERNATIVE SITES AND COST ASSOCIATED WITH GRID INTEGRATION

The purpose of the scoping phase which commenced in 2007 was to assess the fives sites identified by means of the NSIP and reduce them to the three most viable alternatives on the basis of this assessment. In paragraph 8.8.2 of the FSR a justification is given for the recommendation that the west coast sites should be excluded from further comparative assessments during the EIA phase. It is mentioned that these two sites are deemed to be "unfeasible" for the proposed Nuclear Power Station. The so-called unfeasibility of these sites are based on:

- The cost associated with the "*local integration and exportation of power via existing corridors."*
- " *..lengthy time delays associated with the authorisation and construction of new power corridors……which will prevent Eskom from providing the power within the required timeframes"*
- Environmental impacts associated with the development of new power corridors.

The Report also states that conclusions are not formed on the basis of detailed impact assessments, but are based purely on qualitative analyses. From studying the report it would appear that the west coast sites were only very superficially evaluated and the impression is created that these two sites were effectively disqualified by Eskom even before the scoping phase commenced. To substantiate this statement one only need to look at Table 18 on page 8-35 of the report. In this table a "preliminary comparative assessment of the baseline environments associated with the five proposed sites" is made. In the table the various aspects studied are tabulated. In the case of the west coast sites, 14 of the 24 aspects were either "least studied" or "insufficient data" were available.

Response (12)

As mentioned above, the Final Scoping Report was approved by the competent authority, the then DEAT, on 19 November 2008. Section 2.17.1 of this letter states that "*The Department accepts the exclusion of the Brazil and Schulpfontein sites for further investigation in this EIA process, as they are not technically feasible at this stage. The Department has also however noted that these sites will be considered for future Nuclear projects."*

In terms of Section 29 (b) of Government Notice Regulation 385 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), Scoping Reports should include "*a description of the proposed activity and of any feasible and reasonable alternatives that have been identified*". Based on the information contained in Eskom's 20 GW Nuclear Transmission Grid Draft Impact Report (2007), it is evident that Brazil and Schulpfontein are neither reasonable nor feasible to meet the desired objectives associated with the Nuclear-1 NPS and are therefore not considered as valid site alternatives. Thus it was not practical to further assess the Brazil and Schulpfontein sites in the detailed Impact Assessment Phase of the EIA process for Nuclear-1.

Furthermore, section 8.8.2 of the FSR states the following as rationale for the exclusion of the Brazil and Schulpfontein sites:

*"Thus, the Brazil and Schulpfontein sites require the construction of new power corridors and the exportation of the majority of the power to areas of demand given the limited local demand (**Figure 78**). Thus, the Brazil and Schulpfontein sites are deemed unfeasible for the proposed NPS based on the following reasoning:*

- *Optimal, strategic and cost effective utilisation of existing infrastructure associated with the Duynefontien, Bantamsklip and Thyspunt sites, with respect to local integration and exportation of power via existing power corridors;*
- *Prevention of lengthy time delays associated with the authorisation and construction of the new power corridors applicable to the Brazil and Schulpfontein sites, which will prevent Eskom from providing the power within the required timeframes;*
- *Unnecessary environmental impacts associated with the construction of new power corridors given that there is existing infrastructure; and*
- *Cost implications associated with the development of new power corridors"*

Based on the severe transmission constraints the West Coast sites were not considered feasible for further investigation in the Impact Assessment Phase of the EIA process.

Table 18 is a "*Preliminary Comparative Assessment of the Baseline Environments associated with the Five Proposed Sites*". Due to the fact that "*other specialist studies could not infer relative sensitivity levels until detailed investigations are undertaken during the detailed assessment phase of the EIA process*", some sections of the table contain the phrases "*least studied sites*" or "*insufficient data*". The FSR specifically states that the information contained in Table 18 "*is based on preliminary studies and therefore cannot be used to draw confident conclusions pertaining to a preferred site until further detailed studies are undertaken as part of the EIA process."* The purpose of the table is to display "*preliminary baseline information obtained from the relevant specialists, to date, show that specific components of the baseline environment indicate varying degrees of sensitivity amongst the five proposed sites*."

In the case of the West Coast sites, only one (1) specialist study was considered "*least studied sites*" and two (2) as "*insufficient data*". The remaining ten (10) specialist studies, which were considered as "*least studied sites*" or "*insufficient data*" apply to not only the West Coast sites but also to all five sites. Further, we would like to point out that there are in fact 25 (and not 24) "*aspects*" or studies; and that only 13 are listed as "*least studied sites*" or "*insufficient data*". This is contrary to your statement that "I*n the case of the west coast sites, 14 of the 24 aspects were either "least studied" or "insufficient data" were available*."

<u>Your comment (13)</u>

Costs of other impacts were not included in the decision making process. Neither was the economic benefits of other impacts taken into account like colder water on the West Coast or the fact that nuclear waste transport will be much less of a potential hazard to the environment and society, which must have a value much greater than anything else.

The Transmission Impact Assessment Report dated March 2008 and attached as Appendix H to the FSR discusses the integration of power potentially to be generated at the various sites. This study and report is a thorough piece of work but, firstly it was produced by Eskom and not by an independent specialist and secondly it was done on the premise that large amounts of electricity will eventually be exported to Gauteng and surrounding areas. In the case of West Coast sites the conclusion was reached that new transmission corridors of 1 500 kilometers will have to be constructed to allow for these exports. If electricity was only required to satisfy the power requirements of the Cape, which was the original basis used in the NSIP, the need for or extent of such corridors would be substantially different.

The second justification for the disqualification of the west coast sites is lengthy time delays that are unacceptable due to the time pressure to build new nuclear power generation capacity. This time pressure is not there anymore for a number of reasons discussed hereunder.

- Eskom's decision to discontinue with commercial negotiations with possible vendors stopped the process dead in its tracks. If the DME or any other government agency or even Eskom where to pick up the ball again and start the process afresh to obtain quotes for the technology and construction of a nuclear power station, the time involved to get to the point at which Eskom was when their Board decided to discontinue negotiations, will probably be one or two years.
- The demand for electricity in South Africa has reduced substantially as a result of the economic recession. National demand is down to 2005 levels and we are looking at zero growth for the calendar year. It will take a couple of years before electricity demand reaches the level where it was at the end of 2007 when all the electricity supply problems occurred.
- Since the Scoping Report was drafted decisions to construct two coal-fired power stations (each with a generating capacity in excess of 5 000 MW) have been taken while a decision on a third one is imminent. In addition a decision to construct a pump storage scheme in the Drakensberg has also been taken by Eskom's board which will greatly assist in improving generation capacity during peak consumption periods. Eskom is also in the process of concluding agreements with a number of private companies to generate electricity from waste heat (co-generation) to supply into the grid.

It is therefore our contention that the time pressure to build a nuclear power station has disappeared and that there is ample time to do a proper scoping study taking into account all the impacts on a cumulative basis that such a project will have. It is essential that the cumulative impacts of such a project should be studied, power station plus transmission lines and power corridors. The total picture should be studied during the scoping phase before alternative sites are eliminated.

Response (13)

Severe time constraints to the nuclear programme are still applicable. In spite of the current economic down-turn, the programme for Eskom to meet energy demands in South Africa is very tight and the EIA for Nuclear-1 remains on the critical path, with the next base load required to be operational by 2018. Despite the economic down turn, which is temporary, electricity demand, although slowed has not declined, furthermore even prior to the economic downturn South Africa's electricity reserve margins were unsustainably low.

In order to meet future demands for electricity South Africa requires electricity from nuclear 1 in conjunction with the proposed coal fired power stations currently been built.

Your comment (14)

CONCLUSION
In summary therefore it is our contention that:

- The purpose of the NSIP, contained as Appendix D in the FSR, was originally conceived (during the 1980s) to identify a site for the next nuclear power station to generate electricity for local Cape consumption.
- It may be acceptable to use the recommendations of the NSIP in a process to determine the most appropriate site for one power station to generate electricity for the Cape market. However, it is unacceptable to use these recommendations in a process to construct three power stations generating electricity, the major share of which will be exported to the industrial heartland of the country.
- The reasons for disqualifying the West Coast sites during the scoping phase of the EIA process were invalid at the time of conducting the study. More recent developments in the supply and demand

environment of electricity consumption in South Africa have reinforced the invalid reasoning contained in the FSR.

Response (14)

Please refer to responses above.

Your comment (15)

COMMENTS ON ENVIRONMENTAL IMPACTS IDENTIFIED DURING THE SCOPING PHASE (Section 3 of the Revised PoS)

In Section 3.2 the key impacts identified to date are summarised. We comment on this section as follows:

- Murky terminology does not provide a basis for objective comparison
- Negative impacts scoped to date include "change in tourism activities" and "loss of agricultural land". At the same time one of the "positive potential impacts scoped to date" is reported to be the "direct economic injection into the local economies".

Since at the end of the day only the all-inclusive or bottom line economic impact on the area is relevant, it causes confusion to refer to the one impact as an "economic injection" and to the other two as a "change" or a "loss". Please also note that with regard to the so-called "direct economic injection" no distinction is made between the construction phase (short term) and normal operation phase (longer term), a matter which makes the chosen terminology even murkier, since the "change in tourism activities" and "loss of agricultural land" are both long term effects.

Bantamsklip coastline is an essential marine resources area[4]
No potential negative economic impacts in relation to the harvesting of marine resources and other marine related economic activities have been mentioned as "key impacts scoped to date" in spite of the fact that some of these are very obvious factors of the highest economic importance for the area. Not including the assessment of the impact on marine based economic activities -be it harvesting of resources or applying these resources to generate tourism based income- is a major omission and project a flawed picture of the economic reality of the area.

Net loss of workplaces as a result of a power station at Bantamsklip[5]

[4] The area is known to support dense kelp beds and abalone resources and the region also supports a number of significant fisheries and other marine activities, such as shark diving and whale watching. Kelp- and (legal) abalone harvesting are essential sources of income for local communities. It is known that as a result of the pumping of colossal amounts of water through a nuclear plant, there is a high mortality (up to over 50%) of phytoplankton. Pelagic fish and several whale species feed on phytoplankton.
The local Overberg coastline has the highest level of marine biodiversity and endemism found in Southern African coastal waters. This is due to the cool Benguela Upwelling (an upwelling more intense here than anywhere else in the world) enhanced by the effects of South Atlantic high-pressure weather system and the topography of the Agulhas coast. This leads to very high levels of primary nutrient (biological) productivity occurring on this coast and substantial marine resources and growing international marine based tourism as a consequence. The area has received enormous international academic and media attention.

[5] Though the Agulhas Plain is still an impoverished rural area with signs of social scars abundant, clear inroads have been made to right the wrongs of the past. As a vehicle focusing on communities and sustainable livelihoods, especially the ABI project (Agulhas Biodiversity Initiative which has *Nature Based Tourism* as one of its three pillars) has been instrumental in this respect by "cementing" land-owners and other relevant parties into a ground-breaking spatial and organizational system that credibly aims to be a working example for successful rural development all over South Africa. It has already been ascertained that certain expansions and planned developments in the Agulhas Plain have been put on hold as a result

Eskom estimates that 1 500 plus people will be permanently employed during the operation phase of the nuclear plant at Bantamsklip, of which a number (no specifics given) will be sourced from outside of South Africa. Only a restricted number of menial jobs (cleaning, security, ground maintenance) will be available for local people. All other employees will have to be sourced from outside the Agulhas Plain and outside South Africa. These 1500 imported jobs have to be compared with the loss of permanent jobs -as a result of the NPS and associated infrastructure- in the existing and future tourism, agricultural and marine based industries in the area.

Net economic impact on an area
In our view the all-inclusive or bottom line economic impact (hereinafter referred to as the net economic impact) is likely to be extremely negative in the Bantamsklip and surrounding area. In the economic assessment that will be carried out in the EIA phase, it is of the utmost importance that a professional and all-inclusive determination of the net economic impact of the proposed development (short, medium and long term) should be made for each of the three sites and their surrounding areas. This should be followed by a proper comparison between the net economic impact of a development at each of the three locations.

Tourism and conservation are interdependent
Tourism in the Bantamsklip area largely depends on its pristine nature, being it terrestrial or marine. The maintenance of the pristine nature of this area is not only the result of, and future responsibility of public efforts within the framework of the Agulhas National Park and Cape Nature Reserves. The contribution of commercially driven tourism enterprises (Grootbos Private Nature Reserve, Dyer Island Cruises and other whale and shark boat operators, Farm 215 Private Nature Reserve, Mount Dyer 4x4 routes, Platbos Forest, Heidehof and others) as well as conservation minded private landowners should not be underestimated.

Conservation Areas.
The "*potential (sic) establishment of formal conservation areas*" is listed as a positive potential benefit scoped to date. However, no mention is made of the potential negative impact that the proposed development will have on the maintenance and future development of private conservation areas due to the undisputed reduction in investment and funding by local and international conservation bodies. With the negative impact that such a development will have on the nature-based tourism industry, the investment of this industry in conservation in the Bantamsklip and surrounding area, will reduce or dry up completely.

Failure to grasp the importance of the local tourism industry for both land and marine based conservation around the Bantamsklip site will result in the projection of a flawed picture of the status of conservation in the area. Any study or statement regarding conservation or conservation areas should consider the total all-inclusive impact that the proposed development will have on conservation. To call the "establishment of formal conservation areas" on or around the Bantamsklip site, where almost the entire area is already under conservation management, either institutional or private, a positive benefit of the proposed development, is far fetched.

Change in tourism activities.
In section 3.2 of the Revised PoS the *"change in tourism activities"* is mentioned as a potential negative impact scoped to date. The phrase *"change in tourism activities"* is however in no manner covering either the present or the future status of tourism in the Bantamsklip area:

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of the planned erection of the nuclear power plant. If the decision to build this plant at Bantamsklip will be taken, the outlook for the local tourism and agricultural industries will be bleak. Especially the targets of ABI will be frustrated, likely up to the point where the whole concept will prove to falter, wasting years of productive work as well as national and international funding and causing international embarrassment. *(Eskom estimates that 7000 people will be employed during the construction phase. It is not expected that any of these people will have the prospect of a permanent job in the area after the completion of the plant. / It is a fact that of all electricity production sources, nuclear energy creates the least amount of jobs per Kw.).*

- The phrase is too general to have any meaning or controllable basis for detailed study
- The phrase ignores the fact that the tourism industry in this area is increasingly based on the international concepts of "responsible and sustainable tourism"[6]. In this regard the industry in this area is recognised as an example for the rest of the tourism industry in South Africa.
- The phrase ignores the fact that the Agulhas Plain is a growing tourism destination supported by international, national and provincial funding. The impact on such funding that the proposed development will have should be properly assessed by suitably competent experts. Of special interest is the future of and the positive effect that the Agulhas National Park will have of the tourism industry.[7]
- The phrase ignores the fact that Walker Bay and the area between Gansbaai and the Agulhas National Park is destined to become one of the most attractive and diverse nature tourism destinations in the world by international tourism marketing experts.[8]

Response (15)

Your comments have been noted and will be passed on to the respective specialists; namely the Tourism and Economic specialists.

Your comment (16)

COMMENTS ON TERMS OF REFERENCE FOR SPECIALIST STUDIES (Section 4.5 of the Revised PoS.

Some of the comments made are of a general nature but the majority are specific to the Bantamsklip site.

ECONOMICS
Kelp and abalone resources should be included
In section 4.5.13 of the Revised PoS where the terms of reference for the assessment of the economic impact of the proposed NPS are summarised, it is noted that certain aspects in relation to the fishing and aquaculture industries will form part of such an assessment. Not included (explicitly or implicitly) under the listed "aspects" are abalone farming (an important industry in Gansbaai) and the harvesting of kelp, an economic activity of high relevance to local communities. This omission should be corrected.

[6] Most of the new tourism developments in the area are expected to be organized along sustainable and responsible tourism standards. "Sustainable" and "responsible" tourism is growing exponentially, especially in the European markets. Of note is that the Agulhas Plain has already at present the highest density of tourism operators certified by Fair Trade in Tourism South Africa of all regions in South Africa. Each of these companies (Grootbos private nature reserve, Farm 215 private nature reserve, Dyer Island cruises and White shark projects) is the winner of several awards in the field of responsible tourism and all of them will be severely impacted by the erection of a nuclear power plant and associated infrastructure since these companies depend for the attraction of their product on a pristine natural landscape which is under threat of being scarred by wide scale infrastructural build-up and a high voltage transmission line corridor of 1.3 km wide (the latter not being part of this assessment study, but to be taken into consideration as a cumulative (incremental) impact as per the Revised Plan of Study (4.2 "Impact assessment methodology".)

[7] The province's motivation for the tarring of the road from Gansbaai to Bredasdorp was to make the area accessible for tourism developments. The Agulhas National Park, into which all the animals which once roamed on the Agulhas Plain ("the Serengeti of the Western Cape") will be released in the coming years, will be a very strong tourism draw card.

[8] A whole plethora of high quality tourism attractions are compacted in a relatively small area only two hours from Cape Town (whale watching, shark cage diving, Agulhas National Park, botanical and horse trails, heritage sites, beaches, wine routes and tasting) . Discussions with several national and international tourism professionals clearly indicate that the mere presence of a nuclear reactor in the area will strongly decrease the attraction of the Agulhas Plain as a nature-based tourism destination up to the point where 80% of respective tour operators answered the following question with "YES". *In case a nuclear reactor will be constructed at the coastline between Gansbaai and Cape Agulhas, will you contemplate an alternative destination for your clients?* Especially European tourists appear to stay clear from destinations in the vicinity of a nuclear plant.

Specific features of economics of area require specific expertise to assess
In relation to the specific features of tourism and agriculture, reference is made to the points made under the respective headings. Since the consultant assessing the economic impacts as well as the impacts on agriculture and tourism is one and the same person, we trust that cross-referencing will happen as a matter of course and does not need to be specifically pointed out.

It is logical that the impacts on agriculture and tourism should be assessed by the same person responsible for the overall economic assessment, it should be pointed out that both the tourism and agricultural industries in the area around Bantamsklip are very specific. As a result specific expertise is required to be able to fully grasp the problems in this respect. Although the credentials of the appointed consultant in respect of a general economic impact assessment would appear to be adequate, it is not clear whether he has any specific knowledge of the tourism, agricultural or marine based industries in the Bantamsklip area. In our opinion these industries in this area is so unique that serious consideration should be given to the appointment of an additional expert with specific knowledge and expertise in these fields to assess the impacts of the proposed development on these industries.

Response (16)

Your comments on the Terms of Reference for the Economic Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Comment (17)

TOURISM
The terms of reference for the assessment of the impact of the proposed development on Tourism is contained in section 4.5.20 of the Revised PoS.

Extent of impact on tourism
The terms of reference states that the impact on the tourism industry “adjacent” to the proposed sites should be assessed. All parties with knowledge of the industry agree that the impact of a NPS and associated infrastructure on the tourism industry will extent far beyond the site of Bantamsklip and Pearly Beach itself. The mere presence of a nuclear reactor in this area, being economically dependent on nature-based tourism, will have an impact as far as Gansbaai to the West and Cape Agulhas to the East, probably as far as Stanford and Arniston and likely as far as Hermanus and De Hoop Nature Reserve.

Whatever the measurable negative impact on existing and future tourism potential on the local tourism industry, the extension of the “nuclear fleet” in the Western Cape will have a negative impact on the attraction of the Western Cape as a tourism destination by international, and more specifically European tourists. These markets associate a nuclear plant with negative perceptions of safety and tourism attraction. Any EIA focusing on the true and real impact on tourism should include a detailed study of the main source markets (expressed in percentage of income) of the regional tourism operations, which is mainly Europe.

Shark, Whale watching and Dyer Island as the ultimate engine of this important tourism industry[9]

[9] Dyer Island is one of the most important islands on the Atlantic coast, one of the largest breeding colonies of African penguins and in general a seabird sanctuary of global importance. The waters around Dyer Island and along the Bantamsklip coast have the highest concentration of Great white sharks in the world who are attracted by the 60.000 odd cape fur seal colony at Geyser Island. The area is suspected to function as the breeding site for Great white sharks (no breeding sites for this fish-species have been confirmed in the world) There are six Red Data bird species found breeding on the island. It is said that the opportunity to view Great White Sharks is second only to the Kruger National Park, when it comes to single activities attracting tourists to South Africa.
The ecology of the Dyer Island Marine Sanctuary and the spawning grounds and nurseries of pelagic fish (anchovies and pilchards) attract the Southern Right, Humpback and Bryde's Whales close inshore on the

In spite of the fact that Whale watching and shark diving are mentioned as specific issues that should be assessed, no word is said about Dyer Island in spite of the fact that the Dyer Island Nature Reserve, situated seven kilometers due south of Bantamsklip, is the condition *sine qua non* for the great white shark industry and arguably for the whale industry as well. Any assessment of tourism impacts in the area should include an exhaustive study of the impacts on Dyer Island and Geyser Rock.

Tourist and spatial planning in the region.
The tourism planning strategies are mainly carried out by ABI (Agulhas Biodiversity Initiative) since the economical activities, conservation and spatial planning are integrated in a region-wide approach under the wings of ABI. Since the tourism angle of ABI is focusing on nature-based tourism activities, a NPS cannot be in line with the region's tourist planning strategies. A NPS and associated infrastructure and transmission lines have not been included in the Spatial Development Plans and the Integrated Development Plans of the region simply because such an installation is not regarded as a compatible land and resource use.

Global warming; the last refuge of fynbos is the Agulhas Plain
In accordance with point 2.41 of DEAT's approval letter, "all specialist reports must consider climate change considerations in their assessments". With global warming, substantial areas that are now covered by fynbos are likely to become too arid for its continued existence. As the Bredasdorpberge and Agulhas Plain are unlikely to be much affected by climate change due to its position around the southern tip, the Agulhas Plain could become the last refuge for this highly endangered vegetation type - the richest in species of any place on earth and already a tourism draw card in its own right.

Response (17)

Your comments on the Terms of Reference for the Tourism Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (18)

AGRICULTURE
The terms of reference for the specialist study to assess the impact of the proposed development on agriculture are contained in section 4.5.16 of the revised PoS. Additional points that should be taken into account in the study are discussed hereunder.

Agulhas Plain is the newest Wine Region in South Africa[10]
The dairy industry is specifically mentioned, but fails to acknowledge that it is generally assumed that the present cattle and sheep grazing around the Bantamsklip site will continue to decline. In its place has and will come nature conservation, eco tourism, smaller scale vegetable and essential-oil harvesting, sustainable harvesting of indigenous flowers and high-end wine production. The Agulhas Wine Region is the newest wine growing region in South Africa (the first vineyard was only established in 2000).

Effect of Global warming; Agulhas Plain last resort for SA wine industry[11]

Agulhas Bank adjacent to Bantamsklip. This coastline witnesses the movements of cow-calf pairing of the Southern Right whales moving between the breeding grounds in the marine reserve off De Hoop to nurseries in the trans-Agulhas/Walker Bay areas. The Waters between Danger Point and Quoin Rock (with Bantamsklip in the middle) are the operating grounds of both the whale watching boats and cage shark diving boats. These marine based attractions are internationally renowned and several of the operators have received major international tourism and environmental awards

[10] One of the reasons that this area –cooled by sea breezes- is increasingly popular for wine growers is that the climate in the traditional wine growing areas tends to become too warm for sound wine production. Most of the wine growers in the area are members of the Biodiversity

According to instruction in point 2.41 of the DEAT approval letter, "all specialist reports must consider climate change considerations in their assessments". In the same manner that substantial areas that are now covered by fynbos are likely to become too arid for the continued existence of fynbos, most of South Africa's traditional winelands will become too hot for a viable future wine industry to flourish. The Agulhas Plain are unlikely to be much affected by climate change due to its position on the southern tip of Africa. The Agulhas Plain may therefore not only become the last refuge for fynbos but would as a consequence prove to be one of the few sustainable wine growing areas left in South Africa, if not the last. South Africa's long term position as a wine growing nation is endangered by global warming. The Agulhas Plains will be the last stronghold of wine production in South Africa since the industry cannot moved any further south.

Sustainable harvesting of indigenous flowers
No mention is made of an essential and specific industry in the Strandveld and the Agulhas Plain namely the harvesting of veld flowers for the cut flower industry. This economic activity provides livelihoods for about 800 families. A pilot project initiated within the ABI program resulted in the UNESCO and Fauna & Flora International funded Flower Valley Project embarking on a new, namely sustainable, way of harvesting indigenous flowers for the export markets. On the basis of these sustainable methods, more land (including conservancies and private reserves) were opened up for Flower Valley and other flower picking enterprises in the area working on the basis of sustainable standards. Even if it is believed that the flower picking industry is not that important from an economic point of view, the impact on this industry as well as the conservancies and nature reserves it depends on, should be assessed in detail.

Response (18)

Your comments on the Terms of Reference for the Agriculture Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (19)

MARINE BIOLOGY
The terms of reference for the Marine Biology specialist study are contained in section 4.5.12 of the Revised PoS. The following additional information should be taken into account by the specialist:

- Close to Bantamsklip lies Dyer Island, home to numerous bird species of which some are vulnerable or endangered. They fish and forage in the sea around the island and are very sensitive to any disturbance in their habitat.
- Research has shown that the African Penguin population experienced a dramatic decline and the slightest negative effects on their ecosystem could result in their extinction.
- The colony of 60 000 Cape Fur Seals in the vicinity of Bantamsklip is part of the ecosystem in which the Great White Sharks thrive. Temperature changes or chemical effluent will have detrimental effects on the magnificent creatures and the entire ecosystem.
- We also think that not enough emphasis is placed on the negative influences on the Southern Right Whales which rear their new born calves in the sheltered bays around Bantamsklip as well as on the humpback dolphins feeding in the vicinity and which are particularly sensitive to changes in their environment.

[11] Wine Initiative ("BWI"), highly supportive of the targets of the Agulhas Biodiversity Initiative and –in a short period- have produced top-class wines (e.g. winners of international gold medals, stocked in the first class of BA's flights..). Many wine growers have or aspire to obtain an organic label and make boutique- and estate-wines. A nuclear reactor in the vicinity (and highly intrusive corridors of high voltage transmission lines) will threaten the marketing capabilities of the winegrowers in the area and endanger the further development of the local wine industry

- Of great concern and requiring extensive study is the effect that liquid effluents containing long life radioactive isotopes like Strontium-90 and Cesium-137 will have on filter feeding species like Black Mussels and Abalone because of the tendency to concentrate the radioactivity in their body mass.

Response (19)

Your comments on the Terms of Reference for the Marine Biology Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (20)

SOCIAL
The terms of reference for the specialist undertaking the assessment of the social impacts of the proposed development are summarised in section 4.5.14 of the Revised PoS. The terms of reference should be modified to include the additional requirements stipulated hereunder.

- A thorough historical, current and projected demographic analysis is required.
- An in depth and detailed demographic study should be conducted to establish the number of persons / families whose lively hood is dependant on various economic types of economic activity in the area eg fishing, commercial agriculture (livestock, flowers, other crops), tourism etc. Comment should be made on the respective industries with regard to their unique selling points and the likely impact that a power station and transmission lines would have. The report should also provide a trend analysis over the last 10 years and projections for another 10 years as this will indicate perceived economically viable activities.
- The report should comment on the skills possessed by the local population and their ability to redirect these skills to other economically viable activities, either in their current environment or if forced to migrate in their new economic environment.
- The report should comment on the current activities in place to enhance the economic development and hence the social upliftment, both from a local or international perspective.
- The report should comment on the current activities to preserve and protect the environment eg. alien clearing activities to protect an already threatened environment, many such activities being reliant on sustainable harvesting of natural flowers and tourism.
- The impact of a massive short term inflow of temporary workers on established social services infra structure (or lack there of) should be properly investigated
- Study the propensity of local and international investors and donors to continue investing and donating funds to eco tourism and related industries.
- Cumulative oversight of all specialist studies

Response (20)

Your comments on the Terms of Reference for the Social Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (21)

HUMAN HEALTH RISKS
A description of the requirements for the study to assess the effects of the proposed development on and risks to human health is given in section 4.5.15 of the Revised PoS. It is noted that the study results will be assessed by the NNR rather than DEAT. It is however essential that the results of this assessment by the NNR as well as the comparison and ranking of the different sites are included into the final EIR that will made available for public comment. The following additional comments on the terms of reference are made:

- Explain and investigate the risk to human health resulting from the consumption of seafood, particularly filter feeding species like Black Mussels and Abalone
- Investigate and assess nuclear risks associated with ongoing emissions, disasters, decommissioning, transport of nuclear fuel and waste; including possible security threats.
- Investigate electro magnetic (and related matters) issues and their impact on humans, livestock and game.
- The risks and safety associated with the storage and/or transport of nuclear waste have to be assessed and a comparison must be done between the sites as far as this aspect is concerned. In the case of the Bantamsklip site any transport by road to Vaalputs will require negotiating a number of treacherous mountain passes with high accident ratings. Any suggestion to adapt the Gansbaai harbour to transport nuclear waste by sea is preposterous.

Response (21)

Your comments on the Terms of Reference for the Human Health Risk Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (22)

FLORA
The terms of reference for the specialist study by the botany expert are summarised in section 4.5.6 of the Revised PoS. It appears to us that the specialist will only be required to study the impact on flora on, and immediately around, the alternative sites with no requirement to study the negative impacts that the entire project will have on the flora in the greater region around the sites. This would appear to be the consequence of separating the assessment of the site from that of the transmission lines associated with the site. We are commenting on this aspect in another part of this document. What we wish to point out however is that the botany specialist doing the study for this EIA should liaise closely with the specialist studying the flora for the transmission routes from Bantamsklip as well as with botanists familiar with the greater area around Bantamsklip. In this regard we suggest that contact should be made with Ross Turner, Nick Helme as well as Doug Euston-Brown who have an intimate knowledge of the area.

Response (22)

Your comments on the Terms of Reference for the Botanical Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (23)

FRESH WATER SUPPLY
We wish to state that fresh water supply in the Bantamsklip area is limited. The Uilkraals River as a source cannot be considered since it is already dammed to satisfy the requirement of the wine industry in the area as well as urban development along the coast. The Ratel River should not even be contemplated as a source since extraction of such large volumes of water will have extremely negative consequences for the wetland systems within the Aghulas National Park.

It is therefore very likely that desalination will be the only option with the resulting negative impact that brine discharge will have on the very sensitive marine life of the area.

Response (23)

Your comments on the Terms of Reference for the Fresh Water Supply Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (24)

GEOLOGY AND SEISMOLOGY
What is of concern is that a number of reports have indicated that as far as the Bantamsklip area is concerned there are major geological faults. In a comparison between the geotechnical suitability of the West coast sites and that of the Bantamsklip site the former was described as having no problems and that sound foundations would be possible while the latter was described as problematic. It is obviously of the utmost importance that clarity on these issues are obtained in the specialist studies that will be conducted during the EIA phase.

Response (24)

Your comments on the Terms of Reference for the Geology and Seismology Supply Specialist Study have been noted. These comments will be considered by Arcus GIBB along with the relevant specialist.

Your comment (25)

ADDITIANAL SPECIALIST STUDY
We believe that it is essential that an study should be included in the EIA phase of the process to demonstrate that a nuclear facility has been successfully located and operated in a biodiversity hotspot and nature-based tourism-mecca of similar sensitivity to that of the Bantamsklip and surrounding area without compromising the integrity of such an area. As indicated in our response to the Bantamsklip transmission line draft scoping report we believe that such a study should identify international best practice for successfully locating and operating such a facility and all its accompanying infrastructure, in such an sensitive area and how such best practice should be applied in and around the Bantamsklip site.

Response (25)

The EIR will incorporate international best practices.

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. Please note that it would be appreciated if factual comments are accompanied by accurate reference lists. Your comments/ questions will be captured in the Draft EIR which 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