

Our Ref: J27035

21 March 2011

Attention: Thyspunt Action Group, Democratic Alliance, NCOP,  
PARLIAMENT

**Johannesburg**

14 Eglin Road  
Sunninghill 2191  
PO Box 2700  
Sunninghill 2128

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

Dear Mrs van Lingen

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

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

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

Responses to your comments / questions are as follows:

**Your comment (1)**

**EIA Process and Public Participation Process**

The entire purpose of an EIA is to ensure a legal, legitimate and transparent process to protect the people, their environment and their properties, especially in the case of the establishment of a nuclear plant.

The public participation process (PPP) is of vital importance as it allows for informed decisions on ground level and also through the contributions by all Interested and Affected Parties (I&AP's) to guide the applicant and the relevant authority to make the correct final decision.

A decision that will comply with all the relevant Acts and Regulations means that these must be adhered to and not just recognised in a window-dressing manner when the real fact is that there is no adherence and total disrespect for the rule of law.

- Has any provincial and national departments submitted any written comments made on the Draft EIR? Is so, who are they and when will these be submitted?
- Why in particular were the comments by the various provincial Departments of Environmental Affairs not submitted and who is responsible for this negligence? Surely this is the department that should be leading this transparent process in the right and legal direction! The lack of the publication of DEA comments on the EIR should be recorded as a fatal flaw, especially when the various provincial departments are registered I&APs.

## **Response (1)**

To date the following National Government Departments/ Organs of State have been consulted as part of the public participation process:

- National Department of Health
- National Department of Agriculture
- National Department of Agriculture and Land Affairs
- National Department of Foreign Affairs
- National Department of Environmental Affairs and Tourism (now DEA)
- National Department of Minerals and Energy
- National Department of Provincial and Local Government
- National Department of Public Enterprises
- National Department of Science and Technology
- National Department of Trade and Industry
- National Department of Transport
- National Department of Water Affairs and Forestry
- National Department of Welfare
- National Energy Regulator
- National Ports Authority
- National Treasury
- National Nuclear Regulator

The following Provincial and Local structures, amongst others have also been consulted as part of the public participation process:

- Bergriver Local Municipality
- Btou Local Municipality
- Blaauwberg Administration City of Cape Town
- Breedevallei Municipality
- Cacadu District Municipality
- Cacade Local Municipality
- Cape Agulhas Local Municipality
- Cedarberg Local Municipality
- City of Cape Town
- City of Cape Town: Spatial Development
- City of Cape Town Disaster Risk Management
- City of Cape Town Metropolitan Municipality
- City of Johannesburg
- City of Tshwane metropolitan Municipality
- Colesberg Local Council
- Department of Agriculture Western Cape
- Department of Agriculture and Land Affairs Eastern Cape
- Department of Agriculture, Conservation and Environment (now Department of Agriculture and Rural Development) Gauteng
- Department of Environmental Affairs KwaZulu-Natal
- Department of Environmental Affairs Northern Cape
- Department of Finance Mpumalanga
- Department of Health Northern Cape, Eastern Cape and Western Cape
- Department of Land Affairs Eastern Cape and Northern Cape
- Department of Minerals and Energy Northern Cape, Eastern Cape and Western Cape
- Department of Public Safety Mpumalanga
- Department of Public Works Northern Cape
- Department of Safety Information and Research Western Cape
- Department of the Premier: Governance and Integration Western Cape

- Department of Tourism and Environmental Conservation Northern Cape
- Department of Transport and Public Works Western Cape
- Department of Transport, roads and Public Works Northern Cape
- Department of Water Affairs and Forestry Eastern Cape, Western Cape KwaZulu-Natal and North West Province.
- Department of Public Safety Mpumalanga
- Drakenstein Municipality
- Eden District Municipality
- Emalahleni Municipality
- Emthanjeni Municipality
- Eshowe Local Council
- Free State Province Office of the Premier
- Hanover Local Council
- Hessequa Local Municipality
- Humansdorp Local Council
- Karrieberg Local Municipality
- Kareedouw Local Municipality
- Klerksdorp Local Council
- Kouga Local Municipality
- Kou-Kamma Local Municipality
- Kroonstad Local Council
- Laingsburg Local Council
- Leeu-Gamka Local Council
- Lesedi Local Municipality
- Madibeng Local Municipality
- Mafube Local Council
- Magareng Municipality
- Masulonyana Municipality
- Matzikama Local Municipality
- Nama Khoi Local Municipality
- Namakwa District Municipality
- Ndlambe Local Municipality
- Nelson Mandela Bay Municipality
- Nelson Mandela Metropolitan Municipality
- Overberg District Municipality
- Overstrand Local Municipality
- Provincial Administration Free State, Gauteng, North West, Northern Cape and Western Cape
- Richmond Local Council
- Richtersveld Local Municipality
- Saldanha Bay Local Municipality
- South African Heritage Resources Agency
- South African National Defence Force
- South African National Parks
- South African National Roads Agency
- Stanger Local Council
- Sundays River Valley Local Municipality
- Swartland Local Municipality
- Swellendam Local Municipality
- Theewaterskloof Local Municipality
- West Coast District Municipality
- Witzenberg Local Municipality

Of these, the following have provided comment in this EIA process:

<b>No</b>	<b>Sphere of Government (National/Provincial /Local)</b>	<b>Name of Authority/ Organisation/Sector</b>	<b>Comment Format (Written submission/Meeting )</b>
1	National	Mr Phillip Hine South African Heritage Resources Agency	Written submission
2	National	Ms. J. Yawitch Department of Environmental Affairs	Written submission
3	Provincial – Western cape  Western Cape Department of Environmental Affairs, Development and Planning – Region B1 and B2	Mr Anthony Barnes Director Integrated Environmental Management (Region B)  Mrs Melanie Webber Integrated Environmental Management Region B2  Mrs Tammy Christie Integrated Environmental Management Region B1	Written submission
3	Local Government – Western Cape City of Cape Town	Mr Keith Wiseman City of Cape Town	Written submission
4	Local Government – Western Cape Overberg District Municipality	Mr W October	Written Submission
5	Local Government - Eastern Cape Kouga Local Municipality	Kouga Mayoral Executive Committee/Council	Comments submitted at Kouga Focus Group Meeting
6	Provincial – Northern Cape Northern Cape Department Environment and Nature Conservation	Mr JJ Mutyorauta	Written submission
7	Department of Science and Technology	Ms Marjorie Pyoos	Comments submitted at the Key Stakeholder Feedback Meeting
8	South African National Parks including Algulhas Biodiversity Initiative	Tertius Carinus Ettiene Fourie Mr Mick Dalton	Comments submitted at Bredasdorp Public Meeting

The DEA, the decision-making authority with respect to this application, initially indicated to GIBB that commenting authority comments do not have to be included in Scoping Reports or Environmental Impact Reports (EIR). It is GIBB's understanding that the DEA&DP is a commenting authority to the DEA as the decision-making authority and it is the DEA's decision as to whether to include DEA&DP's comments in the DEA's correspondence to the Environmental Impact Assessment Practitioner (EAP). The DEA have indicated in recent communication that commenting authority comments can be made available to public. These comments will be included into the Revised Draft EIR.

## **Your comment (2)**

### **The big Nuclear 1 picture**

It is necessary to note that the Nuclear 1 project started off with one EIA process. Splitting the EIA's as indicated below jeopardises the legality of the process because some fatal flaws could be hidden in such "subsidiary" EIA's. The main EIA could be approved in the first process and then how will the fatal flaws be addressed in the subsidiary EIA's? This is a manipulation of the legal process, public participation and especially transparency and it is in contravention with the spirit of intent of NEMA altogether.

- The transmission line EIA process was introduced later as a separate process.
- There was also a period when the transmission of the electricity from the plant to the point where the transmission lines started – a total distance of 5 km, was left out of the process altogether. This was later (Nov 2009) just added to the main site EIA process.
- To date there has been no talk of an EIA for a Staff Village, nor has an impact assessment been made on the infrastructure of the villages of St Francis Bay, including Sea Vista & Cape St Francis, Oyster Bay and Humansdorp. The capacities of educational and health institutions have not been investigated properly.
- Is there going to be another EIA for the HV Yard? Where is this going to be placed in terms of the Nuclear 1 site?

## **Response (2)**

The original application submitted to the then Department of Environmental Affairs and Tourism (now Department of Environmental Affairs) in May 2007, and the amended application dated July 2008, was an application to commence with an EIA process for the proposed construction, operation and decommissioning of a single power station, referred to as "Nuclear-1". During the Scoping Phase of the environmental authorisation process, five sites were assessed as alternative sites in order to identify a single preferred site for the location of Nuclear-1.

The Scoping Phase of the EIA highlighted that two alternative sites i.e. Brazil and Schulpfontein, would not constitute reasonable and / or feasible site alternatives for Nuclear-1 based on, limited local demand and the lack of existing electricity transmission corridors associated with these sites coupled with the severe time constraints associated with Nuclear-1's development. Eskom Transmission Planning Division performed high level studies of the integration into the South African electricity supply system of a large power station at each of the five coastal sites. These studies included an assessment of the contribution to the transmission network stability, the contribution of the electricity supply to and the distance from the major load centres, the transmission infrastructure that would be required and the time required for the integration at each of the respective sites.

Thus, Brazil and Schulpfontein have been excluded from further consideration during the detailed EIA Phase 1 of the EIA process. However, the Scoping Report explicitly stated that the exclusion of Brazil and Schulpfontein from the EIA Phase did not preclude Brazil and Schulpfontein from the development of power stations in future.

DEAT's comments on the Final Scoping Report, received on the 19 November 2008, provided approval of the recommendation to exclude Brazil and Schulpfontein from further assessment during the EIA Phase of the EIA.

It has always been Eskom's intention to prepare for more than one nuclear power station. It was stated from the onset of the EIA process that all original five sites identified during the Nuclear Site Investigation Programme (NISIP) will be considered for the development of power stations, as far as they are deemed feasible by the EIA process. This is part of the long-term power generation strategy for South Africa. Although the initial application for an NPS was for only a single site, during 2009 Eskom announced its intention to amend the application in order to apply for authorisation of all three

---

sites (Duynefontein, Bantamsklip and Thyspunt). The rationale for a combined application for all three sites was based on Eskom's decision to pursue its strategy to develop a fleet of nuclear power stations on the sites identified through the NSIP undertaken during the 1980s. The intention to submit a combined application was based on the probable amendment of the EIA regulations.

Eskom subsequently decided to remain with the original application for the authorisation of a single site. Should Eskom's wish to develop a nuclear power station on another site, besides the one authorised (if authorised) through the current application, a separate application will need to be submitted to the DEA.

#### Transmission Lines:

Where feasible Eskom has combined Tx and Plant EIA's, however with complex and detailed EIA's such as large power plants and long and large Transmission infrastructure it would not serve the public to try and engage the entire project which includes three power stations and three significant Transmission lines. Eskom did initiate the Tx EIA's as soon as possible after the plant EIA to ensure that any relevant aspects could be considered and incorporated into the plant EIA process.

With the initiation of the Transmission line EIA, the scope of the Nuclear 1 and Transmission line were evaluated, a decision was taken to include the section between the HV yard and plant since it would be a cumulative impact on site which needed to be considered along with other linear infrastructure on site. The line was included into all specialist studies and the public have had an opportunity to comment on this associated infrastructure.

#### EIA for a Staff Village and HV Yard

As stated, in the Draft EIR and in public meetings, that the areas where accommodation will be required will be integrated as far as possible with areas dedicated for housing in the existing planning processes of the local authorities within which the power station is proposed to be located. Where possible, employees (especially operational employees) will obtain accommodation in existing settlements. If new urban development has already been approved in the area of the nearby human settlements, it would be Eskom's preference to make use of the opportunities provided by this rather than create a new area for residential development which would then require an EIA.

Eskom has completed initial investigations into housing around all three sites. Apart from Bantamsklip, the current development around Humansdorp, Jeffreys Bay and in the greater Cape Town would accommodate housing needs and therefore would be highly unlikely to require an EIA. The Staff Village will require an area of 44.2 ha and will make provision for the following facilities, as indicated in Appendix C of the Draft EIR and the Social Impact Assessment (Appendix E18 of the Draft EIR):

#### Recreation Club;

- Indoor Sport and Function Hall;
- Shop;
- Medical Clinic;
- Entrance Security Building;
- Workshop and Stores;
- Kitchen and Dining Room;
- School for Expatriates;
- Primary School;
- Secondary School;
- Tennis Courts;
- Squash Courts;
- Rugby fields;
- Soccer fields;
- Basketball; and
- Parking for 270 cars.

The above infrastructure will contribute positively towards development in the area and the possibility of attracting other developments and investment in the area that can benefit the adjacent communities. The building and maintenance of above infrastructure during construction and operation will provide a number of job and business opportunities. Running of these facilities will also provide a number of new job opportunities.

In general the facilities will contribute positively towards the social assets of the community at large with positive interaction between the existing and new facilities.

The HV yard is included in this EIA application and would not require an additional application. In the case of Bantamsklip and Duynfontein the HV yard would be situated directly adjacent to the power station. However, at Thyspunt, the HV yard would be located away from the power station, on the northern "panhandle" portion of the site. This is in order to avoid impacts on the sensitive mobile dune systems that separate the northern and southern portions of the Thyspunt site.

### **Your comment (3)**

#### **Thyspunt as Preferred Site**

In a National Council of Provinces (NCOP) Select Committee parliamentary meeting (1 June 2010) the NNR representatives casually referred to "a worthless piece of land somewhere along the coast" should be utilised for the nuclear plant. This disregard to the value of the very property the NNR is to protect under their legal mandate is of great concern.

It needs to be recorded that the various specialist studies were not done by people from the Eastern Cape and the various resources of technical specialists were not utilised and as examples please note the following:

- The cultural heritage of the area from Klasies River to Gamtoos River – Dr Johan Binneman from Grahamstown is a specialist on the area and this area is to be developed as a "coastal cradle of mankind". We owe this to our coastal tribes!
- The squid industry has a Squid Management working Group and a Scientific Working Group both operating under the auspices of Marine & Coastal Management. Both groups have been ignored.
- The specialist studies also appear to slant their outcomes in favour of Eskom and more and more in favour of Thyspunt. The reasons above are examples and Eskom needs to openly state what development it has done on each of the three sites since the commencement of the EIA process and what land transactions it has entered to since that date clearly listing the location, size and the value of the transactions. This has to include the land swap transactions at a market related price.
- The Eskom Nuclear Site Investigation Programme of 1982 is outdated not only in terms of environmental Acts that has since come into place, but it is now also politically outdated since there is no political limitations to extinct homeland boundaries.
- The specific bulk requirement for electricity is at Coega on the eastern side of Port Elizabeth. The Thyspunt site is on the western side of Port Elizabeth and at least 125 km from Port Elizabeth. Referring to the transmission line EIA process in 2.1 one also has to request a comparative financial study of the transmission lines against the costs of a new site closer to Coega. What about the costs of the distance and width of the transmission lines sacrificed in agricultural land, especially in an area such as Humansdorp which is the highest milk producing district in SA?
- Seismic stability at Thyspunt seems to be the best, but Koeberg is built on not such a "safe" fault line. We have been informed that Coega is also situated on a fault line, but to what extent is this worse than the nuclear plants in Japan which were built on a minefield of seismic fault lines. Was a comparative cost study done between the transmission lines and the costs of strengthening the foundations of the plant near Coega?

### **Response (3)**

Your comments on the NNR statement are noted and are unfortunate through out this EIA process the value of the land from a social, environmental and economic perspective have been respected and recognised, perhaps the individual speaking on behalf of NNR is not familiar with the project.

Specialist studies conducted as part of the EIA process have been compiled by recognised specialists in their respective fields (refer to Appendix E1 of the Draft EIR for their CVs as well as [www.eskom.co.za](http://www.eskom.co.za) and [www.gibb.co.za/](http://www.gibb.co.za/) 'Nuclear-1' EIA link) and have all conducted extensive fieldwork in order to collect data and to acquaint themselves fully with the alternative sites (refer to the methodology sections of each of the specialist reports – Appendices E2 –E29). Studies carried out by Dr Johan Binneman have been considered by the Heritage specialist.

In terms of consultation with the squid industry the marine scientists considering marine ecology impacts associated with the Nuclear-1 development are required to base any assessment on published and peer reviewed information.

Following the St. Francis Key Stakeholder meeting Professor Charlie Griffiths made contact with Mr. Greg Christy who indicated that he has unpublished information from the Chokka Fish Association which showed that 30% of the chokka stock would be lost should spoil be dumped at sea at the Thyspunt site. Although Mr. Christy agreed to pass the data on, Professor Griffiths did not receive any data. He then proceeded to contact Dr Warwick Sauer (the consultant for the Chokka fisherman and Rhodes University academic). Dr Sauer said the only information available was over a decade old and had been published. This confirmed that the most recent scientific information for the Thyspunt area was collected as part of the Marine Assessment for the Nuclear-1 Draft EIR. Mr. Christy thereafter contacted Professor Griffiths and indicated that he was not aware what data Professor Griffiths was waiting for, he suggested that Dr Hans Verhey of Marine and Coastal Management be contacted.

Therefore the steps taken to date to ensure that the information available to update the Marine Assessment, if needed, are as up-to-date as possible are as follows:

1. Contact Dr Verhey. He has said he heads up the Squid working group but is not a squid expert.
2. Contact Dr Nikki Downey (Squid expert based at Bay World in Port Elizabeth). She has indicated that there is work on the effects of turbidity and temperature which is underway but this is not available yet. She referred the specialist to a further contact at the DEA's Directorate of Marine Coastal Management (MCM) - Dr Jean Mwicigis. Dr. Jean Mwicigis indicated that she has access to unpublished info which is relevant to the marine assessment and may indicate that Thyspunt is in fact important for chokka as a species. She has agreed to contact her superior.
3. The marine specialists have searched through all scientific papers published in the South African and international literature to ensure we have the most recent information to work with. It appears that no clear information exists which indicates that the Thyspunt site is an important site for the Chokka as a species (although it might be important for the fishery industry).

Any data they obtain through this process will be reflected in their revised study.

In terms of the site selection process, the basis of the site selection process, namely the NSIP, was reviewed during the Scoping Process and found to be based on facts that continue to be valid. This approach has also been approved by the Department of Environment Affairs and the Final Scoping Report, in which certain of these sites were carried forward for further investigation in the EIA phase. The decision that the Northern Cape sites were not recommended for further investigation, was also approved by the DEA.

**No developments have taken place on all sites besides the normal management of looking after the sites properly. Any land transactions are commercially sensitive and remains confidential between Eskom and sellers.**

The site selection process and the assessment of alternative sites do not include the consideration of Coega as an alternative site and does not fall within the scope of the current EIA process. When the

Environmental Application for Nuclear-1 was submitted in 2007 GIBB was informed by the IDZ that there was no space available on the Coega site for the development of a Nuclear Power Station.

Furthermore the presence of the Coega fault, which runs across the southern part of the Algoa basin before extending into Algoa Bay near the Coega harbour, means that the Coega IDZ should be considered carefully before proceeding with geological investigations for nuclear siting. In terms of the NNR requirements it is necessary to develop a comprehensive geological data base for the Coega IDZ prior to considering the site for a nuclear power plant, these studies are estimated to take up to 5-6 years. The currently available geological data, indicates that the Coega fault, which represents the easternmost component of a fault line with known Holocene (i.e. the last 11,700 years) reactivation, should be considered to pose a risk with regard to future seismicity. It would therefore be appropriate to include Coega IDZ into the next site screening process which will be initiated for future nuclear sites but for this EIA Coega cannot be regarded as a feasible and reasonable site.

#### **Your comment (4)**

##### **Specialist Studies**

Staff influx:

- At the Mosgas development there were jobs for about 13,000 people at the start of the project, however about 100,000 people descended on Mossel Bay and most of them stayed, whether there were jobs for them or not. It was the “expectation” of a possible job that caused the migration. A small municipality like Kouga cannot manage an even estimated 10,000 influx, so one fears the mere thought of a possible 100,000 like at Mossel Bay.
- Why has the location of the staff village been hidden from the public & I&APs? Where is it going to be located in Kouga?
- The government is not enforcing migration measures anywhere - hence political unrest will be inevitable due to lack of service delivery in influx informal settlements in a very stable environment such as currently in Kouga. In the (NEMA Amendment Act No 62 of 2008 – 24 (1) (b) (iii)) however, it is “the applicant” who is responsible and who must comply. Eskom has not been given good credits by specialists and EAP to implement and comply with recommendations.
- Kouga already has according to the Integrated Development Plan (IDP) a shortage of over 9,000 RDP houses.
- There is a clear lack of a specialist study of the impact of staff migration and what effect it will have on the infrastructure in the surrounding villages.

#### **Response (4)**

Your comments are noted. The Social Impact Assessment (Appendix E18 of the Draft EIR) assessed the potential impacts of the influx of job seekers of the areas surrounding Thyspunt.

The positions of the staff villages are not hidden. A decision on the location of staff villages will only be made once certainty has been obtained on the location of the power station. It has been stated, in the Draft EIR and in public meetings, that the areas where accommodation will be required will be integrated as far as possible with areas dedicated for housing in the existing planning processes of the local authorities within which the power station is proposed to be located. Where possible, employees (especially operational employees) will obtain accommodation in existing settlements. If new urban development has already been approved in the area of the nearby human settlements, it would be Eskom’s preference to make use of the opportunities provided by this rather than create a new area for residential development which would then require an EIA. Also see the section under response 2 related to staff villages.

The Social Impact Assessment (Appendix E18 of the Draft EIR) assessed the potential impact of the influx of job seekers of the areas surrounding Thyspunt.

The Social Impact Assessment reports that provision for future residential development has been made in the Kouga Spatial Development Plan (2009), in and around Sea Vista, Cape St Francis, Oyster Bay and Humansdorp. In terms of service delivery it reports the following:

**Water:**

The region generally relies largely on springs and water from underground aquifers for its supply. In addition, the Impofu and Churchill Dams, which provide treated water to Port Elizabeth via the Churchill pipeline, supply water to a number of towns in the planning areas during peak consumption periods. These towns include Humansdorp, St Francis Bay, Cape St Francis and Jeffery's Bay. The Kouga Dam is the main source of water supply to Hankey and Patensie. The rapid population growth in the Kouga region over the last 10 years is placing increased pressure on the region's water resources, resulting in shortages during peak holiday seasons. Approximately 22% of the population of the Kouga Municipality do not have access to water on site and make use of public taps, standpipes or rainwater.

When considering the backlog, the municipality has taken cognisance of an additional element, viz. the ability to maintain the existing infrastructure. Subsequently, operational budget to attain effective repairs and maintenance programmes has been allocated.

**Sanitation:**

Methods of sewerage reticulation and treatment in the various urban and rural areas differ substantially. Most of the formal and middle to high income residential areas are equipped with waterborne sanitation systems. In some cases informal areas are still served with buckets or pit latrines. It is estimated that approximately 1 181 households do not have access to sanitation services in the Kouga region. A further 5 156 households make use of pit latrines and bucket systems. Pit latrines and septic tanks are the most common methods in the non-urban areas. (Kouga Integrated Development Plan 2009 – 2012).

The Social Impact Assessment further proposes the following mitigation measures:

- Eskom must liaise closely with the appropriate municipal, provincial and other relevant authorities to ensure ;
  - that essential services are in place prior to the development;
  - that non-essential facilities are upgraded in accordance with the development;
  - that the implementation process is carefully monitored and that any disruptions are immediately identified and appropriately managed; and
  - that all affected communities is kept well informed of the process and of all significant dates attached to the development process.

**Your comment (5)**

Radiological Issues: Nuclear Waste and Emergency Response

- Why is there no assessment by NNR on these matters included in EIR? The I&APs do not have reasonable access to NNR's input. Please keep the PPP door open for transparency and information.
- The Emergency Response specialist is confusing European Utility Requirements (EUR) with the South African regulations. The NNR assured the NCOP Select Committee on 1 June 2010 that the safety zones for any nuclear plant in **SA is still the same as that of the International Atomic Energy Association (IAEA) which is 16 km**. In fact SA is a member of the IAEA. The NNR agreed then that the European Utilities Requirements (EUR) "standard" of 800 m for a safety zone is misleading as it is a position "aggressively marketed by Areva". In fact, Mr Msebenzi assured the Select Committee that the **safety zones in SA are in line with those of IAEA**, so we are still at the 16 km safety zones. The Democratic Alliance will hold the NNR accountable for this.
- There is no mention made of the radiation effect on the produce such as milk and the squid industry on the SA and international markets.

## **Response (5)**

Your comments are noted. As indicated repeatedly in public forums and in EIA documentation, the separation between the EIA process and the NNR licensing process is based on the legislative provisions of the relevant Acts, namely the National Environmental Management Act, 1998 and the National Nuclear Regulator Act, 1999, as well as the DEA / NNR co-operative agreement that governs the consideration of radiological issues in EIA processes. The NNR is a key stakeholder in the EIA process and has been invited to comment on the various documents made available for comment in the public domain, as well as to the various key stakeholder meetings that have been held in the affected Provinces throughout the process.

In terms of the Public Participation Process related to the National Nuclear Regulator Act (NNRA) – the legislation makes provision for Public Hearings but the NNR still needs to decide which format the Public Participation Process will follow.

According to the National Nuclear Regulator (2005 and 2006), various gaseous and liquid effluents are produced during the routine operation of a nuclear power station. However, such substances are treated prior to it entering the environment through dedicated clean up systems. These clean up systems reduce the amount of radioactivity in such substances to well within the specified limits. The risk of public exposure from that portion of radiation released to the environment is controlled through the implementation of a radiological effluent management programme. This ensures that the risk that such effluent poses to the public is not significant.

One of the key features of this programme, as implemented at the Koeberg Nuclear Power Station, is the control of the level of radioactivity in effluent discharges to within the Annual Authorised Discharge Quantities (AADQ). Besides these tests and clean up systems, radiological surveillance of the environment surrounding the power station is conducted, which ensures that strict control is placed over potential public exposure to radioactive releases.

Mr Mzebenzi presented to the Parliamentary select committee On economic development 1 June 2010 in which he stated *“One major outcome of these new designs is that the emergency planning zones, specifically the Urgent Planning Zone, which is the zone within which evacuation of the public has to be catered for, would in all likelihood be reduced from 16 km in the case of Koeberg, to a much smaller radius which could fall within the property owned by the holder, and thereby to some extent minimize the issue of the control on urban developments which could potentially threaten the viability of nuclear sites”*.

## **Your comment (6)**

Transport / Roads Report:

- The access to Thyspunt cannot be through Humansdorp from the N2 for the heavy duty vehicles. Another access road has to be created. It is clear that the specialist has not set foot on site in Humansdorp Main Street on a normal business day let alone at a month end. In fact there has been a strong move to ban all heavy duty vehicles from the Main Street.
- These heavy duty vehicles will destroy business in the Main Street environment.
- These vehicles will further damage the streets and place an additional burden on an already poorly maintained infrastructure of the local municipality.
- The report lacks reporting on access for the 1000-ton loads all the way from Port Elizabeth harbour to Humansdorp.
- There is no specialist report on the heavy duty loads, especially the 1000-ton loads, and the bridges for instance. The Van Stadens bridge is a good example of lacking maintenance and there is no report covering this aspect. There should also mention be made of the weather elements and the eroding effect being so high at the coast. Also remember that concrete bridges have at the most a 50 yr lifespan and less when it comes to heavy loads like this.
- What is the exact route for radioactive waste transportation to Vaalputs. Is this going to be the N2 through Knysna, Sedgfield and Wilderness? Or is it going via N2 through Langkloof and

Route 62? And then? What is the route to be followed? Have stakeholders been informed and how is this going to affect tourism in places like Knysna?

#### **Response (6)**

The issue of the transportation of exceptionally and normal heavy loads at Thyspunt is addressed in section 10.3 and 10.4 of the Transportation Assessment as well as sections 2.4.8 and 3.9 of the Social Impact Assessment. Your view on taking traffic through Humansdorp main street are supported by Eskom. Both of the social and transportation specialist studies have been revised and will be made available for public comment as part of the Revised Draft EIR.

The report currently states that access to the Thyspunt site is proposed via two access routes, the R330 and the upgraded Oyster Bay Road.

During the Construction phase Thyspunt site requires the following mitigation actions:

- The Oyster Bay road should be upgraded to a surfaced road to allow access to the site from the west;
- The R330 is proposed to be used for heavy load transport and may require pavement structure upgrades to cope with the increased heavy loads.
- An access road off the R330 towards the site is required to be built;
- Three intersection upgrades are required, namely Access Road 1 / R330
- Exceptionally heavy loads should be transported during the dry season, on weekdays during non peak periods on the N2 from 18:00 to 06:00, 10:00 to 15:00 and non-peak travel times on the R330 from 00:00 to 09:00 and 15:00 to 00:00;
- A comprehensive Construction Traffic Management Plan should be completed in conjunction with the local authorities.

The design engineers responsible for the designing of the roads are to ensure that upgrades to the existing infrastructure are adequate to cope with the expected increase in traffic.

An initial assessment of the N2 including all bridges has been completed. The initial indications are that the route is feasible and would require construction of bypasses for overpasses. In addition, detailed design is required for the transportation of the ultra heavy loads over a number of bridges including Van Staden Bridge. The principle is to distribute the loading across several spans. Bridge experts are confident the loading on the structures will be within allowable loads.

There is no set route for the nuclear waste from the site to Vaalputs and the power station manager would under the nuclear licence apply to the NNR before that waste is to be transported.

#### **Your comment (7)**

Economic impact on the Squid industry (See comment 3)

- There was a desktop specialist report compiled & there is a clear lack of research & communication with the groups in comment 3. This is a typical example of why it is said that these reports slant in favour of Eskom & Thyspunt.
- One cannot ignore the fact that, due to the lack of proper scientific studies of the squid industry, this nuclear plant will destroy the squid industry which forms a large portion job market in Kouga and contributes about R500 m pa to the GDP in foreign exchange. It is arrogant to look at the breeding area of the squid which is relatively small and then to say that in the big picture the damage caused by the spoil will have limited effect and the affected marine area will recover quickly.
- There is an urgent call to revisit this industry in an additional specialist report, visiting the trade's scientific resources and communicating with all the stakeholders on the ground, including the workers.

## Response (7)

Your comments are noted. We refer you to our Response 3 in terms of consultation with the squid industry.

## Your comment (8)

### **Project Financial Estimates**

- The estimated cost of the project and how this is going to be funded is of extreme importance.
- Environmental sustainability = social, biological and economic aspects. There is a skewed rating process where the environment is poorly rated – there is no regard for our environmental assets or the social impacts. The Scores favour Eskom and are completely against the environment and are therefore not balanced.
- There are comparative estimates submitted between the various sites according to EAP indicating that: “Thyspunt is about 6% more cost effective than Bantamsklip and less than 1% more cost effective than Duynefontein. This constitutes a difference between Duynefontein and Bantamsklip of R6,388 million and between Thyspunt and Duynefontein of R570 million. It must be mentioned that although R6,388 million and R570 million are large amounts, they are relatively small amounts in terms of the total estimated cost of a nuclear power station (R170 billion in 2008 –prices).

If the full costing of the project **with feasible funding options** is not submitted of the entire project, it is flawed. Funding costs money too. The costs should include all the options of the plant, transmission lines, the staff village, road upgrades from Thyspunt to Port Elizabeth harbour, contributions to social impact, especially on educational and health institutions, municipal infrastructure.

- It should also include the costs of the sacrifices that should be made such as:
  - Effect on the underground water;
  - Effect of the existence of the squid industry as well as the effects of the spoils and desalination plant on the industry;
  - Effect on the wetlands;
  - Effect on the dune system’
  - Effect on the domestic and international markets when the “daily radiation” is labelled to the dairy, beef/meat, vegetable, and squid produce;
  - Loss of land under the transmission line corridors as well as the loss of agricultural land under centre pivots.
- Eskom must make it clear that these costs and the possible funding depend entirely on Eskom’s “good financial position”. The SA taxpayers have just been hoaxed into 25% electricity increases for the next 3 years. It was clearly stated at the public hearings of NERSA that these increases were to improve the financial position of Eskom to obtain international funding and not to build power stations. It is therefore imperative to inform all taxpayers and educate staff of the importance of a good credit rating for Eskom. Already the SA government had to guarantee the World Bank loan and not Eskom. Eskom must be held accountable for its financial management and position and not shift the responsibility to the taxpayers. A list of the recent under budgeted power plants will clearly indicate Eskom’s inability to plan and budget properly.

## Response (8)

The EIA is only one of many studies which require approval. The full business case for Nuclear 1 will have to be approved by Government, Eskom Board and NERSA prior to the project proceeding. Eskom acknowledges that funding is critical and determining how the project will be funded prior to proceeding will be completed.

The methodology for evaluating the preferred site has been reviewed by an independent specialist, some enhancements were proposed during this last review and will be addressed, the environmental aspects have been considered in the evaluation.

**Your comment (9)**

Conclusion

- It is important that when Nuclear 1 project is established, it is not done so at the cost of sacrifices to that local community (the people), the environment or their properties;
- Arcus Gibb continuously at various meetings and in the EIR that the public concern is “relatively low” or that a “good meeting” was held with ... community. This is not altogether the truth. It is easy to manipulate this when one can keep the community groups apart. The public information days are a typical example of the Eskom and Arcus Gibb tactics to avoid a public meeting where specific issues are addressed and it is an abuse of a Constitutional right of public participation.
- The location of the site must not be a preconceived decision and then the law is applied and in many cases abused, to qualify a specific site for a company decision.

**Response (9)**

Your comments are noted. Consultation during the Scoping and EIA phases were conducted in terms of best practice methodologies and the guidelines as prescribed by the DEA. The consultation process included:

- Focus Group Meetings;
- Key Stakeholder Workshops; and
- Public Meetings.

Public meetings (and not public open houses) were specifically arranged during the EIA phase to afford I&APs the opportunity to engage directly with the GIBB and ACER teams as well as the Eskom technical and engineering team. A list of all public meetings conducted can be provided upon request. These meetings were arranged in terms of best practise principles by scheduling the meetings as close as possible to affected communities and during times when most of the community members could attend. Meetings were advertised in national, regional and local newspapers and all I&APs were free to attend any meeting that they wished to. The EIA Public Participation Process has also been reviewed by independent reviewers who have found the process to be adequate in terms of the legal requirements.

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

Yours faithfully  
For Arcus GIBB (Pty) Ltd



---

Jaana-Maria Ball  
Nuclear-1 EIA Manager