

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
DEAT REFERENCE NO.: 12/12/20/944**

**FOR THE PROPOSED ESKOM NUCLEAR POWER STATION AND
ASSOCIATED INFRASTRUCTURE**

**DISCUSSION SESSION HELD WITH
THUYSPUNT ANTI-NUCLEAR GROUP
26 JULY 2007**

PREFACE

The Environmental Impact Assessment (EIA) Project Team wishes to thank all representatives of the various organisations who attended this session at The Dunes Guest House.

Should participants who attended the session require any changes to this record, please notify the Public Participation Office in writing within two weeks of receipt.

There are three sets of minutes:

- Set A - Public Meetings
- Set B - Key Stakeholder Workshops
- Set C - Various Focus Group Meetings (as requested by stakeholders)

All minutes are part of the public record, should you wish to receive a specific set, kindly request them from the Public Participation Office.

NOTES ON DISCUSSION SESSION

- This discussion session was held in addition to the Public Meetings.
- Members of the Thypunt Anti-Nuclear Group (TANG) represent different interest groups.
- Members of TANG attended various public meetings that were held in areas potentially affected by the Thyspunt Site, near Oyster Bay, Eastern Cape.
- No presentations were given at this meeting.

This record has been:

Compiled by: ACER (Africa) Environmental Management Consultants
Reviewed by: ARCUS GIBB (Pty) Ltd
Accepted by: Eskom Holdings Limited, Generation and Enterprises Division

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1. ATTENDANCE

1.1 Attendance – Thyspunt Anti-Nuclear Group

| Name | Organisation | Position |
|--------------------------|--|---------------------|
| Ms Joan Brady | Friends of the St Francis Nature Reserve | Member |
| Mr Derek Cook | Machoy Investments | Partner |
| Dr Shirley Cowling | Friends of the St Francis Nature Reserve | Member |
| Mr Rudi Dahlhauser | For A Clean Tomorrow | Member |
| Ms Judy de Vegs | Johnnic | Photographer |
| Mr Ryan Donnelly | For A Clean Tomorrow | Chairperson |
| Ms Patricia Honey | For A Clean Tomorrow | Coordinator |
| Mr Alwijn Malgas | Independent Democrats | Chairperson |
| Ms Deborah Nicholson | Chas Everitt International | Property Consultant |
| Mrs Elizabeth Rautenbach | St Francis Conservancy | Chairperson |
| Mr Hilton Thorpe | Kouga Anti Nuclear Group | Chairperson |
| Mr Harry Weistra | St Francis Bay Residents Association | Chairperson |
| Ms Trudi Malan | Ajubatus Marine and Wildlife Rescue | Operations Manager |

1.2 Attendance – Eskom Holdings Limited

| Name | Organisation | Role in the project |
|------------------|--|-------------------------------------|
| Ms Deidre Herbst | Eskom Generation | Environmental Manager |
| Mr Dave Wynne | Eskom Enterprise | Corporate Specialist |
| Mr Jongi Dyabaza | Eskom Generation - Koeberg Nuclear Power Station | Stakeholder Management Practitioner |

1.3 Attendance - Environmental Consulting Team

| Name | Organisation | Role in the project |
|---------------------|--------------------------|---------------------------------|
| Ms Karin Bowler | Karin Bowler Enterprises | Facilitator |
| Ms Jaana-Maria Ball | ARCUS GIBB | EIA Project Manager |
| Ms Bongsi Shinga | ACER (Africa) | Public Participation Consultant |

2. WELCOME AND INTRODUCTIONS

The Facilitator, Ms Karin Bowler welcomed all present and thanked the members of the Thyspunt Anti-Nuclear Group for their participation in the EIA process for the proposed Eskom Nuclear Power Station (NPS).

She noted that members of the Thyspunt Anti-Nuclear Group have already participated in the process through attending public meetings held to date.

3. OBJECTIVES OF THE DISCUSSION SESSION

All participants outlined their specific objectives for attending the session (as outlined in Section 4 below).

4. UNDERSTANDING OF THE THYSPUNT ANTI NUCLEAR GROUP

4.1 Representation and key activities

This section provides an overview of the different interest groups being represented by the Thyspunt Anti-Nuclear Group.

The key questions that were covered in the understanding of the “Thyspunt Anti Nuclear Group” were as follows:

- Constituency represented.
- Membership details (how many, where are they based, etc).
- Key Focus Areas or activities of the group.
- Communication methods and any other feedback mechanisms.
- Mandate to represent the group’s interest on the proposed NPS.

Ms Elizabeth Rautenbach is the Chairperson of the St Francis Conservancy, which has approximately 300 members who are landowners along the coast. Any person interested in conservation of the area is welcome to join the St Francis Conservancy. Eskom is also a member of the St Francis Conservancy.

The St Francis Conservancy was instigated through the Wildlife and Environmental Society of South Africa (WESSA). St Francis Conservancy is actively involved in a wide range of conservation activities and alien eradication. In addition, they have established walking trails as part of the conservancy. Some members of the conservancy also farm game.

Mr Derek Cook is also a landowner and a member of the St Francis Conservancy. There is approximately 3,000 - 4,000 hectares of land that falls under the St Francis Conservancy.

Mr Harry Weistra represents the interests of the St Francis Bay Residents Association and has a responsibility of providing feedback to the Kouga Business Forum. There are approximately 300 business owners that are represented by the Kouga Business Forum. The main business activities are tourism, fishing, chokka, dairy, building industry (holiday homes), woodlands dairy (range of products distributed nationally) and various other smaller industries. Jeffrey’s Bay is currently experiencing a boom within the industrial sector. Mr Weistra is also actively involved in the Gamtoos Valley and would be making presentations to the EIA study team.

Mr Ryan Donnelly is the Chairperson and Founder of the organisation “For A Clean Tomorrow” (FACT). FACT is interested in energy efficiency programmes and undertakes public awareness programmes in support of sustainable energy production. FACT is officially opposing the proposed NPS in St Francis Bay and in South Africa. Since the announcement of the proposed NPS, FACT’s membership has increased significantly on a daily basis.

Ms Patricia Honey is a concerned resident and a member of FACT. She believes that members of the public have a constitutional right to know about proposed developments as it could impact (positively or negatively) on people’s livelihoods. FACT accepts the responsibility of distributing information on behalf of FACT members.

Ms Trudi Malan represents Ajubatus Marine and Wildlife Rescue, a Section 21 company which is affiliated with SANCA. She is also a supporter of FACT. She is concerned about sustainability of all developments in the area, including social issues.

Mr Rudi Dahlhauser is a member of FACT. He does not support the proposed NPS.

Ms Joan Brady is a member of the Friends of the St Francis Nature Reserve (FOSTER) and would like to understand how the proposed NPS will affect the receiving environment (social and economic impacts).

Dr Shirley (Pierce) Cowling is the Chairperson of Thatch Farm Project and a member of FOSTER. She is looking after the interests of people in St Francis Bay. She is actively involved in alien vegetation and in conservation. The communities that are potentially affected include Sea Vista, which is near St Francis Bay. Dr Cowling had to leave the meeting after approximately an hour and undertook to send her issues and concerns to ACER for inclusion in the Issues and Response Report (IRR). These issues have been received and included in the IRR.

Ms Debbie Nicholson is a property consultant for Chas Everitt International and also represents the St Francis Civic Association. The St Francis Civic Association represents approximately 80 % of the population, some of which have not yet participated in this EIA. In terms of information dissemination, the St Francis Civic Association has 350 email addresses of 800 people and is able to disseminate information using postal addresses.

Mr Hilton Thorpe is the Chairman of the Kromme Trust and his main interest is to ensure that the correct procedures are followed in terms of the environment. He has been actively involved in the PBMR project, i.e. from the time when Thyspunt was earmarked for a PBMR Power Plant. The Kromme Trust has a membership of approximately 500 people. He is willing to assist the Project Team with information dissemination to his constituency.

4.2 Other additional comments

Ms Patricia Honey – although they have submitted questions to ACER, subsequent to the various discussions, a number of pertinent questions have come up and she would like to deal with them at this meeting.

Mr Rudi Dahlhauser – he is unhappy that ACER has not provided him with the 3,000 comment sheets that he needed for distributing to the communities, predominantly black South African citizens. He wanted to know when the minutes of the various meetings would be distributed to the public. He strongly felt that ACER is not independent.

Ms Patricia Honey – concerned about the recording of issues i.e. information recorded may be subjective. **Response:** The Project Team confirmed that all information captured during the EIA investigations is part of the public records and all Interested and Affected Parties (I&APs) will have an opportunity to verify if their issues have been captured correctly and well understood.

Ms Debbie Nicholson – she feels it is an insult and undermines the integrity of the public to sit and listen to Eskom's presentations during the meetings. **Response:** Ms Nicholson was reminded not all members of the public have been privileged to have access to information as she may have been over the past years. It remains the responsibility of the Project Team to ensure that all members of the public are given the appropriate level of information to be able to engage in discussions. I&APs have a choice of using various means of submitting comments to the project team, should they not wish to attend public meetings.

A suggestion was made that ACER approaches Kouga Local Municipality to assist with the dissemination of project information. The rationale behind this suggestion is that every single household receives an electricity bill.

5. ISSUES AND COMMENTS RAISED AND DISCUSSED

For ease of reference, all issues raised and discussed at the meeting are presented in a table (pages 8 - 25).

6. WAY FORWARD AND CLOSING REMARKS

6.1 Facilitators concluding remarks

The facilitator stated that all issues raised had been captured and will be included in the minutes, which will be made available to stakeholders. She also reminded all stakeholders that all comments should be submitted to ACER using the various means available:

Tel: 086 010 4958

Fax: 035 340 2232

Email: nuclear1@acerafrica.co.za

Postal address: PO Box 503, Mtunzini, 3867

Website: www.eskom.co.za/eia on the "Nuclear 1" link

6.2 Submission of initial comments on Scoping

The original deadline date for the submission of comments during scoping was 20 July 2007.

Due to the large public interest shown in the proposed project, the initial comment period was extended by an additional five weeks making the closing date 28 August 2007. All I&APs were requested to use the additional comment period to submit any or additional comments to ACER.

6.3 End of comment period and way forward

At the end of the comment period a Draft Scoping Report (DSR) will be prepared and made available to the public for review and comment. The DSR will be accompanied by an Issues and Response Report. All I&APs will have opportunities to review the report and to discuss its contents in public meetings, before it is finalised. Closer to the time, advertisements will be placed in the newspapers and letters will be sent to I&APs notifying them of exact details and venues for viewing the DSR and exact details concerning public meetings.

6.4 Thanks and Closure

Ms Bowler thanked all participants and closed the meeting.

APPENDIX 1: RECORD OF ISSUES RAISED AND DISCUSSED**Please note:**

- ACER has tried to capture and reflect as accurately as possible all issues raised at this discussion session.
- Should you as a participant at the meeting not agree to the way in which ACER has captured your issue, please submit your requested changes in writing within two weeks of receiving this document.
- In some cases a name was not captured during the discussion, this in no way diminishes the value of the issue or concern raised. Should you identify your input and would like your name to be registered next to it, please advise ACER.

| No | Name | Comment/Concern | Response |
|----|------------------|--|--|
| 1 | Mr Ryan Donnelly | <p>The Background Information Document (BID) refers to the proposed Nuclear Power Station (NPS) as “sustainable development”. He strongly felt that a NPS does not constitute sustainable development. It certainly does not take into account the future detrimental effects on the environment.</p> <p>He is against the use of sustainable development by Eskom and requested ACER to note his objection.</p> | <p>There are a number of different views around sustainability. Electricity is a fundamental requirements for the development in any country.</p> <p>Comment noted.</p> |
| 2 | A Stakeholder | Do we have sufficient uranium reserves and resources to take care of future power generation requirements? How much uranium is needed, available and how long would it last in South Africa? | <p>Every 1000 MW of nuclear power capacity needs approximately 200 tonnes of natural uranium per annum. Thus, 20 000 MW of nuclear power operating for a 60 year period would require about 240 000 tonnes of natural uranium.</p> <p>South Africa’s Reasonable Assured Resources (RAR) of uranium is estimated to be 521 000 tonnes, with a further 211 000 tonnes as inferred resources. [Reference: IAEA/NEA “Uranium 2005: Resources Production and Demand” – the “Red Book”]. Thus, South Africa has enough uranium resources to support bigger than 20 000 MW nuclear programme for the envisaged 60 year lifetime of the modern nuclear power plants.</p> |

| No | Name | Comment/Concern | Response |
|----|-------------------|--|--|
| 3 | Ms Patricia Honey | Does South Africa need to consider nuclear for power generation? | <p>Yes.</p> <p>Internationally it is accepted that there are only four forms of energy that can provide the base load capacity. These are gas, hydro, nuclear and coal.</p> <p>However, in the South African context only coal and nuclear are suitable for the provision of base load capacity. In this regard the following should be noted:</p> <p>Gas - the gas price is linked to oil prices. South Africa does not have extensive proven gas reserves, which it can utilise. All of South Africa's Open Cycle gas Turbines utilise diesel, making them extremely expensive to operate. In addition to the cost it is unlikely that South Africa has sufficient refining capacity to provide the required amounts of diesel should current and any proposed OCGT plants be utilised for base load generation.</p> <p>Hydro-electric schemes - add to the peak power stations but cannot be used for base load due to water scarcity in South Africa.</p> <p>There are opportunities for importing hydro-power from countries, which are north of South Africa, however, South Africa would not want to become overly-dependent on neighbouring countries for electricity supplies.</p> <p>Nuclear - South Africa is rich in uranium resources. There are different kinds of nuclear technology currently available for generating electricity.</p> <p>Coal technology is the main electricity generator in South Africa and will continue to be used in the future. Currently, more than 90 % of electricity is generated from coal. Coal is currently the cheapest option for generating electricity.</p> |

| No | Name | Comment/Concern | Response |
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| 4 | Ms Trudi Malan | Development and resource allocation decision processes are increasingly under pressure to take environmental values into account in order to reach optimal economic outcomes. In this regard, she referred to the impacts on social and biophysical environments in the Okavango Delta, Botswana. | Comment noted. |
| 5 | Mr Harry Weistra | Nuclear power is more expensive than any other form of energy. This EIA process appears to be fast-tracked. If not, Eskom should properly investigate all options in detail prior to engaging on the current process. | <p>The process is not fast-tracked. The Eskom Board has approved the investigations for a NPS, but have not yet made an investment decision.</p> <p>This EIA forms part of the initial investigations. A final decision from the Eskom board will only occur in 2008.</p> <p>An EIA is an assessment, which looks at all the potential environmental impacts of a proposed development, both positive and negative. Importantly, an EIA looks at the larger picture, which considers the three primary dimensions of the environment, i.e. social, economic and biophysical. The environmental impact report is submitted to the relevant authority (DEAT in this case) for a decision, positive or negative, in terms of environmental legislation / regulations.</p> |
| 6 | Ms Trudi Malan | From a development perspective, the current developments being done in Kouga are not sustainable. There are a number of brown issues, which are not being taken care of as part of planning. Some of the key issues are around existing infrastructure, if one considers that it does not have the capacity to deal with current developments. We need to think of where construction infrastructure will be placed, housing for contractors, availability of potable water, waste disposal, sewerage, etc. | Comment noted. These issues would be dealt with as part of the social and socio-economic specialist studies. |
| 7 | Ms Trudi Malan | <p>It concerns her that the political situation is changing significantly in South Africa and unfortunately, the planning frameworks, e.g. IDPs, SDPs, etc are being ignored.</p> <p>Due to the changes in political scenery, particularly in smaller towns,</p> | Comments noted. |

| No | Name | Comment/Concern | Response |
|----|------------------|--|---|
| | | <p>there are a number of developments that are taking place that should not be happening.</p> <p>Sewerage waste explosion will precede the nuclear explosion in Kouga. There is a significant problem with the carrying capacity of the area. The impact of this is huge; therefore planning issues are fundamentally important.</p> | |
| 8 | Mr Harry Weistra | <p>There are water supply problems in St Francis Bay and an interim solution has been the erection of a new pipeline. Although this has been done, the problem remains that of insufficient water supply into the area. There is essentially one dam that supplies Kouga and Port Elizabeth. Port Elizabeth is experiencing major growth.</p> <p>The proposed NPS is located on an aquifer and the potential impacts need to be properly understood.</p> | Comments noted. |
| 9 | Ms Trudi Malan | <p>Eskom needs to be aware that their plans are unsustainable, as the Kouga Municipality would not cope with the proposed NPS.</p> <p>Jeffrey's Bay, St Francis Bay and Oyster Bay are growing significantly.</p> <p>She believes that it is unfair to give people a wrong impression of the proposed development. They should rather know and understand the implications properly.</p> | Comment noted. |
| 10 | Ms Trudi Malan | <p>Would like to see the results of studies on water temperatures, changes in species composition, etc.</p> | <p>Using Koeberg as an example: Approximately eighty tons of sea water per second is taken through to the condensers in the turbine section of the plant. This water is discharged into the sea again at an increase in temperature of approximately ten degrees. Independent studies conducted by the University of Cape Town before the station started operating and, which have been ongoing since the operating of the station, have shown no adverse</p> |

| No | Name | Comment/Concern | Response |
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| | | <p>She suggested that studies, which were undertaken previously, should not be used as a basis for the proposed NPS as they may no longer be relevant. Importantly, impacts could differ depending on the receiving environment and coastal conditions.</p> | <p>effects on the marine life in the area (records are available from the University). The outfall of Koeberg has been designed in such a way that the warmer water mixes with and cools down to the ambient sea water temperature within 500 – 1000 metres from the point of discharge into the sea.</p> <p>This information is applicable to Koeberg site and must not be extrapolated to another site, as the dispersion and cooling of the outfall water depends on the receiving coastal conditions. This is also one of the studies that will be undertaken in the EIA. Marine specialists are part of the team contracted by the EIA Consultant to perform specialist studies. All specialist findings and associated reports will be made available for public review. All I&APs will be notified well in advance as to when such reports will be made available for review.</p> <p>Comment noted.</p> |
| 11 | Ms Trudi Malan | <p>What has Eskom done to mitigate the impacts of coal-fired power stations?</p> | <p>All of Eskom power stations are fitted with appropriate pollution abatement equipment (Electrostatic precipitators or Pulse Jet Fabric Filters) to control particulate emissions. Eskom's tall stack policy also assists in ensuring the management of ambient air quality.</p> <p>All of Eskom coal fired power stations are also strive to achieve Zero Liquid Effluent Discharge</p> <p>Eskom continues to monitor and investigate the progress internationally with the commercialisation of more efficient coal-fired power stations.</p> <p>Eskom is researching underground coal gasification as a means to generate electricity from coal – a pilot facility is</p> |

| No | Name | Comment/Concern | Response |
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| | | | being established in Mphumalanga Province near the Majuba coal-fired power station. One of the major considerations is the carbon dioxide that is emitted when coal is burnt. Eskom monitors and participates in international forums investigating the possibility of capturing and storing carbon dioxide emissions. |
| 12 | A Stakeholder | The biodiversity at Thyspunt is important. It is certainly against the National Environmental Management Act to consider Thyspunt as a potential site for a NPS. | Comment noted. |
| 13 | EIA Study Team | Due to ongoing concerns about the capacity of the existing infrastructure, i.e. infrastructure constraints that exist in the area, the EIA Study Team questioned as to how infrastructure has affected the property development market or property sales? | Ms Debbie Nicholson, Chas Everitt Property Consultant indicated that the property development market has not been negatively affected by the infrastructural constraints. She added that there is definitely a concern around the infrastructure in the area but infrastructure is not a life threatening concern compared to a NPS. |
| 14 | A Stakeholder | Eskom has signed a lease agreement with Alcan, so this is an obvious reason for choosing Thyspunt as a site for the NPS. | The Alcan Smelter project will have a demand of approximately 1355 MVA after commissioning of both potlines. The potlines will be built in 2 phases - the full capacity of 675 MVA for the first potline will be required in about 2011 and the full capacity of 1355 MVA for both potlines will be required around 2014 Alcan will get electricity supply from the National Grid and not directly from the NPS. All Eskom power stations supply electricity into the national transmission network. |
| 15 | Ms Trudi Malan | Has Eskom factored power supplies from the de-mothballed power stations (Camden, Grootvlei and Komati) in their future projections? | Yes. Camden, Grootvlei and Komati are in a process of being recommissioned to meet the growing demand for electricity. The nominal capacities of the de-mothballed power stations are as follows: |

| No | Name | Comment/Concern | Response |
|----|------------------|--|---|
| | | | <ul style="list-style-type: none"> ❑ Camden - 1,600 MW ❑ Grootvlei - 1,200 MW ❑ Komati - 1,000 MW |
| 16 | Mr Derek Cook | How many NPS are being built around the world? If yes, how big are they compared to South Africa's proposed NPS? | <p>There are approximately 30 nuclear power stations that are currently under construction. (reference: IAEA http://www.iaea.org/cgi-bin/db.page.pl/pris.charts.htm) They range in unit size from about 300 MW to 1600 MW. The total station sizes are dependent on how many units would form each power station. The Eskom proposed power station would consist of 2 or 3 units, depending on which design is selected, for a total station capacity between 3200 and 3600 MW. The EIA is, however, being undertaken for 4000 MW to ensure conservatism.</p> |
| 17 | Mr Alwijn Malgas | <p>He warned the study team about job creation expectations. He highlighted that his concerns are not about the creation of jobs <i>per se</i> but the in-migration of people who expect to get jobs.</p> <p>He suggested that Eskom does not create unrealistic expectations to people in the area. Although there may be job opportunities, most opportunities are mainly short-term. Workers do not come to the area alone but bring their families. Some people move to the area with job prospects even two years prior to construction. Promises of job opportunities might create problems for the receiving environment, communities and Eskom. This is based on experiences from previous EIA's and projects.</p> <p>Additional people in the area might require provision of additional infrastructure, schools, clinics, etc.</p> | <p>Comment noted with thanks.</p> <p>Eskom has been involved in various big projects, which also involve short-term employment creation. There are lessons that have been learnt over the past years and will definitely be useful for this proposed NPS.</p> <p>In addition, a social and socio-economic specialist study has been commissioned to assist the study team to better understand the social issues, including their economic implications.</p> <p>All current planning will be taken into consideration during the investigations. In addition, the social and socio-economic specialist will consider various planning frameworks.</p> |

| No | Name | Comment/Concern | Response |
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| 18 | Mr Derek Cook | <p>Municipalities promote projects that create job opportunities. Eskom is aware of the numbers of people who are going to be employed in the power station; it would be useful for Eskom to make this information available. For every one job created, 10 more people arrive in the area and the Municipality needs to house them. You need to better understand where to house these people.</p> <p>It is extremely important for people to understand what could happen if things go wrong.</p> | Comments noted. |
| 19 | Ms Patricia Honey | <p>Many people are employed in tourism related jobs in the Eastern Cape. A lot of people need to be made aware that they stand to lose jobs due to the proposed NPS. Based on recent surveys, the Eastern Cape has shown the highest tourism based jobs.</p> <p>One does not mix tourism developments with the NPS. This has created lots of suspicion internationally.</p> <p>She has been liaising closely with an international organisations and tour groups and is currently waiting for feedback from them regarding the proposed NPS. She will forward their comments to the EIA team.</p> | <p>Comments noted.</p> <p>Tourism in the Western Cape does not seem to have been negatively impacted by Koeberg power station. The tourism, economic, social and social economic specialists will investigate these issues.</p> |
| 20 | Mr Derek Cook | He is concerned about the transparency of the EIA process. Should the specialist outcomes from various investigations not be favourable to Eskom, will this information be made available to the public? | EIA investigations are also part of the public process. The public also has an opportunity to review the Scope of Work for Environmental Impact Report as well as read the final report, which will contain the Specialists findings. |
| 21 | Ms Debbie Nicholson | <p>What are the main objections from other proposed sites? Are they all around safety?</p> <p>Do fears being expressed by I&APs carry any weight in the Environmental Impact Assessment process?</p> | Concerns raised by the various I&APs are dependent on the site and their respective interest in the project. The minutes of all public meetings and key stakeholder workshops will be circulated for all persons to view. |

| No | Name | Comment/Concern | Response |
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| 22 | Mr Alwijn Malgas | He has heard that a decision has been made by the Government to go Nuclear? | The Government has made a decision to investigate nuclear as one of the options for power generation in South Africa. Government is expected to publish a draft Nuclear Energy Policy and Strategy for public comment in August / September 2007. |
| 23 | Ms Joan Brady | Baviaanskloof is a World Heritage Site and is located within 40 km of Thyspunt Site. Baviaanskloof is classified according to UNESCO and forms part of the Cape Floral Kingdom. It also has some endangered species along the coast. | Comment noted. |
| 24 | Ms Elizabeth Rautenbach | What is being done in terms of researching wind and solar as alternative energy sources? To what extent is Eskom interested in looking at alternative power generation options? | Eskom is looking at all generation alternatives. Currently Eskom is running a research programme exploring wave, ocean current, solar, wind as well as any other potentially viable generating technology. Eskom is currently busy with an EIA that is investigating the development of a commercial wind farm in Vredendal on the West Coast. The plant will have a generating capacity of 100 MW. The turbines are to be erected in an area that is approximately 25 km ² . In terms of solar, the Eskom is investigating the construction of a 100 MW solar thermal power in the Northern Cape, near Upington. An EIA has been completed and submitted to DEAT for review and Decision making |
| 25 | Ms Trudi Malan | What is happening with research being done on wave power? | Wave power generation is one of the alternatives that Eskom is researching. The technology is still been assessed from a technical and economic viability perspective. |

| No | Name | Comment/Concern | Response |
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| 26 | A Stakeholder | Why is Eskom spending so much money on PBMR compared to renewables? | <p>The pebble bed modular reactor (PBMR) technology is being developed by the PBMR (PTY) Ltd company. The Government provides the funding for the development of the PBMR technology.</p> <p>Eskom has submitted applications for an environmental authorisation and for a nuclear installation licence for a PBMR demonstration power plant to be constructed on the Koeberg site. The EIA for the PBMR Demonstration Power Plant is in progress. Pending the successful operation of the Demonstration Plant, Eskom will purchase PBMR power stations, subject to normal commercial conditions and regulatory requirements (authorisations, licences, permits etc) being met.</p> |
| 27 | A Stakeholder | Will it make any difference to reduce the demand using renewables? | <p>Eskom is pursuing Demand Side Management and energy efficiency as one of the means to meet the growing demand for electricity. The DSM programme is intended to save 3000 MW by 2012 and 8000 MW by 2025.</p> <p>Demand side management and energy efficiency, although extremely important, will not be sufficient to meet the full 40 000 MW required by 2025.</p> |
| 28 | Mr Ryan Donnelly | How was a decision to use nuclear power in South Africa formulated? | <p>The decision to investigate the further use of nuclear power comes from the Government and Eskom.</p> <p>One of the tasks for the Minister of Minerals and Energy is to develop and update the Integrated Energy Plan, which looks at resources and considers options that will best take care of energy requirements in South Africa.</p> <p>In the Integrated Energy Plan, the Minister looks at various options for producing electricity in South Africa. Nuclear is one of those options. The government has done a lot of strategic thinking around power generation alternatives.</p> |

| No | Name | Comment/Concern | Response |
|----|-------------------|--|---|
| 29 | Mr Ryan Donnelly | What is Eskom doing to introduce energy efficiency programmes? Is Eskom doing any work to introduce and implement Demand Side Management Programmes? | Eskom has a demand side management and energy efficiency programme target of 3 000 MW by 2012 and 8 000 MW by 2025. 8 000 MW is equivalent of avoiding the construction of two large coal-fired power stations. |
| 30 | Mr Hilton Thorpe | In France there are approximately 12 different categories for electricity usage and the charge is based on the time for consumption. | In South Africa, this (tariff based on the time of use) does exist for industry but not yet for domestic residences. Eskom is investigating the introduction of time of use tariffs for residences – special metres would be required in each household. |
| 31 | A Stakeholder | Is it possible for Eskom to introduce a system that will enable wealthy citizens to pay more for electricity usage and poor people pay relatively less? | The National Energy Regulator of South Africa (NERSA) not Eskom determines the price of electricity. |
| 32 | Ms Patricia Honey | Is it public perception that it is easier for Eskom to reduce the demand for electricity? If Eskom continues to build power stations, people might not see the need to change their behaviour on electricity consumption. | Eskom is currently undertaking a massive public awareness program focusing on energy efficiency. Eskom has a demand side management and energy efficiency programme target of 3 000 MW by 2012 and 8 000 MW by 2025. 8 000 MW is equivalent to avoiding the construction of two large coal-fired power stations. |
| 33 | Mr Ryan Donnelly | How can one lobby for the Government to change the legislation? | There are Parliamentary Portfolio Committee Meetings, which can be used by the public to address issues of particular interest. One of the Parliament's most important functions is to encourage and facilitate participation of the public and have created many ways that make it easy for the public to become involved. Any member of the public can write to a committee or make a presentation to a committee. One of the most effective ways of becoming involved in the work of Parliament is through one of its many committees. Committees are the forums in which the finer detail of legislation is discussed among the different political parties |

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| | | | <p>represented in Parliament. When deliberating on a new piece of legislation, most committees also have public hearings so that they can determine the opinion of the public on a particular issue.</p> <p>You can make written submissions to committees of Parliament about the issues they are discussing or issues that you think they should be discussing. If a committee has a meeting about an issue of great importance and you want to make an oral submission, you may request permission from the committee to do so.</p> <p>The different committees of Parliament have one or more of the following functions:</p> <ul style="list-style-type: none"> ▪ They monitor and oversee the work of the executive and hold them accountable. ▪ They oversee the accounts of national government departments and state institutions. ▪ They examine specific areas of public life or matters of public interest. ▪ They consider bills and may amend them. They may also initiate bills. ▪ They discuss international treaties and agreements entered into by the executive and recommend their ratification by Parliament. <p>Further detail can be obtained from www.parliament.gov.za</p> |
| 34 | Mr Hilton Thorpe | <p>The fragmentation of the whole process in terms of waste disposal is a cause for concern. For decades the nuclear industry has not faced up to the waste issue in the nuclear programme and now South Africa is going ahead with additional nuclear power stations.</p> <p>The fragmentation of the whole process is quite frustrating for the communities. He does not understand how Eskom can exclude the critical elements of the process in this EIA. If Eskom is serious about</p> | Comments noted. |

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| | | <p>sites, they need to look at the waste disposal issue.</p> <p>He is uncomfortable with the argument that improved technology will make high-level waste sites safer. In England they have failed to get a nuclear license because it is a political decision. No one wants to have high-level waste.</p> <p>He further stated that England has indicated on a number of publications, including the UK Fowler Commission Report that “ it would be irresponsible to pursue or engage in another nuclear programme if the site for waste disposal has not been identified”.</p> <p>Vaalputs is badly managed. Prof Richard Cowling has been to Vaalputs and was not impressed by the management of the area.</p> | |
| 35 | Mr Hilton Thorpe | <p>Thyspunt is no longer viable for the PWR as it has not been declared as inherently safe.</p> <p>It has been mentioned that the emergency planning zones for the latest PWR technology may be reduced to 5 km or less. All nuclear power generation remains a potentially hazardous process. Whatever the emergency planning zone requirements are for the PWR at Thyspunt, it does not remove the fundamental requirement, to ensure adequate provision for evacuation in an emergency.</p> | <p>The EIA and nuclear licensing processes will address the issue of the viability of the alternative sites.</p> <p>The Emergency Protection Zone (EPZ) for Koeberg NPS is 16 km. This 16 km was based on the plant type, design and site for Koeberg. The proposed NPS will be a modernised version of Koeberg (i.e. Pressurised Water Reactor [PWR] type technology) and it is expected that the EPZ will be less than that required for Koeberg.</p> <p>The NNR requires Eskom to show that there is a viable emergency plans for evacuation, sufficient resources to deal with emergency, etc. The NNR deals with the restriction zone based on the information provided for dealing with emergency, i.e. a safety case.</p> <p>It should be noted that the EPZ is not exclusionary, activities still occur within the zone. Eskom in partnership will need to engage in all the necessary discussions to undertake all the necessary planning within this zone.</p> |

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| | | What will be the procedure in the event of an accident? | Although the risk of an accident is very low, the NNR nevertheless requires emergency planning to be undertaken. The area for which emergency plans must be prepared is the emergency-planning zone. The NNR will determine the emergency plan requirements based on a safety assessment of the design of the proposed NPS and the proposed site and environment. |
| 36 | Mr Hilton Thorpe | Would like to receive detailed information on the insurance provided by Eskom or any other parties in the event of an accident. | The National Nuclear Regulator Act and specifically the regulations related to “the level of Financial Security to be provided by holders of Nuclear Installation Licences” provide this information. Reference NNR web site www.nnr.co.za and Government Notice 581 of 7 May 2004. |
| 37 | Mr Hilton Thorpe | The visual impact arising from the transmission lines is enormous. The transmission lines will cost billions of rands in addition to the cost of a NPS. Instead of spending huge amounts of money, Eskom can utilise this money on other generation options. | Comment noted. Transmission lines will always be required, regardless of the type of power station being constructed. |
| 38 | Mr Hilton Thorpe | <p>The latest census was incompetently conducted. Approximately 50 % of the population was enumerated. The demographics in that census is completely unreliable</p> <p>Therefore, it is incorrect to use the 2001 census data for planning purposes. This is due to high seasonal fluctuations in the Greater St Francis area over holiday periods.</p> <p>The NNR needs to assess accurate demographics during peak periods. The purpose of the Emergency Planning Zone is to ensure adequate provision for evacuation in the event of a nuclear emergency. Accidents cannot be scheduled, therefore a worst-case scenario, namely the peak holiday season, must be used in assessing any Disaster Management Plan.</p> | Comment noted. |

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| | | If you need to consider Thyspunt, the Nuclear Regulator should check the viability of the Thyspunt site. | |
| 39 | Ms Patricia Honey | <p>If fuel or nuclear waste will be transported (possibly between the three provinces), why is an EIA not being done for the whole country as the public would be exposed to radioactive waste. She suggested that the entire country be involved in the EIA process.</p> <p>It concerns her as to who will be dealing with nuclear waste issues within the next 60 years?</p> | <p>The transportation of nuclear fuel and radioactive materials (medical isotopes and other radioactive sources are also transported nationally and internationally on a daily basis) are conducted in accordance with international standards and under the control of the relevant Authorities</p> <p>In terms of the Nuclear Energy Act of 1999, the authority over the management and discarding of radioactive waste is vested in the Minister of Minerals and Energy. The SA Cabinet approved a National Radioactive Management Policy and Strategy in 2005. The Department of Minerals and Energy (DME) is currently drafting legislation to implement the Policy.</p> |
| 40 | Ms Patricia Honey | Is a uranium mine radioactive? | Yes. |
| 41 | A Stakeholder | If fuel rods were to spill on the road during transportation, would anyone be killed? | Not from the nuclear fuel. The radiation exposure from un-irradiated nuclear fuel is very low. When such fuel arrives at the power station it is visually inspected by technicians standing in very close proximity to the fuel (wearing gloves so that they do not contaminate the fuel when they touch it) |
| 42 | Mr Harry Weistra | The Department of Health (DoH) should be involved in the study particularly with regards to the transportation of fuel to the waste site. | The Department of Health is involved in the EIA. Note that fuel is <u>not</u> transported to the waste site |
| 43 | Mr Harry Weistra | Although the industry has a good track record, it is not a matter of probability; it is a matter of looking at what would happen if the accident/incident happens. Unfortunately, when an incident happens, it could be catastrophic. Human error is the greatest risk and Eskom cannot ignore the fact that it could happen. | <p>Comment noted.</p> <p>Although the risk of an accident is very low, the NNR nevertheless requires emergency planning to be undertaken.</p> |

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| 44 | Mr Harry Weistra | <p>The possibility of building a NPS at the Thyspunt Site, which is in close proximity to the Mpofu Dam, needs to be carefully examined. If the Mpofu Dam gets contaminated, a possibility exists for the destruction of all forms of life, as there will be no way of containing the impact.</p> <p>The Mpofu Dam supplies Port Elizabeth and other western sections of the Eastern Cape, i.e. towns between Kouga and Port Elizabeth along the coast. There is a water treatment plant at the dam. Should water contamination occur in the area, the potable water supply would be destroyed with no alternatives being available. This in turn could affect the groundwater supplies in the region and stop all forms of industrial and human activities in the area.</p> | Comment noted. This aspect would be considered by the NNR in terms of the safety of the proposed plant and the potential impact of accidents. |
| 45 | Ms Patricia Honey | Would like to alert the study team that in some cases, the Greater St Francis area can go for weeks without a drop of water. They have a significant problem with potable water in the area. | Comment noted with thanks. |
| 46 | Mr Harry Weistra | He suggested that ARCUS GIBB rectifies the application submitted to the National DEAT by including all potentially affected towns, i.e. St Francis Bay, Cape St Francis, Sea Vista, Kruisfontein, Jeffrey's Bay, Humansdorp, Tokyo Sexwale Township, Aston Bay, Paradise Bay, etc. Considering wind direction, all towns that would be affected should be included in the application, so the environmental authorities and/or decision makers understand the extent/magnitude of impacts in relation to the receiving environment. | ARCUS GIBB noted this comment. |
| 47 | A Stakeholder | There are a number of people who have bought stands in the area and have a right to occupy those stands. | Comment noted. |

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| 48 | Mr Ryan Donnelly | If one looks at the dune system at Koeberg, with the wind blowing in a south-easterly direction. It is abundantly clear that with the prevailing winds in the area, should there be radioactive fallout, there would be limited time to evacuate communities around Thyspunt Site. | Comment noted. |
| 49 | Mr Derek Cook | Is it not risky for the EIA team to rely on the public to give information? | <p>An Environmental Impact Assessment Process (EIA) is a joint fact finding process. Scoping entails significant gathering of issues from the proponent (Eskom), technical specialists and the public.</p> <p>In addition, the National Environmental Management Act (NEMA) places responsibility on I&APs to assist in the identification and prioritisation of issues that need to be investigated in the EIA.</p> |
| 50 | Mr Harry Weistra | <p>The intention of the group is to get to understand the project and the proposed process. They are hoping to receive detailed information from the study team and Eskom. They would not like to be obstructive, instead would like to expedite the power generation process.</p> <p>As long as I&APs do not know or have insufficient information, Eskom should expect objections. The nervousness that is continuously being expressed by the public comes from not having sufficient information.</p> | <p>Comment noted.</p> <p>The detail on available information would increase as we continue with the process.</p> |
| 51 | Ms Patricia Honey | <p>The low level emissions:</p> <ul style="list-style-type: none"> ▪ What is the permissible amount of emissions? ▪ Do you consider how many chimneys will be going at the same time? ▪ Who decides on the permissible levels of emissions? | <p>It is also important to note that information would be accurate once Eskom has decided on the plant type. The NNR, who makes a decision on Nuclear Licensing, would make this information available.</p> <p>The NNR makes decisions on permissible levels of emissions (called Annual Authorised Discharge Quantities).</p> |

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| | | | The NNR table an annual report in Parliament in which it discloses, <i>inter alia</i> , the amount and type of emissions that have taken place (NNR Annual Report available off their web site www.nnr.co.za) |
| 52 | Mr Harry Weistra | <p>How do you budget for a NPS when you do not know the plant design?</p> <p>He understands that with regards to cost implications for the proposed NPS, Eskom should be taking economic implications into account.</p> | Eskom has only made a decision to investigate nuclear power but has not yet made a decision to build the proposed NPS. As part of the investigations, Eskom has indicative prices from potential vendors. Once the negotiations with the vendors commence, Eskom will obtain contracted prices from the vendors. These contracted prices would form part of a business case to the Eskom Board for a decision – from a financial perspective - regarding the continuation of the project. Note that the Minister of Finance and the Minister of Public Enterprises must give their approvals in terms of the requirements of the Public Finance Management Act. A licence is also required from the NERSA, who also considers the financial viability and sustainability of the proposed power station in terms of the impact it will have on the price of electricity. |
| 53 | Mr Ryan Donnelly | In terms of acceptable emissions from a NPS, have any tests been done to the level that would affect fetuses and not the standard grown-up human being? | The standards and limits imposed by the NNR are based on, and in some cases are more stringent than international standards. The limits for occupational exposures are lower for pregnant woman. The NNR standards are identified in published regulations (refer Government Notice 388 of 28 April 2006). |
| 54 | A Stakeholder | There is fear that the Government is driving for a short-term solution and not considering the implications of their decisions. Part of the fear constitutes neglecting or not looking after South African citizens. | Comment noted. This is not the general perception – Government does perform long-term planning taking the needs of all South Africans into consideration. |

APPENDIX 1: ATTENDANCE REGISTERS

Please note: Attendance Registers can only be made available upon request