

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**

**EIA: 12/12/20/944**

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

**KOMAGGAS PUBLIC MEETING**

**Wednesday, 11 July 2007**

## RECORD OF ISSUES RAISED AND DISCUSSED

**Note:** Should you as a participant at the meeting not agree to the way in which ARCUS GIBB has captured your issue, please submit your requested changes to ACER in writing within two weeks of receiving this document

No	Name & Organisation	Issue/Comment/Concern	Response
1	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The Komaggas community are attending the meeting under protest and as such request that the meeting not be placed on record. The community protests against the construction of the proposed NPS in the area. There has been a lack of capacity building from the National Nuclear Regulator (NNR) in terms of nuclear energy in general. As such, the Komaggas community is not able to participate constructively. Furthermore, all presentations and discussions should be conducted in Afrikaans using layman's terms, as the community is not able to understand more complex concepts. While the community is in attendance under protest, we intend to give the Project Team an opportunity to deliver their presentations.	<p>The Komaggas community, as well as other communities on the West Coast (Northern Cape) have been previously informed of the proposed project. The methods of communication have been varied and include advertisement in local and regional media, placement of posters in the towns, as well as through community leaders. Where possible presentations will be presented in Afrikaans and in the case of the English presentation (i.e. EIA Presentation) it will be translated into Afrikaans. Eskom will approach the NNR regarding the rollout of a public awareness programme on nuclear power. Should such a programme be rolled out, the West Coast (Northern Cape) will be included.</p> <p>The Northern Cape Department of Tourism, Environment and Conservation (DTEC) will evaluate the information that is submitted to the Department by the independent EIA consultants as part of the Environmental Impact Assessment (EIA) process. DTEC will submit their comment on the EIA to the relevant environmental authorities, the national Department of Environmental Affairs and Tourism (DEAT). This will enable DEAT to make a decision in terms of whether the proposed NPS can proceed from an environmental perspective. The Departments will also evaluate the public participation process that has been followed as part of the EIA.</p>

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2	Ms Karin Bowler Independent Facilitator Karin Bowler Enterprises	As the Independent Facilitator she is sorry to hear that the Komaggas community is here in protest. Being at a meeting in protest could possibly prevent I&APs from listening to the presentations delivered with open minds. An element of trust between the public and the project team is needed to ensure that a robust EIA process is followed. From the presence of Earthlife Africa posters in the Komaggas town and at the public meeting venue it is evident that Earthlife Africa may have been delivering messages to the public about nuclear power. It is in the interests of the public and the process to listen to the information of all involved parties to enable constructive engagement and add value to the EIA process. The EIA process being followed is a legal process in terms of the National Environmental Management Act (NEMA).	
3	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The Komaggas community are not children and should be spoken to as adults. The Komaggas community must be allowed a chance to hear and speak the truth.	Comment noted.
4	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	Can the Independent Facilitator, Ms Bowler, provide the Komaggas community with proof that she is independent?	Ms Bowler confirmed that she was acting as Independent Facilitator and that she had a responsibility to protect the independence of the public participation process (PPP).

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5	Ms Karin Bowler Independent Facilitator Karin Bowler Enterprises	The EIA consultants must as far as possible provide the information that they have to the Komaggas community on the proposed project. The community must assess, at the end of the EIA process, how well the EIA consultants and their specialists understand nuclear power, and how well they understand the potential environmental impacts. It is the Independent Facilitator's role to make sure that the PPP is constructive and that everyone gets the truth and has trust in the process. She defends her independence and ethics.	
6	Mr Thomas Cupido Komaggas Resident	Please introduce the Project Team to the public.	<p>The EIA Team presented at the meeting by Ms Bowler, the Independent Facilitator, included Ms Jaana-Maria Ball the EIA Manager from ARCUS GIBB, the independent environmental consultants undertaking the EIA; Ms Rashieda Thomas as the Environmental Scientist assisting with the scribing of the minutes at the meeting from ARCUS GIBB, and Mr Alewijn Dieppenaar as the Socio-economic Specialist on the EIA Team. The Facilitator also introduced Mr Tony Stott, Senior Manager from Eskom Enterprises Division,</p> <p>It was highlighted that ARCUS GIBB's Company Profile and the Curricula Vitae of all the EIA Team members and specialists were available of the project website or from the public participation subconsultants, ACER Africa (ACER). The website address and Toll Free number for ACER were given and their whereabouts highlighted on the Background Information Document (BID).</p>

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7	Mr Joey Ruiters Komaggas Resident	Will the proposed project be stopped if this public meeting in Komaggas resulted in too many potential negative impacts being highlighted?	Stakeholders should and have an obligation to participate meaningfully and constructively at the public meetings. The questions asked by the community will assist in the identification of potential impacts that can be considered and investigated by the EIA Team and their specialists. The alternative sites to be considered in the EIA for the proposed project must also be considered by the public. The Komaggas Public Meeting (PM) is one of many public, Key Focus Group (KFG) and key Stakeholder Meetings (KSMs) to be held during the project announcement sub-phase of the Scoping Phase of the EIA.
8	Mr Joey Ruiters Komaggas Resident	Earthlife Africa would also get specialists to look at the potential impacts that may occur due to the proposed development.	Comment noted. Any organisation, including Earthlife Africa, or member of the public has a right to review any of the specialist studies undertaken as part of this EIA. The EIA Team has appointed independent reviewers to review the specialist studies and the Specialist Reports and the Specialists Review Reports will be available for public review and comment. The <i>Curricula Vitae</i> of the appointed Specialists and the Specialist Reviewers are available on the project website and from ACER.
9	Mr Pieter Cloete Komaggas Resident	The anti-nuclear posters on the walls of the meeting venue do not represent the views of the entire Komaggas community.	Comment noted.

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10	Ms Rina Cloete Komaggas Resident	Exactly how is nuclear power generated?	<p>In any thermal power station, heat is required to boil water and create steam. The hot, high pressure steam turns the turbines, which in turn cause a generator to turn and to produce electricity.</p> <p>In a coal-fired power station, coal is burnt to produce the heat.</p> <p>In a nuclear power station, the nuclear reaction in uranium produces the heat. Steam is produced which drives the turbine and in turn the generator and results in electricity being produced.</p> <p>Eskom is proposing to implement a nuclear awareness programme to help explain to communities how nuclear power is produced.</p>
11	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	A request has been made to the NNR to provide funding for a public awareness programme workshop to take place in Komaggas. It would have been preferable if the workshop had taken place before this public meeting for the EIA for the proposed NPS. It is confirmed that the request for funding made to the NNR had not been granted.	Comment noted. As previously stated, Eskom will organise a nuclear public awareness programme to be rolled out nationally (including the Northern Cape).

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12	Mr Salmiaan Komaggas Resident	The Komaggas community is being left out of the EIA process by not being properly informed.	The purpose of the first round of meetings in the EIA process (i.e. the project announcement phase meetings) is not only to inform the public about the proposed project but to get comments and concerns regarding the proposed project, as well as to identify gaps in information. It is clear, however, from the questions being asked in this meeting in Komaggas that there is a level of understanding about nuclear. It is well known that Earthlife Africa has been providing some capacity building in the community in this regard. As such, there is a great responsibility on the EIA Team to provide clear detailed information in terms of its findings in the future phases of the EIA.
13	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The Komaggas community has voted the current African National Congress (ANC) Government into power, and this very Government is now marginalising us.	Comment noted.
14	Mr Pieter Cloete Komaggas Resident	Nuclear power and nuclear weapons is the same thing.	Nuclear weapons and nuclear power are not the same thing. Weapons of any kind are designed to explode and cause damage. Power stations of any kind are designed to generate electricity. A nuclear power station cannot explode.
15	Mr Charles Komaggas Resident	Nuclear is a deadly thing. Why was there no talk about nuclear in the presentation delivered by Eskom?	Any industrial facility, including a nuclear power station, must be managed, operated and maintained correctly. If this is done, then the facility is a benefit to society and is not deadly. The National Nuclear Regulator (NNR) will not issue a license to Eskom if all requirements for constructing, operating, maintaining and managing the proposed nuclear power station safely are not, and will not be fully met. Using Koeberg as an example, the NNR has inspectors permanently based at the power station who monitor the

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		<p>Why is the proposed NPS to be built here near Komaggas?</p>	<p>operations and maintenance. The NNR can take away a licence that has already been granted if the NNR feels that nuclear safety is being compromised.</p> <p>In the early 1980s Eskom identified a need to expand its nuclear component of its energy generation mix in the future. To realise this suitable sites for the construction and operation of conventional Nuclear Power Stations (NPSs) were required. Eskom commissioned the Environmental Evaluation Unit (EEU) at the University of Cape Town (UCT) to find and assess potential sites along South Africa's coastline. This study was termed the Nuclear Site Investigation Programme (NSIP) (refer to the project website for more details). The programme comprised three phases, the last phase comprising detailed specialist studies and limited stakeholder participation. Sites were identified that were found to be suitable for the construction and operation of a conventional nuclear power station. These sites include the five alternative sites investigated in this EIA, namely Brazil and Schulpfontein on the West Coast (Northern Cape), Duynefontein (alongside the existing Koeberg NPS (Western Cape), Bantamsklip near Hermanus (Western Cape) and Thyspunt near Port Elizabeth (Eastern Cape). The criteria used to evaluate site suitability included physical characteristics of the sites (e.g. geology, geohydrology, seismic risk), biophysical aspects (fauna and flora), land use, demographics, economic aspects, cultural aspects and social aspects. All five alternative sites will be investigated in this EIA.</p>

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16	Mr Patrick Diergaardt Komaggas Resident	<p>What is the danger of the products used to generate nuclear power, namely uranium and plutonium? What are the potential environmental impacts of uranium and plutonium? Eskom did not do background research as it should have.</p> <p>There are so few other countries that accept nuclear for power generation and this is largely due to radioactivity resulting from the production of nuclear power.</p>	<p>Uranium is a natural material that is mined either by itself or as a by-product of the gold mining industry. It must be enriched and manufactured into a fuel element before it can be used for nuclear energy production. Uranium is naturally radioactive. However, after undergoing the nuclear reaction in the nuclear power station, the spent fuel is very radioactive and emits intense levels of radiation. Radioactive elements are naturally found everywhere (e.g. certain rocks) in the world and these continually emit radiation. X-rays are also forms of radiation. One needs to protect oneself against excessive levels of radiation.</p> <p>This is incorrect. There are more than 430 nuclear power stations in operation throughout the world in at least 30 different countries. Many countries, including the USA, UK, Finland, France, China, Korea, Argentina, Brazil have indicated their intention to build new nuclear power stations.</p>

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17	Member of Komaggas Community	<p>What benefits will communities like Komaggas, or the Namaqualand in general, realise as a result of this proposed NPS?</p> <p>What is the value of the proposed NPS?</p>	<p>The EIA and its specialists will investigate both the potential negative and positive impacts of the proposed NPS on the environment (social, economic and biophysical). There could well be positive impacts associated with construction of the proposed NPS at either of the alternative sites. Examples of potential positive impacts could be job creation or the establishment of a nature reserve. However, these positive impacts will come out later in the EIA. The appointed social specialist has a responsibility to make sure that the social impacts of the project are considered. Mr Alewyn Diepenaar, the appointed social specialist, will interrogate communities about their understanding of the proposed NPS. The assessments will be made on both a local, regional and national level. The results of the assessment will be available in the Impact Assessment Report, which will be made available to the public in the later part of 2008.</p> <p>The value of the proposed nuclear power station is that it would assist in meeting South Africa's electricity demands. Eskom will need to have added more than 40 000 MW of new power stations to its existing electricity generating capacity in order to be able to meet the projected demand for electricity in South Africa by 2025. Nuclear power stations are being considered for up to 50% (i.e. 20 000 MW) of the total required capacity.</p>

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		<p>The Komaggas community are concerned about the potential impact that the proposed project can have on our natural and undisturbed environment. The community wants to maintain the environment in its current state as far as possible.</p> <p>What would happen during the transportation of the radioactive waste from Brazil or Schulpfontein to the Vaalputs Waste Disposal Site?</p>	<p>Comment noted. The EIA will investigate both the potential negative and positive impacts of the proposed NPS on the biophysical environment. As part of the study a botanical, fauna (Vertebrate and invertebrate), fresh water ecology, marine, archaeology and heritage resources, tourism, agriculture specialist studies will be undertaken, amongst others.</p> <p>The transportation of radioactive waste is performed according the strict international standards and in compliance with the requirements set by the National Nuclear Regulator. Transportation of low and intermediate level radioactive waste from Koeberg to Vaalputs has taken place over the past 23 years in compliance with the requirements of the NNR and without any adverse consequences.</p>

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18	Member of Komaggas Community	<p>The Komaggas community want to be able to comment within the Comment Period for the project announcement phase. Members of the Komaggas community feel like we are being 'spoon-fed' at the moment and have little time to reflect on their response to the proposed project. What is the purpose of our attendance at this public meeting as part of the EIA? The proposed project is already in motion and it will continue to carry on.</p> <p>There is only one Namaqualand in the world and it must not be jeopardised due to economic development.</p>	<p>The purpose of the project announcement public meeting at Komaggas is twofold. One is to tell the Komaggas community about the proposed project and the EIA, and the other is to get the communities initial comment on the proposed project, as detailed in the Background Information Document (BID) and during the presentations delivered at the public meeting. Valid questions cannot be expected from public if Eskom and the EIA Team does not deliver the appropriate information to the public. It is the responsibility of EIA consultants to undertake the project in compliance with the legislation.</p> <p>A document with all questions and answers will be produced (Issues and Response Report) and will be distributed to the public. Feedback will be provided on the outcome of the meetings held all around the country. People will not miss out on opportunities to comment on the proposed NPS as comment will be accepted throughout the EIA, which is likely to extend into late 2008.</p> <p>Comment noted.</p>
19	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	As Facilitator, Ms Bowler should not answer questions but rather allow the EIA and Eskom specialists to answer the questions.	Where questions are asked that pertain to the EIA process or public participation process (PPP), the Facilitator is within her full right to provide a response.

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20	Thomas Komaggas Resident	<p>The alternative sites of Schulpfontein and Brazil are not far from Komaggas. What is the minimum distance that people are allowed to live from a NPS of the technology type proposed?</p> <p>Would Eskom pay for the relocation of communities should this be required? Would the destruction of a town in order to build the proposed NPS be allowed by Government?</p>	<p>For the proposed nuclear power station Eskom is considering the latest design of Pressurized Water Reactor (PWR) technology. Internationally, these designs have formal emergency planning zones less than 16 km. The NNR will however determine the extent of the required zone based on a safety assessment of the design of the proposed nuclear power station and the proposed site and environs.</p> <p>The sites that are being investigated in the EIA are not in towns, and hence no towns will be destroyed. In other projects, where relocations have been required, Eskom has taken the accountability for the relocation.</p>
21	Komaggas Community Member	There is not enough time in this public meeting for Komaggas community members to ask questions.	A commitment was made by the Eskom and EIA Team to stay as late as necessary to answer all questions. The Komaggas meeting participants should, however, also allow for the presentations to be completed as well.
22	Komaggas Community Member	<p>Is the fact that that high-level radioactive waste (HLW) is currently being stored at the Koeberg NPS at a depth of 500 m below the ground level being considered in the EIA?</p> <p>What will be done with the HLW in future if there is currently no viable disposal solution?</p>	<p>There is a misunderstanding – the spent fuel at Koeberg is not stored 500 m underground. The spent fuel is retained at Koeberg in spent fuel storage facilities (pools and casks) licensed by the National Nuclear Regulator. The pools and casks have sufficient capacity for the 40-year design life of Koeberg.</p> <p>For proposed nuclear power station, Eskom will follow the same practices for the management of radioactive waste as discussed above, under the regulatory control of the National Nuclear Regulator and subject to the requirements of the National Radioactive Waste Management Policy and Strategy and any associated legislation or regulations.</p>

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		<p>What are the potential impacts of the disposal of low-level- (LLW) and intermediate-level radioactive waste (ILW) at the Vaalputs Waste Disposal Site?</p>	<p>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. Two options for the long term management of spent fuel are possible: (a) direct final disposal of the spent fuel in a deep underground geological disposal facility, or (b) reprocessing of the spent fuel to extract unused uranium and plutonium for re-use and concentration and disposal of the residual (about 3-4% of the spent fuel) high level waste in a deep underground geological disposal facility. Both options are being pursued internationally.</p> <p>Vaalputs is managed by Necsa on behalf of the State. Low and intermediate radioactive waste is disposed of at Vaalputs in accordance with the licence granted by the National Nuclear Regulator. The NNR will only grant a licence for a nuclear facility such as Vaalputs if the NNR is satisfied, based on a safety assessment, that the risk of adverse impacts is acceptably low.</p>
23	Charles Komaggas Resident	<p>There is no evidence that nuclear power works and it is questioned how the lives of communities can be risked due to a proposed project that Eskom is unsure about.</p> <p>How many years would it take before the proposed NPS is constructed?</p>	<p>Eskom has managed, operated and maintained the Koeberg nuclear power station successfully and safely for the past 23 years. Koeberg has made a positive contribution to the Western Cape and South Africa.</p> <p>If Eskom obtains the required authorisations, construction of the proposed power station could commence in late 2009 / early 2010 with operation of the first unit about 2016.</p>

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24	Komaggas Community Member	<p>The comparison made by Eskom between the sun's rays and the rays of radioactivity is incorrect.</p> <p>Eskom does not have an appropriate storage space for high-level radioactive waste (HLW).</p>	<p>The comparison made was that one must protect oneself against excessive amounts of radiation. Various forms of radiation come from the sun, including ultraviolet radiation. It is necessary to protect oneself against excessive exposure to the radiation from the sun. Too much exposure to the sun is known throughout the medical profession and by most people to be harmful. Similarly it is necessary to protect oneself from over-exposure to the radiation that is present inside a nuclear power station. One can protect oneself by keeping far away from the areas of high radiation, or by keeping materials, such as a concrete wall or a volume of water, between oneself and the source of radiation, or by making sure that one exposes oneself to the radiation for only a short period of time.</p> <p>The spent fuel is retained at Koeberg in spent fuel storage facilities (pools and casks) licensed by the National Nuclear Regulator. The pools and casks have sufficient capacity for the 40-year design life of Koeberg.</p> <p>For proposed nuclear power station, Eskom will follow the same practices for the management of radioactive waste as discussed above, under the regulatory control of the National Nuclear Regulator and subject to the requirements of the National Radioactive Waste Management Policy and Strategy and any associated legislation or regulations.</p>

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25	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	People should be adequately informed. What is the lifespan of HLW?	The lifespan of high level waste is dependent on what radioactive materials are in the waste. The radioactivity of some of the materials in high level radioactive waste decreases back to natural levels within relatively short periods of time. Other materials however remain radioactive for several thousands of years. Hence the need to dispose of high level radioactive waste in deep geological disposal facilities where it is isolated from the environment.
26	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	Will the spent fuel from the proposed NPS be stored in Namaqualand? Eskom must not tell the public half-truths.  It will cost South Africa R400 000 billion to construct five NPSs. Will this money come from South African taxpayers?	The allegation that Eskom tells the public half-truths is unsubstantiated and is incorrect.  The spent fuel is retained at Koeberg in spent fuel storage facilities (pools and casks) licensed by the National Nuclear Regulator. The pools and casks have sufficient capacity for the 40-year design life of Koeberg.  For proposed nuclear power station, Eskom will follow the same practices for the management of radioactive waste as discussed above, under the regulatory control of the National Nuclear Regulator and subject to the requirements of the National Radioactive Waste Management Policy and Strategy and any associated legislation or regulations.  The financial figures stated are incorrect. Nevertheless, Eskom does not get any funding from the Government and hence from taxpayers for the construction of power stations. Eskom provides the funding for the construction of power stations and other electricity supply infrastructure from retained earnings and from loans and bonds raised from national and international financial institutions

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		What is the lifespan of a spent fuel rod?	<p>Spent fuel rods are the fuel rods that are contained in the spent fuel elements. If the spent fuel is not intended to be recycled then it is defined as high level waste. If the spent fuel is reprocessed to extract and recycle the unused uranium then the residues from the reprocessing is the high level waste. As mentioned previously the lifespan of high level waste is dependent on what radioactive materials are in the waste. The radioactivity of some of the materials in high level radioactive waste decreases back to natural levels within relatively short periods of time. Other materials however remain radioactive for several thousands of years. Hence the need to dispose of high level radioactive waste in deep geological disposal facilities where it is isolated from the environment.</p> <p>The lifespan of the spent fuel rod (as shown in the Eskom presentation) is about 4 years.</p>
27	Member of Komaggas Community	There are many unanswered questions that must be answered. Please answer questions systematically.	Comment noted. It was also stated that this is the start of the EIA process, and many questions cannot be answered until the EIA studies have been undertaken.
28	Mr Kobus van Zyl Komaggas Resident	There is currently no solution to the management of nuclear waste in South Africa. There is likely to be no solution in the near future.	<p>Radioactive waste is internationally categorised into three levels:</p> <p><b>Using Koeberg (1800 MW net output) as an example:</b>  <b>Low-level radioactive</b> waste consists of day-to-day refuse such as paper, gloves, plastic containers, disposable overalls, overshoes etc, which have low traces of radioactive contamination. It is compacted into metal drums (200 litre drums). These drums are transported by road to Vaalputs, the National Radioactive Waste Disposal site in the Northern Cape for near surface disposal. Vaalputs is managed by Necsa on behalf of the State, in terms of a licence issued by</p>

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			<p>the National Nuclear Regular. The level of radioactivity in the metal drums decreases with time; after approximately 30 years, the level of radioactivity is equivalent to natural background levels.</p> <p><b>Intermediate level waste</b> consists of radioactive resins and sludges, spent filter cartridges and scrap pieces from maintenance work. Intermediate-level waste is solidified by combining it into a sand/cement mix, which is poured into is mixed into a concrete slurry and solidified in concrete containers, which are transported to Vaalputs for near surface disposal. The level of radioactivity in the concrete containers decreases with time; after approximately 300-400 years, the level of radioactivity is equivalent to natural background levels.</p> <p><b>Spent fuel or high-level radioactive waste:</b> The spent fuel is retained at Koeberg in spent fuel storage facilities (pools and casks) licensed by the National Nuclear Regulator. The pools and casks have sufficient capacity for the 40-year design life of Koeberg.</p> <p>The SA Cabinet approved a National Radioactive Waste Management Policy and Strategy in 2005. The Department of Minerals and Energy (DME) is currently drafting legislation to implement the Policy. Two options for the long term management of spent fuel are possible: (a) direct final disposal of the spent fuel in a deep underground geological disposal facility, or (b) reprocessing of the spent fuel to extract unused uranium and plutonium for re-use and concentration and disposal of the residual (about 3-4% of the spent fuel) high level waste in a deep underground geological disposal facility. Both options are being pursued internationally.</p>

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		<p>If a person stands next to a radioactive source he will die immediately.</p>	<p>The radioactivity of some of the materials in high level radioactive waste decreases back to natural levels within relatively short periods of time. Other materials however remain radioactive for several thousands of years. Hence the need to dispose of high level radioactive waste in deep geological disposal facilities where it is isolated from the environment.</p> <p>For proposed nuclear power station, Eskom will follow the same practices for the management of radioactive waste as discussed above, under the regulatory control of the National Nuclear Regulator and subject to the requirements of the National Radioactive Waste Management Policy and Strategy and any associated legislation or regulations.</p> <p>Comment noted, but requires clarification. The radiation from radioactive sources varies. The world is naturally radioactive and gives off radiation all the time. Radioactive sources are used extensively and beneficially in the medical profession; for example, X-rays are radiation. Radioactive sources are used in fire detectors. The radiation from these radioactive sources is generally of low intensity and does not kill or harm people. However there are other radioactive sources that emit very intense radiation, for example certain radioactive sources used in industry and in the medical field. Spent fuel also emits very intense radiation. Standing next to these intense sources of radiation will make one ill and could kill one. Hence one must protect oneself from such radioactive sources by distance, by shielding or by limiting the time over which one is exposed to the radioactive source.</p>

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		<p>Why should a NPS be built at Brazil or Schulpfontein if the electricity is to be transported to Cape Town where it is needed?</p> <p>What would happen to the NPS once its lifespan is over?</p>	<p>Eskom supplies electricity to South Africa as a whole via the national transmission network. Power stations are constructed in the areas that are found to be suitable. Hence as mentioned previously, a study was conducted in the 1980s / 1990s to find and assess potential sites along South Africa's coastline. This study was termed the Nuclear Site Investigation Programme (NSIP) (refer to the project website for more details). Sites were identified that were found to be suitable for the construction and operation of a conventional nuclear power station. These sites included the Brazil and Schulpfontein sites.</p> <p>Any power station, once it has come to the end of its economic life, is shutdown and decommissioned. For a nuclear power station, the decommissioning must be undertaken in accordance with the requirements of the National Nuclear Regulator.</p>
29	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	Were there criteria in the Nuclear Site Investigation Programme (NSIP) to say that fewer alternative sites must be looked at?	On the West Coast (Northern Cape) nine alternative sites were considered in the Nuclear Site Investigation Programme (NSIP). Other sites were considered on the East and South Coast of South Africa. Refer to the project website for more details of this study. There were no criteria as to how many sites should be considered in each region. In 1994 the study concluded that five sites were considered to be suitable for the construction and operation of a conventional NPS. This included the Brazil and Schulpfontein sites on the West Coast, as well as three other sites. The results and conclusions of the NSIP will be reviewed in the Scoping Phase of the EIA and made available for public review in the Draft Scoping Report (DSR).

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30	Member of Komaggas Community	The public must be informed about the potential negative impacts and not just the potential positive impacts.	Comment noted.
31	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The EIA is just a process that is being followed and the decision to construct the proposed NPS has already been made.	No decision to construct the proposed NPS has been made. A number of authorisations, including environmental, are required before this decision can be made.
32	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The Komaggas community do not want the proposed NPS to be built at Brazil and Schulpfontein.	Comment noted.
33	Ms Ennie Ramsden Komaggas Resident	Given my involvement in tourism in the area, I am concerned about the potential impacts of the proposed NPS on tourism in the area.	<p>The socio-economic study will look at the impact of the Nuclear Power Station on the social environment.</p> <p>A separate tourism study will be commissioned in order to better understand the tourism impacts and feed into the economic study.</p>
34	Ms Karin Bowler Independent Facilitator Karin Bowler Enterprises	Are there any other alternatives that have to be investigated as part of the EIA, other than alternative sites and alternative sources of energy generation?	Yes. The 'No-go' alternative is one of these and the potential impacts of not constructing the proposed NPS must be looked at. The EIA Team will incorporate all comments raised by the public during this Comment Period for the project announcement phase, include those regarding alternatives, into the Draft Scoping Report (DSR). No decision about the proposed NPS has been made yet and authorisation from a number of organisations is required before this decision is made.

No	Name & Organisation	Issue/Comment/Concern	Response
35	Clarke Komaggas Resident	<p>Could the Vaalputs Waste Disposal Site be rehabilitated in the same way as mines can?</p> <p>What would ultimately happen to the environment where the waste is to be stored?</p> <p>The danger of nuclear power is well known internationally.</p> <p>There is concern that nuclear waste from other countries will be dumped in South Africa.</p>	<p>Necsa is responsible for the Vaalputs National Radioactive Waste Disposal Site. The trenches in which the metal drums of low level radioactive waste and the concrete containers of intermediate level radioactive are placed will be rehabilitated by Necsa as each trench is filled to its intended capacity.</p> <p>As mentioned above it will be rehabilitated. Since the level of radioactivity decreases with time, approximately 300 years after the disposal of the last metal/concrete container, the radioactivity of a site used only for low and intermediate level waste would have returned to normal background radioactivity levels.</p> <p>Comment noted. The benefits of nuclear power are also recognised internationally. Nuclear power is not dangerous or harmful when it is managed, operated and maintained correctly.</p> <p>South Africa does not permit the importing of waste from other countries for disposal in South Africa.</p>
36	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	<p>There was a stage where the leaking drums of LLW waste at the Vaalputs Waste Disposal Site had to be closed by workers. The workers did so without wearing gloves. Certain radioactivity from waste in these drums can even penetrate concrete walls.</p>	<p>Vaalputs is managed and operated by Necsa on behalf of the State under a licence issued by the National Regulator. These comments should be directed to either Necsa or the NNR. To Eskom's knowledge these statements are not correct.</p> <p>The radioactivity levels of the steel drums and concrete containers meet the requirements of the NNR and the standards of the International Atomic Energy Agency.</p>



No	Name & Organisation	Issue/Comment/Concern	Response
		<p data-bbox="611 256 1196 284">What happened to the Cahora Bassa alternative?</p> <p data-bbox="611 395 1346 459">Why did Eskom withdraw its support from the proposed gas-fired power stations?</p> <p data-bbox="611 847 1346 1018">There is no policy available to guide this process. The proposed project has preferred bidders and the PWR is not the preferred generation alternative. John Walmsley makes confusing statements in the public domain and Martin Kramer says that there is no preferred technology.</p>	<p data-bbox="1370 256 2096 355">Eskom currently imports the majority of the power that is produced by the Cahora Bassa hydro electric power station in northern Mozambique.</p> <p data-bbox="1370 395 2096 600">Eskom is continuing to investigate being able to access natural gas from the Kudu gas fields in Namibia, the Ibhubesi gas fields off the west coast of South Africa, the gas fields in Mozambique and liquid natural gas from international markets, to generate electricity in combined cycle gas turbine power plants.</p> <p data-bbox="1370 608 2096 812">If sufficient natural gas becomes economically available (the gas price is also linked to oil prices and subject to foreign exchange rates), the possibility also exists to convert the new Open Cycle Gas Turbines that Eskom recently constructed in the Western Cape to combined cycle gas turbines.</p> <p data-bbox="1370 847 2096 1158">Comment noted. Eskom's investigations into the possibility of expanding its nuclear power capacity is aligned to Government policy. As indicated in the Background Information Document for this EIA, Eskom has identified the Pressurised Water Reactor (PWR) technology for the proposed nuclear power station. The negotiations with potential vendors is anticipated to commence later in 2007. Eskom is not responsible for statements made by non-Eskom employees.</p>

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37	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	The proposed Kudu Gas Field and associated transmission line must be protected.	Comment noted. Mr Pienaar subsequently stated at the Key Stakeholder Workshop held in Springbok (Northern Cape) on 9 October 2007 that the Komaggas Community supported this proposed project, as it wanted to realise the benefits of potential servitude fees to be paid by Eskom if the proposed transmission lines were constructed.
38	Member of Komaggas Community	How will the proposed project impact on farming practices in the region?	<p>Using Koeberg as an example: Koeberg has operated for the past 23 years within very close proximity of wheat, cattle and diary farms. The nearest farms are within the 10 km radius of Koeberg. It has not affected the farming activities in any way. This can be attested to by the farmers in the Philadelphia area (farming union nearest Koeberg).</p> <p>The expectation is thus that the operation of the proposed nuclear power station will not hamper agricultural activities in the vicinity of the power station if it is constructed. This will be investigated as part of the EIA process - the impact on agricultural activities, both during construction and operation of the proposed power station is one of the specialist studies that will be undertaken.</p>
39	Ms Anita Cloete Komaggas Resident	<p>What will the potential impacts of the proposed NPS be on the Komaggas community?</p> <p>There is a feeling amongst the community that the decision to approve the proposed NPS has already been made, regardless of the disapproval of the public.</p>	<p>The potential impacts of the proposed NPS will be studied as part of the EIA. The specialist studies have only just commenced.</p> <p>No decision to construct the proposed NPS has been made. A number of authorisations, including environmental, are required before this decision can be made.</p> <p>The EIA Team would be grateful to hear the communities'</p>

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		<p>The land on which the proposed NPS is proposed to be built belongs to the Komaggas community. The community has thus been robbed of our land. Our community has received nothing for this land, which belonged to our ancestors.</p> <p>Will the Komaggas community be far enough away from the proposed NPS to avoid the potential safety hazards?</p>	<p>comments, concerns and issues regarding the proposed NPS. The Komaggas community is encouraged to submit their comments on the proposed NPS to ACER, throughout the EIA process. The first opportunity for comment is on the Background Information Document (BID) and the presentations delivered at the public meetings. If comments cannot be faxed to ACER, the EIA Team would arrange to collect them. Interested and Affected Parties (I&amp;APs) are encouraged to make use of the Toll Free phone line that will be available throughout the EIA.</p> <p>Comment noted, however, no decision has been made regarding the construction of the proposed NPS.</p> <p>For the proposed nuclear power station Eskom is considering the latest design of Pressurized Water Reactor (PWR) technology. Internationally, these designs have formal emergency planning zones less than 16 km. The NNR will however determine the extent of the required zone based on a safety assessment of the design of the proposed nuclear power station and the proposed site and environs. The nuclear safety of, and the risk of a nuclear accident at the proposed power station will be independently assessed by the National Nuclear Regulator. The NNR will only issue a nuclear installation licence for the proposed power station if it is satisfied that the risk of an accident is acceptable low. Using Koeberg as an example, the NNR has inspectors permanently based at the power station who monitor the operations and maintenance. The NNR can take away a licence that has already been granted if the NNR feels that nuclear safety is being compromised.</p>

No	Name & Organisation	Issue/Comment/Concern	Response
40	Ms Carlotte Diergaardt Komaggas Resident	The project is not good for the future generations of the Komaggas community.	Comment noted. The socio-economic part of the EIA will study the benefits and disadvantages of the proposed power station.
41	Ms Anna Bam Komaggas Resident	I stopped working for De Beers five years ago and am an old pensioner. I have a huge concern for the safety of our children.	Comment noted. The nuclear safety of, and the risk of a nuclear accident at the proposed power station will be independently assessed by the National Nuclear Regulator. The NNR will only issue a nuclear installation licence for the proposed power station if it is satisfied that the risk of an accident is acceptable low. Using Koeberg as an example, the NNR has inspectors permanently based at the power station who monitor the operations and maintenance. The NNR can take away a licence that has already been granted if the NNR feels that nuclear safety is being compromised.
42	Dolly Komaggas Resident	I am concerned for safety of my children. I am opposed to the construction of a NPS so close to the Komaggas community.	Comment noted. The nuclear safety of, and the risk of a nuclear accident at the proposed power station will be independently assessed by the National Nuclear Regulator. The NNR will only issue a nuclear installation licence for the proposed power station if it is satisfied that the risk of an accident is acceptable low. Using Koeberg as an example, the NNR has inspectors permanently based at the power station who monitor the operations and maintenance. The NNR can take away a licence that has already been granted if the NNR feels that nuclear safety is being compromised.
43	Member of Komaggas Community	I am concerned about the potential impacts of the proposed NPS on our livestock.	Using Koeberg as an example: Koeberg has operated for the past 23 years within very close proximity of wheat, cattle and dairy farms. The nearest farms are within the 10 km radius of Koeberg. It has not affected the farming activities in any way. This can be

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		<p>Has Eskom already bought the land from De Beers?</p> <p>Why can the waste products of the NPS not go to the place where the electricity has been used, namely, Cape Town?</p> <p>The transportation of the radioactive waste is a concern. What is the guarantee that the waste will not be spilled while being transported to the Vaalputs Waste Disposal Site?</p> <p>The safety of communities surrounding the proposed NPS must be ensured. There are underground aquifers on the West Coast (Northern Cape) and the Komaggas community make use of boreholes. What are the potential impacts on water resources due to the proposed NPS? The Komaggas community is afraid of what might happen if contamination of its underground water resources occurs.</p>	<p>affected the farming activities in any way. This can be attested to by the farmers in the Philadelphia area (farming union nearest Koeberg).</p> <p>The expectation is thus that the operation of the proposed nuclear power station will not hamper agricultural activities in the vicinity of the power station if it is constructed. This will be investigated as part of the EIA process - the impact on agricultural activities, both during construction and operation of the proposed power station is one of the specialist studies that will be undertaken.</p> <p>No, Eskom has neither purchased the Brazil (from the State) nor the Schulpfontein site (from de Beers).</p> <p>Vaalputs National Radioactive Waste Disposal Facility is the designated site for the disposal of radioactive waste in South Africa.</p> <p>The transportation of radioactive waste is performed according the strict international standards and in compliance with the requirements set by the National Nuclear Regulator. Transportation of low and intermediate level radioactive waste from Koeberg to Vaalputs has taken place over the past 23 years in compliance with the requirements of the NNR and without any adverse consequences.</p> <p>Amongst others, a geohydrological specialist study will be undertaken as part of the EIA. This study will assess the potential impacts (positive and negative) of the proposed NPS on the ground water resources on a local, regional and national level.</p>

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44	Member of Komaggas Community	People get sick and die from gases produced by NPSs.	Comment noted, however it is not factually correct. Amongst others, an air quality and health impact assessment will be undertaken as part of the EIA. These studies will assess the potential impacts (positive and negative) of the proposed NPS on the air quality and human health on a local, regional and national level.
45	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	<p>The Koeberg NPS causes the mutation of jellyfish and other sea-life around the power station. This conclusion was made in a study undertaken by the University of Cape Town (UCT). This report is available from the Atlantis community.</p> <p>The heating of water through the nuclear process will pose a problem to marine life.</p>	<p>Eskom disputed the validity of these statements and challenged Mr Pienaar to provide the evidence and the report to the National Nuclear Regulator.</p> <p>Sea water is used to cool the steam that drives the turbines. 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 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>

No	Name & Organisation	Issue/Comment/Concern	Response
			<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.</p>
46	<p>Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident</p>	<p>Would Tony Stott from Eskom Enterprises purchase a house next to the proposed NPS?</p>	<p>Mr Stott confirmed that he would indeed buy a house next to the proposed NPS if he was assigned to work at the power station. Mr Stott stated that he would love to buy a house near Koeberg, but that he could not do so because the house prices were extremely high (millions of rands).</p>
47	<p>Mr Thomas Cupido Komaggas Resident</p>	<p>What is the danger of an additional waste disposal facility, if one is to be constructed?</p> <p>I am concerned that other countries will come and dispose of their hazardous waste in South Africa.</p>	<p>Vaalputs National Radioactive Waste Disposal Facility is the designated site for the disposal of radioactive waste in South Africa. It is managed and operated by Necsa on behalf of the State under a licence issued by the National Nuclear Regulator. At this stage only about 1% of Vaalputs has been used – hence it is unlikely that another waste disposal facility will be constructed.</p> <p>South Africa does not permit the importing of waste from other countries for disposal in South Africa.</p>
48	<p>Member of Komaggas Community</p>	<p>What is the number of jobs that can be created through renewable generation projects, such as wind or solar power?</p>	<p>Approximately 6 permanent jobs would be created per 100 MW. During construction additional jobs would be created, however not in very large numbers. If local manufacturing of components were to take place, additional jobs would be created. The number of jobs created from a local industry is not known.</p>

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49	Mr Derrick Diergaardt Komaggas Resident	I represent the Komaggas community's interests on a committee dealing with land claims. How would the process be affected if the community has a land claim on both alternative sites on the West Coast (Northern Cape)?	The presence of potential or registered land claims on all five alternative sites will be investigated as part of the EIA. The Land Claims Commissioner in each of the affected Provinces has already been contacted in this regard. The end decision will rest with Eskom as to whether or not they want to purchase property that has land claims registered against it.
50	Ms Ennie Ramsden Komaggas Resident	Will seawater be used in the process of nuclear energy production?	<p>Sea water is used to cool the steam that drives the turbines. Using Koeberg as an example:</p> <p>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 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.</p>

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51	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	Do the EIA consultants understand the economic value of the De Beers farm to the Komaggas community? The community can use that land after mining and rehabilitation for farming purposes.	Amongst others, an economic, agricultural and tourism specialist studies will be undertaken as part of the EIA. These studies will assess the potential impacts (positive and negative) of the proposed NPS on current and future economic, agricultural and tourism activities on a local, regional and national level.
52	Member of Komaggas Community	Have the EIA studies specifically been around the nuclear facility?	The current EIA studies are for the proposed nuclear power station, and its associated infrastructure on one of the 5 sites that are being investigated.
53	Member of Komaggas Community	Security around the proposed NPS can be breached and this may result in a threat of a nuclear explosion.  The issues raised by the Komaggas community must be taken up very seriously.	In South Africa, in terms of an Act of Parliament, all power stations are designated "Key National Points". Security for such installations is the joint responsibility of the relevant security agencies. Although, the general security of any installation can be breached, and some damage could be caused, it could not result in a nuclear explosion.  Comment noted. The issues raised by all Interested & Affected Parties are taken seriously.

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54	Mr Alewyn Diepenaar Socio-economic Specialist EIA Team	As part of the social specialist study, the Octagonal Team would talk to the Komaggas and other communities about how the proposed NPS could affect them. The potential impacts due to influx of workers to the community, on tourism and on community lifestyle will be investigated in the social impact study. The Social Impact Assessment Team will return to the community to talk to people in small groups. All people that are within a reasonable distance of the two proposed alternative sites on the West Coast (Northern Cape) will be considered in the study. There is no study boundary for the social impact study at this point. The Octagonal Team will consider the social impacts of constructing and operating a NPS at all of the five alternative sites.	
55	Mr Andy Pienaar Namaqualand Action Group for Environmental Protection and Komaggas Resident	<p>The Eskom Team is not concerned about the Komaggas community. This very 'industry' (i.e. nuclear in the form of the Pebble Bed Modular Reactor [PBMR]) was promised to the Komaggas community before and we do not trust that we will benefit from Eskom's proposed venture.</p> <p>The proposed NPS is going to be detrimental to the Komaggas community. The community would meet shortly to decide whether it will participate in the EIA process and whether it will allow any of the specialists into the town to conduct their work.</p>	<p>Comment noted. Mr Stott specifically emphasised that he, on behalf of Eskom, makes no promises to the Komaggas Community. The EIA would investigate the benefits of the proposed nuclear power station.</p> <p>Comment noted. The EIA would investigate the benefits and disadvantages of the proposed nuclear power station.</p>