

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

ENVIRONMENTAL IMPACT ASSESSMENT (EIA: 12/12/20/944)

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

(Volume 01: 09 May 2011)

Issues have been received from the following stakeholders:

No	Name	Organisation
1	Eleanor Welsh	Save Bantamskip
2	Pam Andrews	Pam Andrews VentureWeb – Outsourced Marketing Solutions
3	J.F. van der Merwe	Interested and Affected Party
4	Byron Andrews	Pam Golding Cape St. Francis
5	Sally Andrew and Bowen Boshier	Interested and Affected Party
6, 7 and 11	Eric Mair	African Alternative Technologies – Research and Development Director
8	Judith Taylor	Earthlife Africa Johannesburg – Branch Co-ordinator
9	Tarryn Paquet	Stellenbosch University - PHD Candidate
10	Various	The Bomb Surf
12	Len Handler	Neuro-Radiologist Retd
13	Kobus Reichert	Gamtkwa Khoisan Council – Heritage Representative
14	Sally Andrew & Bowen Boshier	Interested and Affected Party
15	Trevor Moodley	Eskom Koeberg Nuclear Power Station QC Inspector
16	Jacques van den Berg	Bergen International Chairman/CEO
17	Melissa Saayman Krige	Platbos: Africa's Southernmost Forest

No	Date	NAME & ORGANISATION	ISSUES/COMMENTS	RESPONSE
1	06 May 2011 12:45 Telephonic conversation	Eleanor Welsh Save Bantamsklip	<p>Request to send Executive Summary etc to new email address: skyflyer@live.co.uk.</p> <p>Ms Welsh cannot understand why there is no Public meeting being held in Hermanus when it is densely populated and almost acting as capital in the area.</p> <p>Furthermore, it is far away from Gansbaai.</p> <p>The request is for revision and to book a venue in Hermanus. The more people that know about it the better. The request for a meeting in Hermanus is not to substitute the Gansbaai meeting.</p>	<p>Thank you for your comment. GIBB suggested via phone to Ms Welsh that she send her comments in writing to the GIBB Public Participation Office, which she has done.</p> <p>The findings of the Draft EIR Version 1 have been previously presented in Hermanus. This round of public meetings are only to discuss changes made in the Revised Draft EIR. The majority of the changes are relevant to the Thyspunt site. Further as the recommended site in the Revised Draft EIR Version 1 is Thyspunt, the most effort (and thus most meetings around the proposed site) is being invested in the area around the Thyspunt site. Thus, only one meeting each has been scheduled for the Bantamsklip and Duynefontein sites to discuss the key changes to the Draft EIR. The closest suitable venues to the alternative sites have been selected for these meetings to accommodate the parties that are potentially impacted the most.</p>
2	28 May 2011 21:49 Email	Pam Andrews Pam Andrews VentureWeb – Outsourced Marketing Solutions	I have read through your documentation and stand firmly by my objection to the nuclear plant at Thyspunt.	Thank you, your comment is noted.
3	29 April 2011 10:28 Email	J.F. van der Merwe	<p>Good news for No Nuke campaign « Jeffreys Bay News</p> <p>----- Original Message ----- From: Forensic Auditor To: Forensic Audit Sent: Wednesday, April 27, 2011 6:31 PM Subject: Emailing: Good news for No Nuke campaign</p>	<p>Thank you for your comment. The GIBB EIA team is aware of the ruling.</p> <p>Issues relating to wetlands, the chokka industry as well as archaeology of the Thyspunt site have been investigated by recognised, experienced and independent specialists in these fields and their findings</p>

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			<p>« Jeffreys Bay News</p> <p>Jeffreys Bay News Good news for No Nuke campaign</p> <p>A Pretoria regional court's finding that an environmental consultant was guilty of providing incorrect or misleading information to the Department of Environmental Affairs in an Environmental Impact Assessment was a landmark ruling, according to University of Cape Town environmental law expert Jan Glazewski.</p> <p>The faulty assessment led to the halting of construction on the Pan African Parliament buildings in Johannesburg when it was found it jeopardised a wetland.</p> <p>"It is a landmark, I have never heard of anyone brought to book for this type of thing," said Prof Glazewski, a member of the Cape Bar.</p> <p>Prof Glazewski said environmental assessment, a profession only 20 years old in SA, had until recently been poorly regulated.</p> <p>Magistrate EK Patterson found the consultant had shown "wilful disregard of the required standard of conduct" in that he had not appointed a wetland specialist to determine whether there was a wetland on the parliament's building site.</p> <p>The proposed site for a nuclear power station at Thyspunt is also situated on a wetland and is an important archaeological heritage site with ancient fish traps along the coast line.</p> <p>Jeffreys Bay Tourism is planning day trips with a</p>	<p>are described in the Freshwater Ecology, Marine Ecology and Heritage Assessments (respectively Appendices E12, E15 and E20 of the Revised Draft EIR Version 1). These issues are further discussed in Chapters 9 and 10 of the Revised Draft EIR Version 1.</p>

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			<p>qualified guide to explore what is known as the cradle of modern mankind along the stretch of coast from Oyster Bay to Jeffrey's Bay.</p> <p>Elza Van Lingen from the DA welcomed the court's decision and said that the DA supported transparency. "Thyspunt is a sensitive issue and can have a lasting impact on the communities of St. Francis Bay as well as Jeffrey's Bay.</p> <p>Due processes must be followed and experts in wetlands, the chokka industry as well as archaeological experts must have input into the Environmental Impact Studies", said Van Lingen.</p>	
4	29 April 2011 11:23 Email	Byron Andrews Pam Golding Cape St. Francis	<p>Thank you for the update. My comment is as follows:</p> <p>FUKUSHIMA?</p> <p>By now Eskom must have realized that Thyspunt is absolutely the wrong place to try and build a nuclear power station. The site being positioned within 16 km of South Africa's most popular holiday destination. Work out how much revenue comes in from property rates in this area. We definitely won't be paying once we have evacuated the area. In the middle of the Eastern Cape's dairy farming region.</p> <p>Within 16 km of Port Elizabeth's water supply, the Churchill dam. Take into account the distance for powerlines to the far side of Port Elizabeth, crossing the Kromme river, Gamtoos river and the Van Stadens river gorge. Then upgrading all of these bridges to be able to transport the reactor to site.</p> <p>The site, on the wildest stretch of coastline in Southern Africa, on a geographical fault line, in a system of shifting dune sands. So just pump all the sand out to sea to get down to bed rock, below sea</p>	<p>Thank you for your comment.</p> <p>The Fukushima (Japan) incident resulted from a series of natural disasters. The nuclear industry is reviewing the detailed information, as it emerges, of the behaviour of the Fukushima power plants to the natural disasters to determine what further improvements are required. Independent of the nuclear industry, the Regulatory Authorities around the world are evaluating the accident to determine what improvements must be implemented. In South Africa, the National Nuclear Regulator (NNR) regularly tests the Koeberg Nuclear Emergency Plan, the most recent exercise having taken place June 2012. The findings from these tests illustrated that South Africa's nuclear installations are able to withstand all external events considered in the original design. External events include seismic activity, tsunamis, flooding, fire, aircraft crashes, tornados, loss of offsite power as well as station blackouts. There were no findings to warrant curtailing operations or to question</p>

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			<p>level. All this sand pumped into the spawning area of South Africa's chocka fishing grounds. When the nation finds out that their electricity costs will double to pay for this ridiculous venture, the people will take to the streets and the revolution will be bloody, as we witnessed in North Africa.</p>	<p>the design margins of these facilities. The NNR is also examining the Fukushima accident to determine whether improvements to Koeberg and to the Nuclear Emergency Plan are required.</p> <p>Please refer to the beyond design accident report in Appendix E33 for further information on the Fukushima incident. The report further outlines why Generation 3 technology (technology considered for the Nuclear-1 power station) is inherently safer.</p> <p>The Revised Draft EIR Version 1 and its associated specialist studies have considered issues raised during the comment period of the Draft EIR related to:</p> <ul style="list-style-type: none"> • Upgrading of transport infrastructure; • Geological suitability of the site; • Dune geomorphology; • Spoil disposal; and • Marine ecology. <p>The Transport specialist study which has been revised and will be made available for public comment and review acknowledges that the Thyspunt site requires significant transport infrastructure upgrades. The R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed</p>

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				<p>to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp.</p> <p>The report further recommends the following:</p> <ul style="list-style-type: none"> • Overhead bridges – Transport vehicles can make use of the on / off ramps at interchanges to avoid overhead bridges. Temporary ramps or detour routes will need to be constructed should there be no existing on / off ramps. • Under bridges – Propping will be required at most under bridges to ensure stability during the transportation. Strengthening and bracing will be required at the Van Staden’s gorge arch bridge. • Turning intersections / roundabouts – Temporary upgrades will be required at the roundabouts and intersections where turning of the abnormal vehicles is involved. Examples of upgrades are upgrading of bell-mouths, removal of street furniture and road widening. • Overhead cables – Overhead cables will be lifted or temporarily removed along the route should it interfere with the abnormal loads. <p>From a seismic point of view, Thyspunt is the most suitable of all the sites as it has the lowest seismic risk of all the alternative sites. There are two contact zones (<u>not</u> faults) at the Thyspunt site and it is recommended that</p>

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				<p>the foundation of critical structures should not cross these contact zones (e.g. the contact zone between the Goudini and Skurweberg Formations). However, other infrastructure could to be constructed over these contact zones.</p> <p>The importance of the mobile dune field is recognised in the EIR. It is for this reason that the footprint of the power station has been placed well to the south of the mobile dunefield and why the initially proposed Northern Access Road and a proposed conveyor belt across this dunefield have been rejected as alternatives.</p> <p>The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns.</p> <p>Keeping the above in mind, specialists agree that there are no fatal flaws at the Thyspunt site in terms of upgrading of transport infrastructure, geological suitability of the site, dune geomorphology, spoil disposal and marine ecology. However, extensive mitigation measures, which are discussed in Chapter 9 of the Revised Draft EIR, summarised in Chapter 10 and included in the Environmental Management Plan (Appendix F of the Revised Draft EIR), are proposed to mitigate the potential impacts.</p> <p>Lastly electricity tariffs are regulated by the National Electricity Regulator of South Africa (NERSA) who presents the national interest</p>

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				of the South African consumers when it comes to the review of tariffs.
5	29 April 2011 10:16 Email	Sally Andrew & Bowen Boshier	Thanks. All our objections as stated in previous emails still stand with reference to your proposals and report. Please do not proceed.	Your comment is noted.
6	29 April 2011 15:28 Email	Eric Mair African Alternative Technologies – Research and Development Director	<p>You should be ashamed of yourselves! How can a professional organisation such as Arcus GIBB publish things like this:</p> <p>"As far as power generation technologies are concerned, nuclear generation and coal-fired power generation are the only proven base-load technologies."</p> <p>"Renewable energy sources such as solar and wind energy do not provide the guaranteed base-load generation capacity that is required."</p> <p>Here are some facts (http://www.nexteraenergyresources.com/):</p> <p>Solar Thermal technology certainly has the capacity to provide base load power given that it can so easily be co-fired with either biomass or biogas. With modern advances such as gas cooled fresnel collectors (no, you haven't heard of them yet) and thermal storage techniques, these CSP technologies are certainly able to take their place alongside coal and nuclear as baseload providers without any of the risks associated with nuclear power. And they are competitive financially too!</p> <p>AATec will very soon now be piloting a storage technology in South Africa (www.gravitypower.net)</p>	<p>Thank you for your comment.</p> <p>Only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply. In South Africa, coal and nuclear power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power, or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR. However, all technologies are required to meet future energy needs, \ as reflected in the approved IRP2010.</p> <p>Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have</p>

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			<p>which will enable the dispatchability of both wind and solar PV at utility scale, so your statement that nuclear and coal are the only sources of base load power is inaccurate and potentially embarrassing for your company.</p> <p>I also find it sad and extremely worrying that it has been seen fit, in specifying the parameters of this study, to ignore:</p> <p>The environmental impact of the mining, transportation and processing of the fuel required to power this facility.</p> <p>The security which surrounds anything nuclear must, surely, have an impact on our environment? And, inevitably, the problem of nuclear waste. How can this very real problem possibly skate past a conscientious ENVIRONMENTAL impact assessment?</p>	<p>sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation.</p> <p>This application for Environmental Authorisation considers the suitability of the Duynefontein, Bantamsklip and Thyspunt sites in terms of the construction, operation and decommissioning of a nuclear power station and in terms of the listed activities contained within Government Notice numbers R 386 and 387 of 2006. Whilst it does consider cumulative impacts (as per Government Notice R 385) it does not, as a project-specific and activity-specific tool, consider the mining, transportation and processing of fuel for the power stations. These issues will fall under separate applications for authorisations and permits, e.g. the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition to what has been said - the issue of competing technologies and preferred energy mix scenarios in the context of demand side and economic growth trajectories are clearly in the ambit of the IRP. IRP 2010 remains the formal IRP adopted by government. The regulatory</p>

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				<p>regime is as stated and nuclear facilities are in general required to consider a range of "design basis security threats" as part of the design assessment process - however the exact nature of these threats and the preventative or mitigative provisions which may be put in place are for obvious reasons restricted in accordance with a "need to know" principle.</p>
7	29 April 2011 15:47 Email	Eric Mair African Alternative Technologies – Research & Development Director	<p>Please provide me with the reference for your statement</p> <p>"The life-cycle environmental impacts of coal-fired power generation are much greater than nuclear-fuelled power generation."</p> <p>I'm not at all sure you have one though.</p>	<p>Thank you for your comment.</p> <p>The statement is based on published research by Dones <i>et al</i>, which has been included in the Nuclear-1 Revised EIR Reference list (Chapter 11 of the Revised Draft EIR). This is referenced in Section 4.2 of the Revised Draft EIR Version 1.</p> <p>Please note that the statement relates to the life cycle greenhouse gas emissions of nuclear power generation versus other forms of power generation.</p>
8	02 May 2011 13:53 Email	Judith Taylor Earthlife Africa Johannesburg – Branch Co-ordinator	<p>My input here is as follows:</p> <p>1. In the face of the disaster at Fukushima and the recently published figures on the impact (continuing) of Chernobyl, this project should not proceed until the IAEA has substantially revised its requirements around radiation dose exposure and the safety aspects of nuclear power plants.</p>	<p>Thank you for your comment.</p> <p>1. The nuclear industry will definitely learn from this accident and implement further measures for the current and future reactors. The nuclear-1 project is in its feasibility stage and this EIA is part of the preparatory work required for decision making. The project is subject to Government approval before execution can begin.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p>

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			<p>2.If the plant is located at Thyspunt, it will destroy a calamari industry which provides over 20 000 jobs and generates considerable export income. As such a plant is incapable of replacing those jobs, its economic viability is suspect.</p>	<p>In addition to the given response it must be noted that IAEA requirements are informed by an extensive Body of Knowledge and where necessary derived from extensive scientific discourse and expert opinion from a variety of sources a range of complementary scientific publications and international Standards, Requirements and Best Practices which are evolutionary in nature and informed by international experience. It is therefore natural to expect standards to evelove over time -and it is unwise to be absolutist in these matters however any practices at any particular time must be based on the prevailing standards noting that the fundamental safety objective of the IAEA enshrines a common purpose that any designer operator or regulator is ultimately bound by and where necessary and guided by principles such as ALARP additional measures are considered for adoption.</p> <p>2. The Marine Impact Assessment (Appendix E15 of the Revised Draft EIR Version 1) concludes that the disposal of spoil at Thyspunt will have limited impact on the overall chokka squid stock, when considered within the context of the extensive area over which this species spawns.</p> <p>The area predicted to be affected by the release of warm water used for cooling purposes is also less than one percent of the coastal spawning ground of chokka. The Economic Impact Assessment lastly concludes that the negative impact on the fishing industry will be slight.</p>

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			<p>3.Caesium emissions from nuclear power plants are proven and cause cancers in the surrounding communities</p>	<p>3. Please provide a peer reviewed reference for this statement. We cannot assess impacts based on unsubstantiated claims.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Epidemiological studies do indicate a statistical link between high level radiation exposure and the risk of excess "cancers" within a study population. Indeed the ongoing studies of survivors of the second world war Japanese atomic weapons continue to inform the basis of radiation protection risk factors and associated exposure limits based on the assumption of the existence of "the linear no threshold" relationship between exposure and risk. However at low exposures associated with occupational and environmental exposure to sources originating from man-made radioactivity this relationship is unproven and remains the subject of intense scientific debate and in particular no direct causality between specific elements such as caesium or their isotopes has been established. However the Radiation Protection community continues to adopt a conservative approach in assuming the linear no threshold model applies in these situations. There have been a number of epidemiological studies undertaken around various industrial facilities including for example studies undertaken around nuclear fuel reprocessing sites which historically had enhanced Cs discharges and also around non-nuclear facilities and which have in some instances indicated statistical "clusters" of excess "cancers" however in general the results and causality remain inconclusive and</p>

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			<p>4.South Africa and indeed the world has no proven safe means of disposing of radioactive waste.</p>	<p>various theories have been proposed including those relating to the migratory nature of the workforce and genetic interaction with other non-radiological environmental stressors.</p> <p>4. Radioactive waste management practices envisaged for the Nuclear-1 Power Stations are consistent with the IAEA guidelines for a Radioactive Waste Management Programme for nuclear power stations, from generation to disposal, and consistent with the South African National Radioactive Waste Management Policy. They will also have to comply with the requirements of the National Nuclear Regulator. The Nuclear-1 Power Station will minimise production of all solid, liquid and gaseous radioactive waste, both in terms of volume and activity content, as required for new reactor designs. The containers into which the radioactive waste will be placed are consistent with the requirements for the disposal of solid waste at the low and intermediate level radioactive waste disposal facility at Vaalputs. The used nuclear fuel will be stored safely on the Nuclear-1 site under the regulatory control of the National Nuclear Regulator until an authorised facility is available in South Africa. With the implementation of appropriate mitigation measures all potential impacts related to nuclear waste management are expected to be of low significance.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>The proposed arrangements are in line with international best practice. Liquid and</p>

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			<p>5.Regulation in South Africa of such plants is next to non-existent.</p> <p>6.Based on recent incidents at Koeberg and Pelindaba, worker health and safety is ignored and the Health and Safety Act is flaunted.</p>	<p>gaseous effluents will be controlled within defined and regulated limits as per license conditions and as assessed through the plant safety case. The arrangements for solid waste management are also in accordance with international best practice. i.e. either storage and disposal at Vaalputs for low and intermediate wastes or on site wet or dry storage for spent fuel pending provision of a centralised or dispersed long term storage facility are all in accordance with internationally accepted practices. It must be understood that the social discourse on radioactive waste disposal has become largely a socio-political one rather than a rigorous debate on the technical merits of particular options.</p> <p>5. Regulation in South Africa in terms of nuclear power plants fall within the ambit of the National Nuclear Regulator, which exercises strict control over all aspects of nuclear power generation.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>This is not the case - Regulation of nuclear facilities in South Africa is in line with International Best Practice and in some instances are more stringent than those adopted elsewhere.</p> <p>6. Kindly provide more details surrounding the recent incidents at Koeberg referred to in your comment as we are unsure as to which incidents you are referring to.</p>

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			<p>7. The cost of the plant is way beyond South Africa's ability to pay, as it cannot be quoted accurately and the total cost from inception to decommissioning is and has never been defined in any nuclear power plant anywhere in the world.</p> <p>8.The cost of the production of nuclear fuel to the communities and the environment is ignored in the costing of the plant. Africa is increasingly being deprived of water as a result of the pollution of water sources by uranium mining and the communities around these mines are suffering from the effects of continuous low dose radiation. South Africa, with the best environmental law in Africa, should not be using this source of highly dangerous and toxic metal to degrade the lives of her neighbours.</p> <p>9.Base load is a fiction when solar is being extensively used in Europe and China without base load being affected in those countries. Localised plants are more than capable of powering whole towns successfully.</p>	<p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Without details of the specific incidents to which these assertions relate or which specific aspects of the various health and safety legislation it is not possible to comment. However it is also difficult to relate assertions in respect of practices at 2 other sites to the siting of a third.</p> <p>7. The costs of the proposed nuclear power station have been estimated in the Economic Impact Assessment (Appendix E 17 of the Revised Draft EIR Version 1).</p> <p>8. Your comment is noted. However, this application for Environmental Authorisation considers the suitability of the Duynefontein, Bantamsklip and Thyspunt sites in terms of the construction, operation and decommissioning of a nuclear power station and as a project specific tool does not consider the mining and processing of fuel for the power stations. These issues fall under separate applications for authorisations and permits e.g. the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the National Nuclear Regulator Act, 1999 (Act No. 47 of 1999).</p> <p>9. Only a few energy sources capable of providing a sustained power supply are available in sufficient quantities suitable for base-load power supply in SA?. In South</p>

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			<p>10. Nuclear power advocates are lazy thinkers who do not bother to look beyond their out dated technology, because it is all they know and are prepared to handle.</p>	<p>Africa, coal and nuclear power are used for base load electricity generation, while the Open Cycle Gas Turbines (OCGTs) (which use liquid fuel such as diesel), two hydroelectric power stations on the Orange River and pumped storage schemes are used for peaking and emergency electricity generation. At present, renewable forms of energy (e.g. wind and solar), are unable to provide viable large scale base load power , or ease of integration into the existing power network in South Africa due to the intermittent supply and lower load factors of these renewable technologies. See for instance, EPRI (2010) referred to in Chapter 5 of the Revised Draft EIR.</p> <p>Internationally, natural gas and hydro power are also used for base-load electricity supply. However, South Africa does not have sufficient quantities of indigenous natural gas and does not have the large rivers required for base load hydro-electric power stations.</p> <p>In light of the above, coal-fired and nuclear power stations are currently the only feasible options in South Africa for base load electricity generation. We therefore need all generation sources/forms of energy including that of renewable energy and Nuclear to make up the mix of energy sources for electricity generation as required in the approved IRP2010.</p> <p>10 and 11. Your comment is noted. The social impact assessment (Appendix) confirms that there will be a potential loss in employment opportunities after construction. However these employment opportunities will</p>

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			<p>11.South Africa cannot afford more pollution nor to lose more jobs. Sustainable clean energy provides ten times the jobs offered by nuclear power and is, in consequence, the logical route for SA to proceed along.</p> <p>I know that others will come with very similar objections. I strongly recommend that GIBB weighs them up carefully and realises that nuclear power is not an option.</p>	<p>only created due to the construction of the actual Nuclear-1 power plant (as with any large infrastructure project). It should however be noted that nuclear energy is not being developed as an alternative to renewable energy, but that nuclear and renewable technologies need to be developed in parallel. The approved IRP includes 9 600 MW of nuclear power and a range of renewable technologies.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>In addition the government has made it clear that the development of Nuclear Energy in South Africa would form part of an overall "industrialisation" process. Although the details have not yet been promulgated it is clear that the Governments objectives will be as far as reasonably practicable ensure the realisation of it's localisation ambitions with the objectives of increasing jobs not exporting jobs. In this regard it shares the same broad objectives as the renewables programme.</p>
9	03 May 2011 (Forwarded by Ms Bongji Shinga, ACER Africa. Email sent to ACER on 29 April 2011) 15:49 12:06 Email	Tarryn Paquet PhD Candidate University of Stellenbosch	<p>I have heard that the Pearly Beach site is no longer an option for the nuclear reactor project. Please would you confirm this for me as it would have an impact on research that I am currently doing on municipal planning in Overstrand.</p> <p>Please excuse the informal email address, our webmail is down at the moment.</p>	<p>Thank you for your comment. Although the Bantamsklip site is not the preferred site in terms of the findings of the Revised Draft EIR for Nuclear-1, this does not exclude the site for consideration in terms of Nuclear-2 or Nuclear-3.</p> <p>New separate applications would have to be submitted by Eskom for Nuclear-2 and -3 and alternative sites, in addition to the Bantamsklip site, would need to be assessed in terms of the National Environmental Management Act and its associated EIA</p>

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				Regulations. In other words a full EIA process, including Public Participation would need to undertaken.
10	26 April 2011 09:45 29 April 2011 07:14 27 April 2011 07:02 29 April 2011 17:02 24 April 2011 19:10 Email	Geraldine Mouton Coral Grobler Janet Roberts Sabine Bittle Elena Belikova	The "Petition against Eskom's proposed nuclear plant in Thyspunt" form has been submitted from your site on the 4/5/2011 9:45:43 AM I object to Thyspunt being chosen as the location of Nuclear-1 because: 1. The EIA itself acknowledges that Thyspunt would experience environmental impacts of higher significance (particularly biophysical impacts) than the other shortlisted site, Duynefontein. 2. The negative impact on local flora, wetlands, dunes, ocean and tourism during construction and operation and the danger to local communities in the event of a radioactive incident. 3. One of the EIAs main arguments in favour of choosing Thyspunt being that it would be beneficial to the conservation of the area is completely devoid of logic.	Thank you for comment and your input and participation in the Environmental Impact Assessment process. Please see our response to your comments below. 1 - 3. The impact assessment at Thyspunt as a result of the construction and operation of the Nuclear Power Station did indeed identify significant potential impacts (negative and positive) on the flora, dune, wetland, tourism and marine environments amongst others. There are also some impacts of potentially higher significance at Duynefontein, for example the impact on the Atlantis Mobile Dunefield (from a botanical point of view). Please refer to Appendix E32 and E33 for a discussion on radiological impacts and potential beyond design accidents for a nuclear power station. In terms of the radiological assessment it has been found that the background radiation levels due to the operation phase of the Nuclear-1 power station, is well below the international standards for nuclear power stations. The report further states that the likelihood of beyond design conditions occurring is mitigated by the defence in depth principles and enhanced safety features of the generation 3 technology design for the Nuclear-1 power station (as per Appendix E33). Development of the Thyspunt site in terms of

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				<p>the wetlands present will, in the absence of mitigation measures, impact significantly on the wetland system. However, the proposed footprint of the plant is situated to avoid the wetlands. The cumulative impacts of the proposed development of a single Nuclear Power Station at the Thyspunt site without implementation of mitigation measures have been assessed as of high negative significance. However, offset mitigation is possible and would involve conservation of areas that include both the Eastern Valley Bottom wetlands and the Oyster Bay dunefield itself, as far as the impacted area at the upstream boundary of The Links golf estate.</p> <p>Oceanographic impacts related to the construction phase are considered to be of low significance.</p> <p>As a result a number of mitigation measures have been suggested and included in a draft Environmental Management Plan in order to mitigate the impact of the Nuclear Power Station on the Environment.</p> <p>Therefore although it is acknowledged that Thyspunt would experience environmental impacts of high significance especially in terms of the Cultural Landscape, we still maintain that the conservation of the remainder of the site through access control and responsible long-term conservation management are significant positive impacts associated with this site. This has been confirmed by the Botany and Dune Ecology Assessments, which conclude that a key positive impact would be the creation of a</p>

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			<p>4. Why develop a Nuclear Power Station in one of SA's windiest regions, when a wind farm could be easily constructed there instead. A quicker, cheaper option that would give clean, safe, renewable energy.</p>	<p>conservation area for the non-developed portion of the site, thus improving conservation of sensitive habitats. In the event that full mitigation as well as offset measures were implemented, the net impact to wetlands on the Thyspunt site is also likely to be one of positive significance, and a preferable scenario to the "no-go" alternative.</p> <p>4. You are referred to the Integrated Resource Plan 2010 which determined that both nuclear and renewable technology is an important component of South Africa's future energy mix however the levelised cost of renewable technology is higher than that of nuclear.</p> <p>The assessment of nuclear safety risks are outside the scope of the EIA process and will be considered in the National Nuclear Regulator's licensing process. Please refer in this regard to the Co-operative Governance Agreement included in Appendix B4 of the Revised Draft EIR Version 1.</p> <p>As indicated in the EIR and in the above response, nuclear power is not being considered as an alternative to renewable power such as wind power. No single source of power can provide in South Africa's need for an additional 20 000 MW of additional capacity by 2020 and a mixture of sources, including wind power and nuclear power, has been recommended in the approved Integrated Resource Plan 2010.</p>
11	03 May 2011 18:17	Eric Mair Environmental	COMMENTS ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT	Please refer to our response to your submission dated 29 April 2011.

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	Email	Compliance – Manager	<p><i>(Please refer to page numbers where possible)</i></p> <p>The assertion that “As far as power generation technologies are concerned, nuclear generation and coal-fired power generation are the only proven base-load technologies.”</p> <p>“Renewable energy sources such as solar and wind energy do not provide the guaranteed base-load generation capacity that is required.” is entirely in accurate. Renewable technology, particularly in the solar thermal field has advanced now to the point where it is capable of providing dispatchable or baseload power. CSP is also capable of co-firing with natural gas or even biomass for additional back-up to the integrated thermal storage systems.</p> <p>Also, our company is about to construct a power storage demonstration plant which will enable the same dispatchability to wind and PV.</p> <p>It is simply no longer true to say that renewables cannot deliver baseload power.</p> <p>Secondly, I find it sad and extremely worrying that it has been seen fit, in specifying the parameters of this study, to ignore:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The environmental impact of the mining, transportation and processing of the fuel required to power this facility, <input type="checkbox"/> The security operation which surrounds anything nuclear, which must surely have an impact on our environment? <input type="checkbox"/> And, inevitably, the problem of nuclear waste. <p>How can this very real problem possibly skate past a conscientious ENVIRONMENTAL impact assessment</p>	

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			of a nuclear power station?	
12	03 May 2011 20:40 Email	Len Handler Neuro-Radiologist Retd	<p>Picked this up in the weekend edit of the NY Times. It's nothing new and is standard medical dogma and an article of faith for radiologists and radiotherapists. You may well find some ammunition in it.</p> <p>At a public EIA meeting beyond Milnerton on a golf estate I was unable to coax the experts to explain how they would evacuate the citizenry of CPT in the event of an accident at Koeberg.</p> <p>The N7, N1 and N7 are all downwind should a Westerly or N'Wester be blowing.</p>	<p>Thank you for your comments. Site safety issues are considered in the Emergency Response and Site Control Reports (Appendix E26 and E27 of the Revised Draft EIR Version 1) and will also be dealt with in the NNR licensing process.</p> <p>Predominant wind directions have been considered in the emergency plans for the Koeberg Nuclear Power Station.</p> <p>It depends on the wind direction on the day of an accident. The City of Cape Town (CoCT) has an agreement (Memorandum of Agreement) with the West Coast District Municipality and the Cape Winelands District Municipality for the allocation of Mass Care Centre for evacuees. According to the Legislation the onus is on CoCT Disaster Risk Management to evacuate the public in consultation with Eskom.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>Agreed - whilst the responsibility of emergency planning rests with the licence of the facility (i.e. identification of potential accidents and the assessment of potential consequences) - the responsibility for disaster management (i.e. emergency responses outside of the licenced site) lies with the relevant local authority</p>
13	04 May 2011 01:37	Kobus Reichert Gamtkwa Khoisan Council – Heritage	Thank you for the response. Please indicate the names of the author and co- authors of the document next to each individual response to our comments. I	Thank you for you comments. The responses to your submission on the Draft EIR have been prepared by the EIA consultant team in

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	Email	Representative	will also appreciate it if you can indicate if the responses are the official view of Eskom, Arcus Gibb or both.	conjunction with the applicant and the Heritage Specialist, Dr. T Hart.
14	04 May 2011 18:42 Email	Sally Andrew and Bowen Boshier Interested Party	<p>Please see all points raised in our previous emails and add emphasis of the obvious problems illustrated by Japan disasters.</p> <p>Also cost factors need to be realistic taking into account actual costs at all stages, from mining to decommissioning, to millennia of waste and disaster management.</p>	<p>Thank you for your comments.</p> <p>The Fukushima (Japan) incident resulted from a series of natural disasters. The nuclear industry is reviewing the detailed information, as it emerges, of the behaviour of the Fukushima power plants to the natural disasters to determine what further improvements are required. Independent of the nuclear industry, the Regulatory Authorities around the world are evaluating the accident to determine what improvements must be implemented. In South Africa, the National Nuclear Regulator (NNR) regularly tests the Koeberg Nuclear Emergency Plan, the most recent exercise having taken place June 2012. The findings from these tests illustrated that South Africa's nuclear installations are able to withstand all external events considered in the original design. External events include seismic activity, tsunamis, flooding, fire, aircraft crashes, tornados, loss of offsite power as well as station blackouts. There were no findings to warrant curtailing operations or to question the design margins of these facilities. The NNR is also examining the Fukushima accident to determine whether improvements to Koeberg and to the Nuclear Emergency Plan are required.</p> <p>Please refer to the beyond design accident report in Appendix E33 for further information on the Fukushima incident. The report further</p>

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				<p>outlines why Generation 3 technology (technology considered for the Nuclear-1 power station) is inherently safer.</p> <p>Please note that the cost relating to mining and waste and disaster management does not fall within the ambit of this EIA, since this application for Environmental Application deals with the suitability of the Duynefontein, Bantamsklip and Thyspunt sites for the construction, operation and decommissioning of a nuclear power station.</p>
15	05 May 2011 00:47 Email	Trevor Moodley Eskom Koeberg Nuclear Power Station QC Inspector	When do we start building? We cannot discuss forever (starting to sound like our President/government).	Thank you, your comment is noted. In the event that the proposed project is authorised, it is anticipated that the construction of the proposed Nuclear-1 power station could commence from the end of 2017. The commencement of construction depends on various Government and Eskom procurement processes and is therefore uncertain at this point in time.
16	05 May 2011 06:46 Email	Jacques van den Berg Bergen International Chairman / CEO	There are far more advanced energy systems under development; so the risks involved in nuclear plants simply are not worth the trouble.	Thank you, your comment is noted.
17	05 May 2011 06:52 Email	Melissa Saayman Krige Platbos: Africa's Southernmost Forest	Please can you explain why we in the Bantamsklip area are being asked to comment on the Thyspunt Nuclear Plant?	Thank you for your comment. The Bantamsklip site is one of the alternative sites that were considered for the application for Nuclear-1 and as such Interested and Affected Parties in this area are included in the public participation process as legislated by the National Environmental Management Act. It is important to note that the competent authority (DEA) may authorise either one of the feasible site alternatives identified as part of the assessment.

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				Whilst the Thyspunt site has been identified as the preferred site in the Revised Draft EIR Version 1, it does not preclude the Bantamsklip site being included in a separate application for Environmental Authorisation for Nuclear-2 or Nuclear-3.