

5 August 2015



Our Ref: J27035 / J31314
Your Ref: Email received 07 August 2011

Thyspunt Alliance
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Dear Mr Thorpe, Thyspunt Alliance and its members, the St Francis Bay Resident's Association and the St Francis Kromme Trust

RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)

Comment 1:

THYSPUNT ALLIANCE

NUCLEAR 1

APP. H

REVISED ENVIRONMENTAL IMPACT REPORT

PEER REVIEW

Response compiled by H.Thorpe and submitted on behalf of the St Francis Bay Residents' Association, the St Francis Kromme Trust and the Thyspunt Alliance

On the whole, this is a balanced and well-researched review, within the limitations outlined at the outset. A strong point is made regarding the national priority of provision of power both to South Africa and to the Eastern Cape, and the relevance of this in assessing the pros and cons of the Thyspunt site. This is not disputed. However, the use of national interest as a ground for overlooking environmental and regulatory requirements would be setting a dangerous precedent.

There are a number of comments which are relevant to the position adopted by the Thyspunt Alliance and by the specialist's review.

These are the following:

1. Limitations in the review

It is acknowledged in the opening paragraph, under "Terms of Reference", that this is "principally a process review, and is not intended as a means of verifying the scientific accuracy or completeness of the special studies that were prepared for the investigation Specialist reviews have been undertaken for that purpose." It has been confirmed verbally in



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private conversation with the EAP that peer review of specialist reports is not conducted by the Peer review specialist. This leaves the way open for abuse.

One of our objections to the EIA process as conducted is the number of weak specialist reports, notably the Transportation, Noise and Social Impact reports. There has been minimal change to the reports mentioned between the first and revised reports, despite their blatant shortcomings.

Response 1:

Thank you for your comment. Please noted that the Transportation Assessment Report has been extensively revised and that all specialist studies were peer reviewed. From the peer reviews conducted on the specialist studies, it was found that the assessment and associated information provided is adequate and not fatally flawed. Kindly refer to Appendix E37 for all specialist peer review reports.

Comment 2:

2. Fragmentation of the process

There is no discussion of the legality or appropriateness of excluding the NNR from the EIA process, or indeed of the fragmentation of the process into two separate EIAs, one for the plant itself and the other for the transmission lines. All of these are integral to the overall Record of Decision, and the cumulative effect of all three is not addressed. We view this as a shortcoming in the peer review.

Response 2:

Section 1.1 of the Revised Draft EIR contains a discussion of the authorisation process, the process driven by the National Nuclear Regulator (NNR) and the separation between the mandates of the NNR and the Department of Environment Affairs (DEA). Furthermore, the content of the co-operative governance agreement between the NNR and the DEA and a further explanatory letter on this agreement from the DEA is provided in full in Appendix B4 of the Revised Draft EIR.

South African legislation mandates nuclear and radiological safety considerations to the National Nuclear Regulator and environmental considerations to the relevant Environmental Authorities. There is some overlap in responsibilities and hence the NNR and the Environmental Authorities signed this cooperative agreement to govern integration of their respective responsibilities with regard to radiological impacts on the environment. The exclusion of the detailed assessment of nuclear safety aspects from the EIA is thus in keeping with South African legislation, and this co-operative governance. The NNR licensing process, during which nuclear safety aspects will be considered in detail, will be undertaken as it is necessary.

It is common practice in South Africa for the EIAs of power stations and electricity transmission lines to be completed separately. This is a practice accepted by the Department of Environmental Affairs and Tourism. The impacts associated with the Transmission lines have been considered as far as possible

during this EIA process. Whilst it might be ideal to consider the potential impacts of the power station and all three transmission corridors in a single document, this is not practically possible and would result in an unmanageable process and in all likelihood a set of documentation that would make understanding of the key issues impossible. At this stage, the EIR for the power station includes 28 different specialist studies and is a very lengthy document (six volumes). This amount of information is already difficult to manage and digest by the public and quadrupling the volume of this documentation by including all three power line corridors (most of which include a number of different corridors in widely dispersed areas) is not practical. It is in recognition of these facts that the DEA has approved the approach of one EIA process for the nuclear power station site and three separate EIA processes for the transmission power lines.

Comment 3:

3. Viability of the Thyspunt site

A key issue in the process should have been the question of the viability of the site in terms of internationally recognized requirements for emergency planning. This is a matter for the NNR, who have been completely excluded because no licence application has yet been made. It would be reasonable to expect that this omission would be mentioned by the reviewer, since it is such a fundamental issue in the context of a Record of Decision on the suitability of Thyspunt as a nuclear site at all. This has not been forthcoming.

Response 3:

As clearly indicated in the EIR, the emergency planning zones (EPZs) on which the application is based are 800 m for the PAZ and 3 km for the UPZ. However, even if the larger EPZs currently applicable to the Koeberg Nuclear Power Station were to be applied to Nuclear-1, it would still remain viable and would not affect the technical viability of the project. Furthermore, also refer to response 2 above regarding the NNR.

Comment 4:

4. Generation –III & EURs

Relevant in this context is the total dependence of this EIA on the use of Generation III technology, which is still in the developmental stage, and, arising from that, the proposal to reduce emergency planning zones in terms of so-called “EUR”s. Eskom is skating on very thin ice here, since both Eskom and the EAP have acknowledged that, if Generation III is not used, the entire EIA will be null and void, and will have to start from scratch. Government announced some time ago that Generation III was not affordable. There is no discussion as to whether this decision has been reviewed, or whether EURs can be regarded as suitable regulatory requirements.

The EURs are a product of the European Nuclear industry, to suit its own agenda, and has not been recognized, either by the IAEA or by any national nuclear regulator anywhere in the

world. Were South Africa to adopt these “requirements”, which are not even guidelines, let alone regulations, it would be the first country in the world to do so.

Surely this should have been included in the EIA process, and in this review. It should have been resolved before such an expensive process was ever entered into. This EIA has therefore been undertaken at risk. It is issues such as this which cause us to question the legality of proceeding with an EIA when the fundamental issue of the specific technology has not been resolved. In view of the extreme significance of these two considerations, it would be reasonable to expect some discussion of this in terms of the process being followed. There is no mention of it.

Response 4:

Your comment is noted. It is acknowledged that this is a key assumption of the EIA process.

The basis for adopting the EUR by Eskom is that the EUR aims at ensuring that the design that is adopted has minimal impact on the man and environment. This has been developed by utilities who will, in any case, have their design studied and endorsed by the relevant regulatory body. If the final design does not conform to the assertions made, the design will not be accepted and might have to be modified accordingly until it conforms to these requirements. Thus, the key emphasis of this requirement is to minimise the impact on man and environment. Eskom has chosen the EUR as this specification is sound and robust. It also allows for alignment with the international nuclear community. The Emergency Plan boundary allow for minimal restrictions around the site, while also providing for safer designs. The current plants being constructed, AP1000 and EPR, are compliant with the EUR emergency zoning.

However, in all the public participation interventions, Eskom has made it clear that the decision regarding the nuclear emergency plan rests with the National Nuclear Regulator (NNR) –refer to response 2 above. The technology has been decided – nuclear power station, pressurized water reactor technology (reference Nuclear Energy Policy of South Africa). The vendor, and hence the specific design of PWR has not yet been decided

Comment 5:

5. The Nuclear Siting Investigation Programme (NSIP)

According to the reviewer, the EAP did review the NSIP. It would seem to us that she did so in a very selective manner. Our comment is based on Revision 1, ref ACC 1166714, dated December, 1994. In this there are several key points which seem to have been overlooked. These are:

- The incomplete nature of the NSIP. The only criteria which were explored in any detail were the seismic, geology and demographic aspects, which led to the favourable report on Thyspunt. No attention was paid to infra-structural requirements, environmental impacts, emergency planning, costs, etc. These are only being investigated in any depth now in the EIA process.

- There is reference on p. 3 of the NSIP to the 50km demographic requirements from Port Elizabeth, and the 100km requirement from the Ciskei. This is repeated in Box 1 on p. 11 of the peer review, which refers to a 200km requirement from the (then) Ciskei. Whichever is correct, it reflects the security concerns of the then apartheid government. This fell away completely with the constitutional changes which occurred in the mid-nineties. There is a reference in the NSIP to a possible site closer to the Ciskei which, if suitable, could have placed the NPS between Port Elizabeth and East London. The failure by Eskom to investigate this further is inexplicable, and has contributed to the sense of urgency which is now so apparent throughout this EIA process. It would be reasonable to expect some reference to this in the peer review, but it is not mentioned.
- The implication of these limitations is that Eskom has, in fact, no confirmed sites for any NPS. They are all provisional, and based on an incomplete process. Eskom is proceeding as if all five sites have been confirmed as suitable, and are available for development. This is incorrect, and should have been acknowledged in the review.
- Item 3.2.2, p.11 states that “the eastern part of the Oyster Bay area is unsuited to development because of the proximity of several holiday centres”. This led to the recommendation in 3.3.3, p.12, that “the small holiday resorts along the coast be left unaffected”.
It is difficult to see how using the R330 as a main access road for heavy traffic is consistent with this recommendation. Yet this is not discussed in the peer review

Response 5:

Relevance of NSIP planning

Project planning for large construction projects typically includes a pre-feasibility and feasibility assessment prior to detail planning and environmental impact assessment. Considering that the NSIP was focused on initial identification of potential nuclear power station sites, it should be regarded as an initial feasibility or even pre-feasibility study. It therefore stands to reason that not all impacts would have been investigated in detail and that these impacts can only be investigated in the EIA process or in other processes such as the nuclear licensing process. The socio-economic realities have not changed to such an extent since the NSIP was undertaken that the major load centres in the Eastern and Western Cape (Port Elizabeth and the Cape Metropole) have changed, and therefore the location of power station sites in each of these regions (close to the Cape Metropole and close to Port Elizabeth) therefore remains as valid today as it was when the NSIP was undertaken.

Your argument regarding review of the NSIP after the 1994 Constitutional changes is noted. Such an approach would imply that all planning undertaken prior to 1994 should have to be frozen pending review – a situation that is untenable as all planning and delivery processes would necessarily have been in limbo for the time it took to review planning priorities in view of the new political dispensation. In the case of the NSIP, planning would have been delayed by many years, since the NSIP process took in excess of a decade. It can be questioned whether the freezing of all power supply planning for a full review of planning conducted over a period of two decades (and the resultant delay in rolling out of power supply) would be of benefit to South African society. Apartheid era planning did not serve all the people of South Africa, yet planning for the development of a power station does in fact serve the entire population, no matter where it is planned, as it provides for security of supply across the

country, whilst a power station specifically developed in the Eastern Cape helps to balance power supply and demand across the national grid.

Construction traffic on the R330

The Transport Impact Assessment Report has been substantively amended, the study therefore 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 to be surfaced to provide improved east-west connectivity. The Transport Impact Assessment Report will form part of the Revised Draft EIR which will be made available for public review.

Comment 6:

6. Pressure on decision-making authority

The point is well made in section 2.3.3, p. 16 of the report, that the possibility of conflict in RODs between the site EIA and the Transmission-line EIA, could force the authorities to approve the transmission lines by virtue of the approval of the power station. This would be a problem if the authorities are forced to approve the transmission lines in the face of a potentially intolerable impact.

The same argument should be applied to the NNR's process. The NNR will only become involved once a licence application is submitted by Eskom. Should Eskom apply for, and obtain a favourable ROD prior to the licencing application, and prior to a decision on viability and other radiological issues by the NNR, this could place the NNR in the same sort of predicament as is mooted for transmission lines. It is unfortunate that these issues are not addressed at all in the peer review.

Our request would be that no ROD be given until such time as the NNR has decided on a licence application.

Response 6:

Your comment is noted. As is the case with many other development projects, there are a number of different authorisations (estimated in excess of 30 for Nuclear-1) that have to be obtained from a number of authorities with widely differing legal mandates, including national, provincial and local authorities. It is practically not possible for these authorisations to be aligned and for the processes required by the relevant legislation to be run in parallel, or for certain authorisations to be dependent on other authorisations. Each authority has a unique legal mandate and each authorisation process has its own programme.

Comment 7:

7. Final Plan of Study issues (Issue 8, p.7)

The argument that it is reasonable to begin study prior to the release of the Final Plan of Study is accepted. What is not acceptable is that several of the specialist studies were completed and dated prior to release of the POS. This meant that the POS and its requirements were not consulted before submission. This cannot be correct.

Response 7:

Your comment is noted. In many cases, especially with regards to biological studies, seasonality is critical, and the fieldwork for some specialist studies was therefore undertaken in the appropriate season. Thus, although it is preferable to wait for approval of the Plan of Study for EIA before conducting any specialist studies, some of these studies were completed prior to this approval.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'G' or similar character, positioned below the typed name.

The Nuclear-1 EIA Team