

05 August 2015

Our Ref: J27035
Your Ref: Email received 08 August 2011

Tshwane

Lynnwood Corporate Park
Block A, 1st Floor, East Wing
36 Alkantrant Road
Lynnwood 0081
PO Box 35007
Menlo Park 0102

Tel: +27 12 348 5880
Fax: +27 12 348 5878
Web: www.gibb.co.za

Dear Jimimah Birch

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

Comment 1:

COMMENT ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT

I am writing in response to the revised draft environmental report for the proposed Nuclear 1 Power station:

There are a few things that have not been clearly thought through. Please add the following concerns to your records:

1. Alternatives to nuclear:

There are many ways to generate energy that will not be as costly as the proposed nuclear station. I don't believe this country can afford another station on various levels.

2. Construction:

Financially construction will impact negatively on the entire country's economy and the country will be disadvantaged by this expense.

Response 1:

Your comments are noted. There are indeed many technologies which could be employed to generate energy as you have stated. The choice of technologies and the weighting to be given to each in terms of addressing South Africa's energy requirements however does not fall within the ambit of this Environmental Impact Assessment (EIA) to address. It falls within the ambit of strategic government initiatives such as the Integrated Resources Plan 2010.

This EIA and Application for Environmental Authorisation is therefore not a strategic assessment of the energy requirements of South Africa and the future energy mix proposed to address these requirements or an investigation into the pros and cons of the use of Nuclear Power versus Renewable/Alternative Energy or indeed a site selection process. It is a tool used to assess the possible positive or negative impact which the proposed project may have on a specific receiving

environment, which in this case are the Duynfontein, Bantamsklip and Thyspunt sites. Despite the site specific nature of the EIA process the Economic Report (Appendix E17 of the Revised Draft EIR Version 1 – Section 3.3) prepared by Conningarth Economists and Imani Development (SA) (Pty) Ltd nevertheless conducts a macroeconomic equilibrium analysis in order to quantify the macroeconomic impact associated with the possible construction and operation of the Nuclear-1 Power Station.

The report acknowledges that as the nuclear power station is such a large capital investment (equivalent to that of six times the capital investment in Gautrain) the economic ripple effects will go far beyond its direct boundaries.

We refer the author to section 3.3 of the report for an expanded discussion.

Comment 2:

Accidents:

Should there be an accident (even a small one) how will clean up be paid for. How will the country afford the medical costs, which are likely to be chronic rather than once-off? How will an accident of any nature impact the economy of local communities?

Response 2:

Eskom as the owner of the Power station is a contributor to the Nuclear Liability fund estimated at 3 Billion to date. The costs of the economic impacts of a nuclear power station incident are determined by the NNR Act. Section 29 of the National Nuclear Regulatory Act, 1999 requires Eskom to make financial provision for insurance purposes. Any shortfall will be covered by the government.

Comment 3:

3. Waste:

The plan doesn't consider the cost of waste disposal effectively. To date there has been no solution to high level waste disposal at Koeberg and now there are plans to generate more. Mounting nuclear waste is a very real concern. We cannot leave it to become the problem of the next generation. The planners need to have a cradle to grave proposal and the costs there off have to be factored into the entire package.

Response 3:

Thank you. Your comments are noted. It is acknowledged that the issues of radioactive waste management is important and integral to debate surrounding nuclear energy and as stated the only alternative currently available in South Africa is long-term storage of the spent fuel in the nuclear power station.. However please note that a radioactive Waste Management Institute is in the process of being established. One of the functions of this institute will be to identify a repository for high level waste in South Africa.

Comment 4:

4. Alternative energy sources:

The comparisons with alternative energy sources not adequate.

Response 4:

Please see our Response 1.

Comment 5:

5. Detailed design:

Detail lacking making projections speculative at best.

Response 5:

Your comments are noted. We assume that you are referring to detail in terms of the reactor type/manufacturer to be used as you have not defined the lack of detail in your statement above.

It is common practice in EIA processes, especially for installation of industrial plants, to consider the performance of the systems and type of technology proposed to be installed, without referring to specific suppliers or manufacturers of this technology, of which there may be a range available in the market. As long as the inputs and outputs of the proposed technology are known and the environmental impacts can be predicted or deduced from these inputs and outputs with reasonable certainty, it is not necessary to know the brand name of the technology.

As has been done in other issues and response reports, it may be appropriate to explain the envelope of criteria in colloquial terms, as has been done in public meetings during the Nuclear-1 EIA process. If the envelope of criteria is compared to the specifications for buying a vehicle, this envelope may contain requirements with respect to top speed, fuel type, fuel efficiency, catalytic convertor performance, type of tyres and wheels, fuel tank size, effective range, CO2 emission limits, cruise control, numbers and positions of airbags and a number of other safety systems such as ABS and EBD. The only thing that isn't specified is the brand of vehicle. Providing such a list of criteria would ensure that only a luxury vehicle with certain characteristics could qualify, but that a base model (entry-level vehicle) would not qualify. Similarly, if a vendor proposes a power station design that fails to comply with the criteria established in the Consistent Dataset, that design will not qualify for consideration.

Assuming that an authorisation is granted by the DEA, a power station design that deviates significantly from that specified in the Consistent Dataset in the Nuclear-1 EIR (Appendix C of the EIR) would render the design incapable of meeting the requirements of the EIR and the authorisation. Hence such a non-confirming design could not be considered for construction.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'E' or 'S' followed by a horizontal line.

The Nuclear-1 EIA Team