



# PRESENTATION ON KOEBERG LONG-TERM OPERATION

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**DATE: 17 FEBRUARY 2024**

**VENUE: BELTHORN COMMUNITY CENTRE**

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[www.90by2030.org.za](http://www.90by2030.org.za)

# WHO IS PROJECT 90 BY 2030?

**Project 90 by 2030 is a social and environmental justice organisation inspiring and mobilising South African society towards a sustainably developed and equitable low-carbon future by means of a [Just Energy Transition](#).**

**We were established in 2007, a time in South Africa when the impacts of climate change were first becoming evident.**

**We are a change-focused organisation aiming to inspire and bring about significant, positive change in the way we engage with earth systems and each other.**



We work with **stakeholders** and **decision makers** to identify **policies** and actions that support climate justice; with a specific focus on developing **environmental leadership** in our youth, and increasing people's ability to engage government – through active public participation – to address climate change, energy poverty, and the social injustices that intersect in their **communities**.



**YOUTH  
DEVELOPMENT**



**COMMUNITY  
CAPACITY BUILDING**



**POLICY  
ENGAGEMENT**



# OUR MAIN POINTS ON WHY WE ARE AGAINST THE LTO OF KOEBERG NUCLEAR POWER STATION



# TRANSPARENCY



# TRANSPARENCY

- **We believe the first comment period as well as this one is not valid as it has not sought a meaningful and fully informed public participation process. With many youth and older community members not only within the 16km radius, but across the broader City either not being aware of the LTO submission period or public hearings.**
- **There are those who were aware of the processes, but have not been able to engage the process because of lack of understanding or access to relevant documentation to make a fully informed decision.**
- **An example of lack of transparency is seen through the heavily redacted safety case. Only recently, following PAIA by civil society organisations, been unredacted.**



# TRANSPARENCY

Additionally, we are still asking for information to be released.

**SIX DOCUMENTS THAT  
PROJECT 90 BY 2030 HAVE  
REQUESTED WITH NO LUCK**

## Six Documents and their reference numbers:

	<b>DOCUMENT NAME</b>	<b>REFERENCE NUMBER</b>
1	Koeberg Solid Radioactive Waste Management Plans	240-113228853
2	Radioactive Waste Management Plan – KNPS Steam Generator Disposal	240-155036632
3	Koeberg Seismic Re-Evaluation Strategy	240-160677773
4	Elastomeric aseismic bearings – Current position and the way forward	331-645
5	Overview of the ageing management programme for the aseismic bearings	331-675
6	Long-Term Repair Strategies for the Containment Buildings – Expert Panel Report	JN465-NSE-ESKB-R-5704



# TRANSPARENCY

## Looking at The Safety Case

The image displays a grid of 24 numbered thumbnails, each representing a page from a safety case document. The thumbnails are arranged in three rows and eight columns. The first row contains thumbnails 225 through 232. The second row contains thumbnails 233 through 240. The third row contains thumbnails 241 through 248. The thumbnails show various content including text, tables, and diagrams. The numbers 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, and 248 are centered below each thumbnail.





## Looking at The Safety Case

### Condition of the FSFs (9.4.5.4)

The PSR plant design review found the current status of plant safety to be considered sufficient for safe operation and LTO, [REDACTED]  
[REDACTED] (Pg.95)



## Looking at The Safety Case

UNREDACTED

### Condition of the FSFs (9.4.5.4)

The PSR plant design review found the current status of plant safety to be considered sufficient for safe operation and LTO, provided the safety improvements identified in Appendix A are implemented. (Pg.95)

Appendix A is 19 pages long.



## Looking at The Safety Case

### Safety Analyses (9.4.6.2)

The objective of the ESEP is to demonstrate seismic margin through a review of a [REDACTED] [REDACTED] justified, scope of equipment that can be relied on for the safe shutdown of the plant following a significant seismic event without affecting regulatory safety criteria. (Pg.99)



# TRANSPARENCY

## Looking at The Safety Case

UNREDACTED

### Safety Analyses (9.4.6.2)

The objective of the ESEP is to demonstrate seismic margin through a review of a **limited, but** justified, scope of equipment that can be relied on for the safe shutdown of the plant following a significant seismic event without affecting regulatory safety criteria. (Pg.99)



# TRANSPARENCY

## Looking at The Safety Case

Radiation Dose to the Public and the Environment (Normal Operations) (9.6.2.4)

ERICA software was developed to assist the user in formulating the problem [REDACTED] performing an impact assessment, evaluating data. (Pg.143)



# TRANSPARENCY

## Looking at The Safety Case

UNREDACTED

Radiation Dose to the Public and the Environment (Normal Operations) (9.6.2.4)

ERICA software was developed to assist the user in formulating the problem (involving stakeholders if appropriate), performing an impact assessment, evaluating data. (Pg.143)



# TRANSPARENCY

## Looking at The Safety Case

### Plant Design Provisions for Environment Protection (9.7.4.2)

The storage tanks allow the short half-life radioactive gases to decay [REDACTED], leaving only relatively small quantities of long half-life radionuclides released into the atmosphere. (Pg.165)



# TRANSPARENCY

## Looking at The Safety Case

UNREDACTED

### Plant Design Provisions for Environment Protection (9.7.4.2)

The storage tanks allow the short half-life radioactive gases to decay **if time allows**, leaving only relatively small quantities of long half-life radionuclides released into the atmosphere. (Pg.165)





## Looking at The Safety Case

### Why it is Safe to Continue Operation (Overall Assessment for Additional 20 Years) (10.0)

The PSR confirmed that the overall safety of the plant was adequate and that the level of safety would be maintained and/or improved with the implementation of the identified safety improvements. It also confirmed that the plant would be suitable for continued operations, [REDACTED] (Pg.184)

It is safe to continue operations, since it has been demonstrated that nuclear safety at the facility will be maintained in accordance with regulatory requirements and international good practices for the intended period of LTO, [REDACTED] (Pg.186)



## Looking at The Safety Case

UNREDACTED

**Why it is Safe to Continue Operation (Overall Assessment for Additional 20 Years) (10.0)**

**The PSR confirmed that the overall safety of the plant was adequate and that the level of safety would be maintained and/or improved with the implementation of the identified safety improvements. It also confirmed that the plant would be suitable for continued operations, provided that the safety improvements were to be implemented. (Pg.184)**

**It is safe to continue operations, since it has been demonstrated that nuclear safety at the facility will be maintained in accordance with regulatory requirements and international good practices for the intended period of LTO, provided that there is timely implementation of the safety improvements contained in the LTO IIP. (Pg.186)**



# TRANSPARENCY

## Looking at The Safety Case

### Conclusions (15.0)

Therefore, it has been demonstrated that nuclear safety at the facility will be maintained in accordance with regulatory requirements and international good practices for the intended period of LTO



# TRANSPARENCY

## Looking at The Safety Case

UNREDACTED

### Conclusions (15.0)

Therefore, it has been demonstrated that nuclear safety at the facility will be maintained in accordance with regulatory requirements and international good practices for the intended period of LTO with timely implementation of the safety improvements contained in the LTO IIP.



# THE EXTENSION



# THE EXTENSION

- We cannot ignore the issue of waste from this conversation as this extension would result in adding 20 years of additional waste.
- Currently low-level nuclear waste is being kept in Vaalputs in the Northern Cape, originally created without public consultation.
- We see that much like the responsibility to do consultation, that once the waste leaves Koeberg, Eskom does not take responsibility for it.
- Koeberg produces approx 32 tons of high level waste each year. 1 280 tons to date with more to come!



# THE EXTENSION

- It also appears that in addition to negating the safety of current generations by not shutting down the plant because of the identified concerns in recent unredacted safety case, that youth and future generations will be left to deal with the radioactive waste fallout in the future.
- It feels like a betrayal as you would get all the electricity from this - if it works - and we get the long term issue of handling the waste.



# THE EXTENSION

- **The extension is also not the least cost option. Eskom has claimed since 2010 that the life extension will cost approximately R20 Billion. This cost not being updated for inflation based cost of today, meaning it will cost more, at least three times that. The high cost element being identified in reports from the Presidential Climate Commission.**
- **The extension puts out this idea of mass economic growth as it relates to job creation, whereas the decommission will take several years. The myth of immediate termination of jobs is concerning, as well as the idea of mass job creation within the nuclear field. Whereas it is estimated that approximately 1 million climate jobs can be created in the first phase alone of a Just Energy Transition to renewables.**
- **In modeling done by the Council for Scientific and Industrial Research (CSIR) we see an energy plan without nuclear that works. It is simply not true that Koeberg is needed to “stabilise the grid”.**





# THE EXTENSION

Is this public participation process one that will be taken into consideration?

If so, why is Eskom acting as though the license has already been approved?

Long Term Operation

Countdown to License Extension (21 July 2024)



[www.eskom.co.za/eskom-divisions/gx/nuclear/](http://www.eskom.co.za/eskom-divisions/gx/nuclear/)

The next 20 years hold the promise of even greater achievements as we continue to operate in a manner that aligns with our core values. Our commitment to safety remains unshaken, and we are determined to continue operating Koeberg with the highest levels of integrity, diligence, and excellence.

Regards,  
*Velaphi*

[www.eskom.co.za/wp-content/uploads/2024/01/2024\\_-Koeberg\\_EP\\_Calendar.pdf](http://www.eskom.co.za/wp-content/uploads/2024/01/2024_-Koeberg_EP_Calendar.pdf)



# SAFETY



1. Without effective management of the LTO programme the plant will not be able to timely implement all activities to demonstrate **preparedness for safe LTO**
2. Without an adequately updated SAR for LTO and ageing management, the plant cannot ensure a complete **safety documentation for LTO**.
3. With incomplete or inconsistent scope setting of SSCs, ageing management and safety function of some SSCs important to **safety could be compromised**.
4. Without comprehensive revision and implementation of the plant programmes, **safety function** of SSCs in scope of plant programmes **cannot be ensured**.
5. Without consistent management and documentation of information, the ageing management review of mechanical SSCs cannot identify in a consistent manner ageing effects that **can challenge safety functions** for LTO.
6. Without complete AMPs for mechanical SSCs, the plant **cannot ensure preserving the safety** function of SSCs for LTO.
7. Without implementing a comprehensive ageing management programme, **safety function of safety related cables** cannot be demonstrated.
8. Without a complete revalidation of environmental qualification of the relevant components, their ability to perform **safety functions cannot be demonstrated** for LTO.
9. Without a complete assessment of electromagnetic compatibility, the **safety function** of electrical components with regard to EMC cannot be demonstrated.
10. Without a complete revalidation of environmental qualification of cables, the ability to perform their **safety functions cannot be demonstrated**.
11. Without a proactive technological obsolescence management, the plant risks **unavailability of SSCs important to safety**.
12. Without comprehensive revalidation of the TLAAs, the plant cannot demonstrate maintenance of the **safety function of concrete structures**.
13. Without a fully functional containment monitoring system, not all necessary data for the containment structure will be available to demonstrate the **intended safety function** during LTO.
14. Without complete implementation of ageing management programmes for civil SSCs, preservation of **safety functions cannot be ensured**.

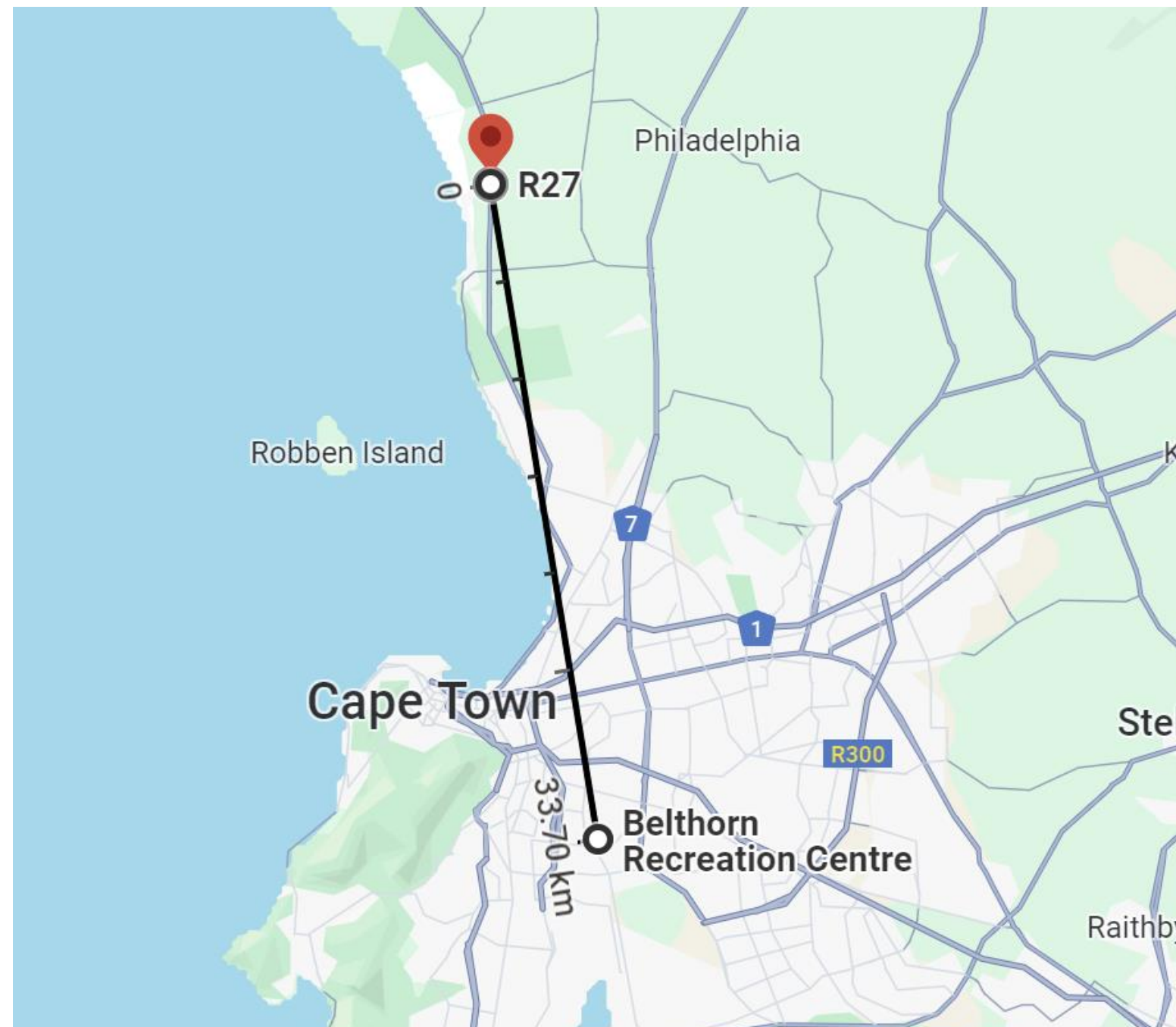
- **The Safety Case:**
  - **As mentioned before a report highlights 14 concerns identified by the IAEA in 2022. Eskom has yet to set out practical and long term solutions to fix all these problems.**
  - **The plans need to take into account the existing wear and tear of the 40 year old build. This should be considered and addressed before the extension is even considered.**



- **Health of people:**
  - We would like to highlight the health issues of those who have worked at Koeberg Power Station, and surrounding areas. The lack of medical records and review is not proof of a clean bill of health.
- **Safe and clean water supplies:**
  - Cape Town is a water scarce city that has in the past experience the “day zero” drought.
  - The long-term operation extension will require mass amounts of water. In a changing climate we cannot risk the misuse of this scare resource.
  - The runoff of nuclear waste affecting our aquifers



# SAFETY



*approximately 33.70km from Koeberg Nuclear Station to here (Belthorn Community Centre)*

- **Evacuation Plan:**
  - **Lack of a transparent and accessible evacuation plan - leaving communities unsure of what to do during the case of an emergency.**
  - **If something were to happen right now, those within the 16km zone will be evacuated, leaving us to figure our own way out of a bottle neck exit to the city.**



# SAFETY

- What to do with the people:
  - In the case of the evacuation hundreds of thousands of people will be forced to leave their homes for an unidentified amount of time.
  - With the small process of government relief, the reality is people will be left to fend for themselves in shelters to the harms of:
    - Violence (notably increase in Gender-based violence)
    - Crime
    - Assault
    - and more.
  - We see that post Durban floods many people are still displaced and have yet to be relocated. Where do you relocate people to after a nuclear exploitation has left their homes unlivable for 100's of years.



*Community members in Durban following 2022 floods, still in shelters for months after disaster occurred.*

All of these are not taken into consideration



🕒 07 May 2022


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# 'I will fire you' - Gwede Mantashe promises those who do not support nuclear programmes

Jason Felix

**news24**

 Comments

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Gwede Mantashe, Minister of Mineral Resources and Energy.

**This is the single most important decision that you, the National Nuclear Regulator will have to make as an independent body.**

**Both the youth and current community leaders look to you with hope, entrusting you with the responsibility you have taken on; and we hope you will make the right choice.**

**Your decision holds the power to shape the dreams and aspirations of generations to come, and ensure that whatever those dreams and aspirations are, that they will emerge with a foundation of transparency, good governance, and safety.**

**Please make the right decision.**





# THANK YOU

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