

Faith Leaders call for No More Nuclear Energy

As South Africa faces another push for nuclear energy when the country is in crisis from the Covid-19 pandemic, faith communities call for no more nuclear energy.

We want the government to invest in ethical, equitable and sustainable energy plans that promote wellbeing for current and future generations and which safeguard all life on our beautiful land.

Millions face the reality of hunger, poverty, unemployment and energy blackouts as our sub-continent staggers under the Covid-19 pandemic. The risks and uncertainties of climate change looms, posing even greater long term threats to human and planetary wellbeing.

As we focus on the Covid-19 crisis, another costly drama is unfolding. With grave concern, we shine a light on the South African government's renewed expression of interest in investing in nuclear energy.

When will we ever learn:

- Fourteen years of research and billions of Rands were wasted on small nuclear energy systems known as the Pebble Bed Modular Reactor. This grandiose and expensive nuclear project involving unproven and unsafe technology was abandoned in 2010.
- A secretive trillion Rand nuclear deal between Russia and South Africa was stopped in its tracks at the eleventh hour by a court order in 2017.
- While facing a crippling burden of debt, power outages and preoccupied with human suffering, nuclear power has stealthily been slipped back into the South African energy mix in 2020.
- Renewable energy is cheaper, cleaner, safer, climate smarter, quicker to construct and has greater job creation opportunities than any new fossil fuel or nuclear project. What is holding this energy transformation back?

As members of faith communities and with support from civil society partners, it is our moral obligation to advocate for an urgent transition to renewable energy generation. We call on the Department of Mineral Resources and Energy, our Government and business, to abandon the dream of rolling out high-tech nuclear power to South Africa and the African Continent.

This is a window of opportunity to be courageous and innovative as we move into a new renewable era that will benefit the health and wellbeing of current and future generations and safeguard our beautiful land.

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Nuclear power

Is not climate resilient: In the process of mining uranium, the transport and enrichment of fuel, waste disposal and the massive use of concrete in construction, enormous amounts of CO₂, a climate changing greenhouse gas (GHG), is released.

Renewable energy plants have a minimal energy footprint and once constructed, emit no GHGs.¹

Is not cheap: New nuclear construction costs are always underestimated and budgets have ballooned wherever new plants are built.² Adding to our current debt burden, ordinary South Africans will have to pay for the new 2500MW of nuclear power through taxes and escalating electricity tariffs. Massive end of life decommissioning costs are an under budgeted expense and hidden legacy left to future generations. Nuclear energy prices are also likely to escalate as more stringent pollution and environmental protection regulations come into force.³ Renewable prices continue to fall and delivery costs of energy from solar and wind are now below fossil fuel or nuclear generated energy. Because renewables leave no radioactive waste decommissioning is not a concern.

Is not competitive: Since 1996, the supply of nuclear power to meet global energy needs has declined, having been overtaken by solar and wind energy which is now far less costly.⁴ The external costs of nuclear energy can never be reliably estimated. It is impossible to predict the hidden costs of security, foreign

¹ Creamer, T.

https://www.engineeringnews.co.za/article/clean-energy-should-be-at-core-of-covid-19-stimulus-plans-quterres-2020-07-09/rep_id:4136

² Eberhard A. and Lovins, A.

<https://www.dailymaverick.co.za/article/2018-01-30-south-africas-electricity-choice-part-1-why-ramaphosa-must-kill-the-nuclear-dream/#gsc.tab=0>

³ Knoesen, D. and Petrik, L.

<https://www.dailymaverick.co.za/article/2020-07-13-nuclear-by-stealth-new-generation-reactor-development-plans-snuck-back-onto-the-table/#gsc.tab=0>

⁴ Ali, U. September 2019.

<https://www.power-technology.com/news/nuclear-energy-report-wnisr/#:~:text=Nuclear%20energy's%20share%20of%20the,1996%20to%2010.15%25%20in%202018%20.&text=The%20WNISR%20notes%20that%20ten,renewables%20than%20with%20fission%20energy.>

expertise, safety precautions, accidents, waste disposal and decommissioning. Since 2011, solar PV prices have fallen by 90% and wind energy by 50%.^{5 6}

Is not quick to build and deliver: Nuclear power plants take in excess of ten years to construct. Projects are routinely subject to time (and cost) overruns. Renewable energy plants can be up and running within 18 months.

Is not able to solve our immediate energy needs: Nuclear energy will not supply our current energy needs nor solve today's crippling load shedding blackouts. If South Africa agreed to the construction of a new nuclear project this year, no new electricity would come online before mid-2030. Renewable energy can be added incrementally to the grid as each unit comes on stream. Local needs can be met without investment in massive infrastructure. Independent Power Producers would carry the development costs and not burden the State.

Is not safe: The use of radioactive materials can never be entirely safe. We know from history that even under the most stringent conditions, accidents happen, whether due to natural disasters, technical failure or human error. (Three Mile Island, USA 1979, Chernobyl, Ukraine in 1986 and Fukushima, Japan 2011). Spent fuel and high level radioactive waste from nuclear plants require secure, very long-term storage, in some instances up to a quarter of a million years. South Africa currently disposes of low and medium level waste at *Vaalputs* in the Northern Cape. The country has no deep geological storage or reprocessing plans and high level waste is stored in tanks on site at Koeberg, the existing power station, 35 km north of Cape Town.⁸ We leave this dangerous inheritance to future generations living in a large metropolitan area and in an area of exquisite natural beauty. Emergency evacuation plans for adjacent communities have never been explicit.

There is no waste from renewable energy which is 'fuelled' by sun and wind. Land and buildings surrounding renewable power plants are safe.

⁵ Eberhard

A. <https://www.dailymaverick.co.za/article/2020-06-17-new-coal-and-nuclear-power-proposals-undermine-prospects-of-a-post-covid-19-economic-recovery/#gsc.tab=0>

⁶ Creamer, T.

https://www.engineeringnews.co.za/article/clean-energy-should-be-at-core-of-covid-19-stimulus-plans-quterres-2020-07-09/rep_id:4136

⁷ Knoesen D and Petrik, L.

<https://www.dailymaverick.co.za/article/2020-07-13-nuclear-by-stealth-new-generation-reactor-development-plans-snuck-back-onto-the-table/#gsc.tab=0>

⁸ Roelf, W. November

2019 <https://www.reuters.com/article/us-safrica-eskom-nuclearfuel/waste-storage-at-af-ricas-only-nuclear-plant-brimming-idUSKBN1XZOMI>

Is not job creating: Nuclear technology is centralised, requires a small, highly skilled work force and is often dependent on foreign expertise and equipment. Renewable energy offers massive decentralised job opportunities which are safer and healthier than work in the coal and nuclear industry.⁹ New research suggests that an ambitious renewables programme will rapidly create about 10,000 direct jobs in construction and operations. This would grow to 50,000 sustainable jobs by 2030.¹⁰

Is not transparent or democratic: Nuclear energy is an issue of national security. It requires high levels of secrecy because the technology uses radioactive materials, is associated with the military and is open to sabotage. Corruption thrives when there is a lack of transparency. Given our country's history of wasteful spending on nuclear projects and allegations of corruption, particularly during the Zuma years, civil society has good reason to be suspicious of the Government's new nuclear aspirations. The re-emergence of interest in nuclear power in South Africa during the Covid crisis reinforces a concern that secret deals are being brokered behind closed doors.¹¹ South Africa has an abundance of sun and wind. The country's Renewable Energy Independent Power Procurement Programme (REIPPP) has been applauded for successfully attracting foreign investment,¹² yet the rollout of renewable energy projects in South Africa is being blocked and potential investors discouraged¹³ because of vested interests in the coal and nuclear sectors.

Is not decoupled from Eskom: The level of trust in Eskom is at an all-time low. South Africans are tired of load-shedding and annoyed that tax revenue continues to be diverted from essential services to bailout dysfunctional state owned enterprises. What reassurance do we have that a new state-owned nuclear project will be any different?

⁹ Bischof-Niemz, T.

https://m.engineeringnews.co.za/article/opinion-are-there-really-more-jobs-in-coal-than-in-renewables-2019-02-12/rep_id:4433

¹⁰ Steyn, G.

<https://www.businesslive.co.za/bd/opinion/2020-07-16-grov-steyn-the-path-to-clean-energy-opens-and-it-comes-at-no-extra-expense/>

¹¹ Knoesen D and Petrik, L.

<https://www.dailymaverick.co.za/article/2020-07-13-nuclear-by-stealth-new-generation-reactor-development-plans-snuck-back-onto-the-table/#gsc.tab=0>

¹² Govender, N.

<https://www.businesslive.co.za/bd/opinion/2020-07-15-the-move-to-renewable-energy-must-be-swift-but-inclusive/>

¹³ Eberhard

A. <https://www.dailymaverick.co.za/article/2020-06-17-new-coal-and-nuclear-power-proposals-undermine-prospects-of-a-post-covid-19-economic-recovery/#gsc.tab=0>

Demand for energy from Eskom is diminishing as many mines, businesses, municipalities and home-owners seek to generate their own more reliable, cheaper and less polluting renewable energy.¹⁴

Is not equitable: New investment in massive, centralised and expensive state owned nuclear infrastructure will result in escalating energy prices. Electricity will become even less affordable for a growing number of citizens who are already deprived of basic services and burdened by poverty and debt. Decentralised renewable energy projects and smart grids will bring power, skills and jobs to rural and marginalised communities.

Is not ethical: Leaving a legacy of hazardous waste and debt to future generations is not ethical. Knowing what we now know about climate change and environmental degradation, we have a moral responsibility to 'do the right thing'. In our decision making, human and planetary wellbeing must be prioritised over vested financial interests. This is a matter of justice and equity.

Energy is essential for human development and involves us all, from industry, mining, agriculture and transport to heating and cooking in our homes. As we seek to bring about a more just society, we call on faith communities to join us in taking a stand against clandestine plans and lead the call for the urgent and rapid rollout of renewable energy.

¹⁴ Knoesen D and Petrik, L.

<https://www.dailymaverick.co.za/article/2020-07-13-nuclear-by-stealth-new-generation-reactor-development-plans-snuck-back-onto-the-table/#gsc.tab=0>