

SA can be top nuclear technology exporter

Speaking at the Mining Indaba in Cape Town, Dr Kelvin Kemm, chairman of Stratek Global, announced that South Africa has the potential to become an exporter of nuclear reactors. The country was an early pioneer in developing a commercial small modular reactor (SMR), and it is now a world leader in SMR development, ready to construct the prototype immediately. This initiative is entirely privately funded.



Mining Indaba 2024 had a focus on energy and less on mineral extraction.

The South African reactor, the HTMR-100, has been designed specifically for deployment in remote areas. It does not require a large body of water for cooling, as it uses helium gas, a design decision made with the versatility needs of African countries in mind.

These reactors are affordable and can be owned by governments, provinces, municipalities, and private companies, including mining companies.



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Lindsey Schutters 7 Feb 2024



Over the past year, the local reactor has attracted significant international interest. Kemm revealed that Stratek - which has its roots in SA's pebble bed modular reactor programme - is in advanced discussions with several foreign funders to raise R10bn privately. Foundation agreements have already been signed with multiple companies.

He urged both private enterprise and government to show real leadership and support the venture, explaining that many business and government leaders publicly advocate for advancing the country's electricity supply, but then wait for others to take meaningful action.

Africa pursuing nuclear

Kemm disclosed that a dozen African countries have formally notified the International Atomic Energy Agency (IAEA) of their intention to pursue a nuclear future. He also debunked the myth that nuclear power is only for large, wealthy countries, stating that any African country can afford and operate an SMR.

There was also an emphasis on the increasing trend of foreign countries recruiting South African nuclear professionals. For instance, 160 South Africans are currently working on the new Barakah nuclear plant in the UAE, and entire teams of nuclear engineers in the US are South African.

“If South African leaders do not show leadership now, the country risks losing more of its people and a fantastic opportunity to become exporters of nuclear reactors,” he said.

South Africa's export of the locally developed HTMR-100 does not preclude the construction of large nuclear reactors in collaboration with foreign suppliers. An SMR produces 35MW of electricity, compared to about 1,400MW produced by a large reactor, such as those at Koeberg.

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