

## **S.A. Government holds firm on nuclear power**

*Good news.*

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The South African government remains committed to developing the Pebble Bed Modular Reactor (PBMR), the Public Enterprises Department said.

Although under fire in the press, the government believed the nuclear power plant would prove a safe, cost-competitive solution to fast-growing local, regional and global energy requirements.

The PBMR design was based on a German power plant that ran for 21-years and could "therefore hardly be termed experimental"

Nuclear power was enjoying a resurgence in popularity because it was cost-competitive and the only power source capable of delivering clean energy economically and in large volumes. The government therefore believed it would have the right technology at the right time. 56 000 jobs would be created

The department said the world market for new power stations was \$100-billion a year.

"A three percent share of this market, which the government believes is achievable, would make this project highly profitable and create almost 56 000 jobs locally.

"The potential rewards from this project are so great that they far outweigh the risks of failure, as some critics would like to believe," it said.

Pebble-bed reactor technology uses spheres or pebbles of coated uranium dioxide encased in graphite. When fully loaded, the reactor holds about 452,000 fuel spheres each of which is 60cm in diameter.

The nuclear reaction that takes place in the reactor is cooled by helium gas, which enters the top of a vessel at approximately 500 degree Centigrade, flows down between the spheres and leaves the bottom of the vessel having been heated to 900 degrees Centigrade.

This heated gas then passes through a gas turbine that drives an electricity generator.