

Nuclear power "answer" to S. Africa's energy supply: official

China is keeping a close eye on other nation's nuclear power intentions.

Xinhua
June 6, 2006

Nuclear technology such as Pebble Bed Modular Reactor (PBMR) could offer an efficient and economical method of providing power to South Africa, a senior official said on Monday.

Public Enterprises Minister Alec Erwin told the National Assembly in Cape Town that global warming had seen nuclear power re-emerge internationally as an attractive, alternative form of energy generation.

"Given the urgent demand for large-scale, clean, affordable energy, and South Africa's lack of primary fuel sources at its coastal regions... the PBMR provides a plausible and cost-competitive alternative solution," he was quoted as saying by the SAPA news agency.

The other possibilities were the construction of very long and expensive transmission systems, or setting up the logistics to supply conventional coastal power stations with either natural gas or coal.

"Both of these solutions are expensive," Erwin said.

South Africa supplies two thirds of Africa's electricity, over 90 percent of which is generated from coal. Experts predicted that the country will soon need to produce much more electricity to meet surging demands after parts of the country experienced constant disruption of power supply since last year.

The South African government has been pushing the use of nuclear technology in power generation, despite protest from environmental groups.

Erwin said on Monday that PBMRs could be situated close to the point of use, and there was no need to upgrade either transmission or rail infrastructure.

PBMRs are small, high-temperature nuclear reactors. The "pebbles" referred to are the fuel -- enriched uranium dioxide encased in a graphite sphere about the size of a billiard ball.

Each module produces about 400 mw, and two of them can be fitted into an area the size of a soccer field. The modular design allows for additional units to be added, according to demand.

"(We) will assist in the establishment of this entity by introducing a PFMA-compliant (Public Finance Management Act) governance system; supporting the construction of a demonstration plant and pilot fuel plant, and facilitating the timely processing of the environmental impact assessment," Erwin was quoted as saying.

He said Eskom, the state-owned electricity utility that supplies 95 percent of South Africa's electricity, would invest 97 billion rand (14.7 billion U.S. dollars) over the next five years.

Sixty-five billion rand (10 billion dollars) will be invested in the generation sector, which includes the new build and the return to service of mothballed plants, and will add about 7,579 mw to the current 37,500 mw available in the system.

About 11 billion rand will be invested in transmission sector expansion and strengthening, while 15 billion rand will be invested in the distribution sector, Erwin said.