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CHINA TO BUILD NEW GENERATION NUCLEAR REACTOR

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China will begin building a revolutionary "pebble-bed" nuclear reactor this year with the aim of making the technology commercially viable by 2020, state press reported Wednesday.

Construction of the 190 megawatt reactor will begin near Weihai city in eastern China's Shandong province with the production of electricity slated for 2010, the China Daily reported.

The cost of the reactor, which the Beijing Institute of Nuclear Engineering is developing, will be 370 million dollars, the paper said.

The plant will be the first radically new reactor designed globally in decades, previous reports said.

It will put China at the forefront in nuclear energy research that offers a "meltdown-proof" alternative to conventional nuclear power stations, the reports have said.

"Pebble bed" reactors are fueled by thousands of small graphite balls with minute uranium cores which provide the fuel for the nuclear reaction.

The technology is said to be proliferation proof, meaning that spent fuel cannot be reprocessed to make weapons-grade uranium.

The new technology is still not commercially viable as costs remain much higher than conventional pressurized water nuclear power technology, Liu Wei, vice president of the Beijing institute, told the paper.

"As the research evolves, the new technology could be competitive in 2020 or 2030," he was cited as saying.

China Huaneng Group, parent of the Hong Kong-listed Huaneng Power International Inc, will own half of the project, while the China Nuclear Engineering and Construction Corp will take a 35 percent stake and Beijing's Tsinghua University will take five percent, it said.

The owner of the remaining 10 percent has yet to be determined, it said.

The modular design of the reactor means that future 190 to 200 megawatt pebble bed reactors could be built in factories, then transported to sites and assembled together to make a power plant of up to five reactor modules.