

China Celebrates Breakthrough in Nuclear Technology

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Chinese scientists have made a breakthrough in spent fuel reprocessing technology that could potentially solve China's uranium supply problem, state television reported on Monday.

The technology, developed and tested at the No.404 Factory of China National Nuclear Corp in the Gobi desert in remote Gansu province, enables the re-use of irradiated fuel and is able to boost the usage rate of uranium materials at nuclear plants by 60 folds.

"With the new technology, China's existing detected uranium resources can be used for 3,000 years," Chinese Central Television reported.

China, as well as France, the United Kingdom and Russia, actively supports reprocessing as a means for the management of highly radioactive spent fuel and as a source of fissile material for future nuclear fuel supply.

But independent scientists argued that commercial application of nuclear fuel reprocessing has always been hindered by cost, technology, proliferation risk and safety challenges.

China has 171,400 tons of proven uranium resources spread mainly in eight provinces -- Jiangxi, Guangdong, Hunan, Xinjiang, Inner Mongolia, Shaanxi, Liaoning and Yunnan.

China is planning a massive push into nuclear power in an effort to wean itself off coal, the dirtiest fossil fuel. It now has 12 working reactors with 10.15 gigawatt of total generating capacity.

China has set an official target of 40 gigawatts (GW) of installed nuclear generating capacity by 2020, but the government indicated it could double the goal to about 80 GW as faster expansion was one of the more feasible solutions for achieving emissions reduction goals.

As such, China will need to source more than 60 percent of the uranium needed for its nuclear power plants from overseas by 2020, even if the country moves forward with a modest nuclear expansion plan, Chinese researchers say.