

UN atomic expert downplays China nuclear 'breakthrough'

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Nuclear reactors at a US power plant. China has become one of only a handful of countries that can reprocess spent nuclear fuel but is not yet capable of doing so on an industrial scale, a UN atomic expert said Monday.

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Earlier this month, the [China](#) National Nuclear Corporation said it had achieved a significant "breakthrough" by developing a fuel reprocessing technology that will extend the lifespan of Beijing's proven uranium deposits to 3,000 years, from the current forecast of 50-70 years.

Experts said however that other countries already own such technology and it remains to be seen whether China will reprocess spent fuel on an

industrial scale.

"The completion of a pilot-scale fuel recycling facility... puts China into a fairly exclusive group of nuclear technology holders, as few other countries are currently operating at even this scale," said Gary Dyck, head of the International Atomic Energy Agency's Nuclear Fuel Cycle and Materials Section.

But "for China to enter into commercial recycling of irradiated [nuclear fuel](#), they will need to construct and commission a much larger facility," Dyck said.

China announced its "breakthrough" to much fanfare on state television two weeks ago, but provided scant detail about the technology.

Dyck told AFP that China's pilot-scale plant was based on the same aqueous recycle technology used in all commercial-scale plants currently in operation in countries such as France and Russia.

He said that recycling fuel from light water reactors and using the plutonium to produce MOX (mixed oxide fuel, made up of plutonium and uranium) fuel for use in other light water reactors "can improve the efficiency with which uranium resources are used by approximately 15 percent."

That rate of efficiency could then be improved "by a factor of 60 or more" if the recycle technology is used with fast breeder reactors.

China commissioned its first fast breeder reactor, the China Experimental Fast Reactor (CEFR), just last year.

Beijing has stepped up investment in nuclear power in an effort to slash its world-leading carbon emissions and scale down the nation's heavy

reliance on coal, which accounts for 70 percent of its energy needs.

China currently has 13 nuclear reactors and has given the green light to plans for 34 others, 26 of which are already under construction.

Beijing currently produces around 750 tonnes of uranium a year but annual demand could rise to 20,000 tonnes a year by 2020, according to state media.

China, which overtook Japan in mid-2010 to become the world's second-largest economy, is the world's biggest energy consumer, according to the International Energy Agency.

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