Japan to abandon troubled fast breeder reactor

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Japan's fast-breeder nuclear reactor plant Monju, pictured near Tsuruga city in Fukui prefecture, 350 km west of Tokyo, on December 24, 2008

Japan will scrap plans to generate electricity at its multi-billion dollar experimental Monju fast breeder reactor, a media report said on Friday, in a move that could affect the nation's nuclear fuel cycle programme.

Monju was designed to generate more fuel than it consumes via nuclear chain reaction, and was intended to be at the core of a programme that would reuse spent fissile materials in a country that has few natural resources of its own.

But its complex technology has been plagued with problems and set-backs that have left it idling for more than a decade, with little return on the initial 1 trillion yen ($9.8 billion) construction outlay and the 50 million yen it uses every day in running costs, even while shut down.

The government will review its overall nuclear energy plan, with the aim of repurposing Monju into a research centre for reducing spent fissile fuels, the business daily Nikkei reported.

Japan has become increasingly nervous about nuclear power in the years since the disaster at Fukushima. Currently, none of its 50 viable reactors is in operation.

The government, led by Prime Minister Shinzo Abe, would like to get some reactors back online, which they see as the best way to plug the country's energy gap and reduce the yawning trade deficit caused by the need to import mountains of fossil fuels.

Workers make preparations inside the control room to restart the Monju Prototype Fast Breeder Reactor, in Tsuruga, Fukui prefecture, west of Tokyo, on May 6, 2010

As well as fears among host communities about the safety of nuclear reactors, opponents worry that there are few solutions for the problem of spent fuel.

Processing waste with a fast-breeder reactor is said to accelerate the decay of radioactive material and slash its volume, the Nikkei said.

Under current plans, Japan's nuclear fuel cycle involves a large plant in the far north of the country processing spent uranium and plutonium for reuse as fuel in fast-breeder reactors.

Without Monju, the pricey process of breeding plutonium would become controversial in terms of both cost-effectiveness and

security—with fears that the material might make its way into the wrong hands and be used for nuclear weapons.

In a plan crafted in 2010, the government envisioned developing demonstrative facilities by around 2025 and having fast-breeder reactors in commercial operation around 2050.

The revision of Monju's position in Japan's nuclear cycle programme will be mentioned in a new energy plan that is likely to be approved by a cabinet meeting this month, the Nikkei said, without citing sources.

Chief Cabinet Secretary Yoshihide Suga denied the report, saying "we have not made a decision to change the course" of the project.