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Nuclear power still faces hurdles, but debate has shifted

Key takeaways

- Recent decisions by prefectural governors to approve reactor restarts suggests that concerns about safety are giving way in the face of concerns about electricity costs and competitiveness.
- The political environment nationally is as favorable towards nuclear power as it has been since 2011.
- However, reaching the target of 20% of electricity generation from nuclear power by 2040 will take either new construction or significant progress in the commercialization of advanced technologies.

On Wednesday, 10 December, Hokkaido Governor Suzuki Naomichi announced his approval for the restart of the No. 3 reactor at the Tomari nuclear power plant, a critical step forward in the resumption of nuclear power generation in Japan.

In making this decision, Suzuki cited the need to lower costs for businesses and households – electricity rates charged by the Hokkaido Electric Power Company (HEPCO) are highest among Japan’s ten regional utilities – and make the prefecture competitive, particularly as chipmaker Rapidus expands its operations and Softbank prepares to open a large data center in Hokkaido.

This decision, coming weeks after Niigata Governor Hanazumi Hideyo approved the restart two reactors at the Tokyo Electric Power Company’s (TEPCO) Kashiwazaki-Kariwa nuclear power plant – a decision that was expected to be controversial and have to wait until after the prefecture’s gubernatorial election in April 2026 – suggests that Japan’s nuclear renaissance has passed a tipping point. What matters is that nearly fifteen years after the 3/11 nuclear disaster, the public’s safety concerns have given way

to more quotidian concerns about utility costs and the risk that powering next-generation technologies could outstrip Japan's capacity, sapping both regional competitiveness – Hokkaido having watched Kyushu, with its four online reactors, become a hub for TSMC – and national competitiveness. In short, the political incentives for local politicians have shifted, which could streamline the process of securing local consent for restarting the remaining offline reactors.

Of course, with Takaichi Sanae in office, Japan may in practice also have the most pro-nuclear government it has had since 2011. Takaichi's fixation on promoting self-sufficiency and strategic autonomy as drivers for growth has naturally inclined her to support not only restarting existing reactors but also to back the development of next-generation nuclear technology like small modular reactors (SMRs) and, looking further, nuclear fusion technology. She has, for example, discussed her dream of Japan's achieving 100% self-sufficiency in energy; "I want to end a foreign policy of bowing before resource-rich countries," she has said. To steer Japan in a more autonomous direction in the near term, her government will be particularly dependent on restarting nuclear reactors, since it has expressed skepticism of large-scale solar farms, demanding tighter regulations on the grounds of wildlife and habitat protection and avoiding dependence on Chinese-manufactured panels. While there are limits to how quickly the national government can accelerate the approval process for existing nuclear reactors, her government will be keen to support local governments consenting to nuclear restarts.

To be clear, the consent of local government is not the only obstacle remaining. Of Japan's thirty-nine existing (or under construction) reactors, ten have still not applied for review by the Nuclear Regulation Authority (NRA); several of these are aging and may end up being decommissioned instead of restarted. Of the twenty-six for which utilities have applied to the NRA for review, only fourteen are in operation. Another four have been cleared by the NRA but have either received local approval and are waiting to be reactivated or, as in the case of the Tokai No. 2 reactor in Ibaraki, are still waiting for local approval. Each of these four faces different obstacles that could affect the timeline for restarting; Tomari No. 3 will not restart before 2027 and Kashiwazaki-Kariwa No. 7 is delayed until 2029 pending the construction of a mandatory anti-terrorism facility. Given local concerns about Tokai No. 2, Kashiwazaki-Kariwa No. 6 is the only realistic candidate for restart in 2026. Finally, eight reactors are still waiting for the NRA's approval, and three are under construction.

But even if all twenty-six reactors that have applied for NRA review are eventually restarted, Japan would still likely not have enough generating capacity to meet its target of roughly 20% of electricity from nuclear power by 2040, as articulated in the Ministry of Economy, Trade, and Industry's (METI) February 2025 strategic energy plan. (METI reported on Friday, 12 December that nuclear supplied 9.4% of Japan's electricity in FY2024). To meet this target, Japan will eventually have to complete reactors under construction – the Oma nuclear power plant, currently delayed until at least 2030, and the indefinitely delayed Higashidori plant, both in Aomori prefecture, as well as the Shimane No. 3 reactor which is aiming for a 2030 start – and build new capacity. In

practice, the challenges facing new construction could explain why Takaichi seems more animated by next-generation technologies that are not yet commercially viable – advanced nuclear, fusion, and Perovskite solar cells – than devoting political capital to securing support for the construction of new facilities using current technology.

For all the public support for restarting reactors, which polls continue to show surpasses the opposition by comfortable margins, it may still be easier to imagine a qualitative leap in clean energy technology than navigating the approval process for new construction of nuclear reactors. Accordingly, while the recent approvals in Niigata and Hokkaido are meaningful signals that the political calculus around nuclear power has shifted – whatever momentum there was towards reducing and eventually eliminating Japan’s use of nuclear power seems largely to have dissipated – there is still a long road to reaching the government’s target for relying on nuclear power as a source of clean electricity.

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