

Japan's Role in Asia's Nuclear Security

By Hideshi Futori

Japan has the ability to play a unique role in nuclear energy development. By maintaining its long-standing commitment to nuclear nonproliferation while harnessing its nuclear technology capabilities, the country can serve as a role model for safe and peaceful nuclear energy. With its close ties to the U.S. nuclear sector, and as nuclear power continues to rapidly grow in Asia even after the March 2011 Fukushima accident, Japan can play a critical role in maintaining regional security and stability.

Challenge of Winning Public Support

Despite all of the country's nuclear plants still shut down and strong public opposition to nuclear power, the current Japanese government showed their intention to continue nuclear energy development with the issuance of a draft of the new basic energy plan last December. The plan states that nuclear energy is a key base-load power source and will continue to be utilized safely to achieve a stable and affordable energy supply and to combat global warming. With these twin goals in mind, reactors in Japan will gradually be restarted as their safety is confirmed by the Nuclear Regulation Authority (NRA). So far, 17 reactors have applied for permission to restart. The new regulations are some of the most stringent in the world, but it remains uncertain how soon the NRA will conclude inspections. The challenge, though is for Japanese politicians to convince the public of the safety of nuclear plants through scientific, transparent, and objective information sharing and dialogue.

The draft of the energy plan may face opposition within even ruling parties and public before final passage. Although the draft called for a diminished role for nuclear power, it did not spell out how there can be a mix of energy sources. The government must demonstrate a clear vision and strong political resolve to end the circuitous ideological, emotional, and non-scientific debates about nuclear power. Given the rapid changes in the international energy landscape, Japan cannot waste any more time clarifying its post-Fukushima energy strategy. Now is the time for Japanese political leaders to make a clear decision to contribute to global nuclear energy development.

Japan needs efficient, reliable, and safe reactors as well as nuclear services in a world where the demand for nuclear energy is rapidly growing. Japan has a closed fuel cycle set-up, including enrichment and reprocessing to recycle used fuel, as well as a mature and well-developed nuclear supply chain. The chain is based on a core of nuclear plant construction companies that are supported by broad based industries, such as material manufacturers, equipment manufacturers, general contractors, and local industries surrounding nuclear reactors.

U.S. –Japan Cooperation for a Nuclear Future

Japan and the United States share mutual political and commercial interests in promoting safe nuclear reactors worldwide. Corporate alliances formed between U.S. and Japanese nuclear companies – such as Westinghouse with Toshiba and GE Nuclear with Hitachi – have resulted in the development of high-tech nuclear products for civilian use and the generation of a large number of the world’s top-class engineers.

Yet the U.S.-Japan corporate alliances face an uncertain future due to the uncertainty surrounding the Japanese government’s intentions. Permanent nuclear shutdown in Japan will make it difficult for the Japanese and U.S. nuclear industries to maintain their outstanding core technology base and retain their experts on nuclear energy. The experience and expertise acquired during the long course of these corporate partnerships will be essential to deal with the global challenge of maintaining high standards while nuclear technologies continue to spread around the world.

Japan is the only non-nuclear weapon country allowed to employ a closed fuel cycle. By taking advantage of this status, Japan has the unique ability to set an example for the world of a normative nuclear policy while still being a member in good standing with the Non-Proliferation Treaty (NPT). Nuclear technologies are inherently dual-use, and the rising demand for nuclear power around the world increases the danger of further nuclear weapons proliferation. It is an important challenge for international society to ensure that the spread of peaceful atomic energy does not result in uncontrolled use of these technologies.

Japan has made extra efforts to apply advanced safeguards to its nuclear facilities. It was the first major nation to ratify and apply the additional protocol to the Comprehensive Safeguards Agreement, which gives the International Atomic Energy Agency access to a country’s entire nuclear program and requires the IAEA to assess whether there are any undeclared nuclear materials or facilities in that country.

The loss of Japanese nuclear vendors’ international competitiveness would jeopardize Japan’s presence in global nuclear markets. Given the cooperation of the United States and Japan in nonproliferation, a decline in Japanese corporate presence would ultimately weaken Washington’s and Tokyo’s voices in the nonproliferation regime. To prevent such a scenario, Japan needs to reemphasize its role as a leading advocate for nonproliferation.¹

While Japan is one of the strongest advocates of the international nonproliferation regime, its plutonium stockpile has raised concerns in the nuclear community. The country should substantially reduce its stockpile of weapons-usable plutonium to instill greater confidence that it could not use this material for weapons purposes. This also would allow Japan to maintain stable

¹ Shoichi Itoh, “Energy Security in Northeast Asia: A Pivotal Moment for the U.S.-Japan Alliance,” *Brookings East Asia Commentary*, Number 62 (March 2013), <http://www.brookings.edu/research/opinions/2013/03/12-energy-security-itoh>

nuclear cooperation with the United States, especially in light of the bilateral civil nuclear cooperation agreement set for review by 2018.

China's Nuclear Energy Needs and Regional Security

Meanwhile, China's nuclear capacity has grown considerably in the last decade. The country has 20 nuclear reactors, ranking 6th in the world. Moreover, it is constructing 28 reactors, and more being planned despite a pause in approvals for new plants following the Fukushima accident. Beijing aims to have over 100 operating commercial reactors by 2030, in which case it will probably possess the largest civil nuclear fleet in the world².

Chinese nuclear construction safety concerns regarding its technical standards given recent domestic accidents in basic infrastructure that have been caused by construction problems. Whether China can adequately address safety issues remains in questions, given the number of domestic infrastructure accidents in recent years. Can Beijing manage industrial safety, a competence that is required for maintaining high nuclear safety standards? China's domestic nuclear sector is still developing its regulatory framework and workforce, so it is too early to become an exporter of nuclear reactors.

China joined the NPT in 1992 as a legal nuclear weapons state and played a positive role in improving the nonproliferation regime. While China is not yet a significant power plant exporter, it may emerge as a major supplier of nuclear technologies by leveraging technology transfers from France and the United States. It could also provide nuclear power to clients in Africa, the Middle East, and Southeast Asia. There is concern that Chinese companies may not require strict nonproliferation standards by customer countries despite Beijing's efforts at gradually strengthening export controls.³

For instance, China's nuclear relationship with Pakistan is an example of the type of difficulties that may arise as China expands its nuclear export efforts. China has recently renewed nuclear energy cooperation with Pakistan and has assisted Pakistan in building nuclear reactors⁴. This assistance bypasses international rules against nuclear exports to non-NPT countries, such as Pakistan. China is the only country willing to supply Pakistan with nuclear plants, and Pakistan provides an outlet for Beijing's hope of selling its nuclear technology more widely. This bilateral relationship has caused international concerns due to Pakistan's poor record in controlling nuclear technology.

Given China's current situation, it is important for Japan to maintain high standards for nuclear technologies and demonstrate strong commitment to the nonproliferation regime. Japan has

² IAEA, Power Reactor Information System, accessed on February 3, 2014, <http://www.iaea.org/PRIS/home.aspx>

³ Charles Ferguson, "The Implications of Expanded Nuclear Energy in Asia," *Strategic Asia 2010-11: Asia's Rising Power and America's Continued Purpose*, ed. Ashley J. Tellis, Andrew Marble, and Travis Tanner (Seattle: National Bureau of Asian Research, September 2010), 146, 165-6.

⁴ Saeed Shah, "Islamabad in Talks to Buy Chinese Reactors," *The Wall Street Journal*, January 21, 2014.

invested enormous amounts of resources to obtain its current advanced position in the field of nuclear energy and needs to keep this position. If Japan decides to allow its nuclear energy to deteriorate, it is China that will receive the most advantages and opportunities to exploit the global market. In this way, Japan's decision will have direct impacts on the global stability of the nuclear order.

Next Steps for Japan and the United States

Greater use of nuclear power in Asia, especially in China, will have significant implications for global nuclear power development and nonproliferation. As such, Japan should demonstrate its strong will to lead the development of global nuclear power and to strengthen the nuclear nonproliferation regime by clarifying its post-Fukushima energy policy. Japan should not conduct its energy policy solely from a domestic viewpoint, but should also consider its international responsibilities. In the context of surging Asian nuclear use, Japan's decision to abandon its nuclear power program will result in the emergence of a more unstable regional security order.

Secondly, nuclear cooperation between the United States and Japan will be necessary to achieve a stable nuclear order in Asia. This cooperation will serve to support the American pivot to Asia strategy to prevent the expansion of China's sphere of influence in the nuclear domain, an important objective while China's nuclear export procedures remain immature and insecure. On this strong foundation, both Japan and the United States should endeavor to explore new possibilities for collaboration with neighboring states.

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