

A study on the Reliability of Nuclear Suppliers Group

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1. Introduce

After the first Indian nuclear explosive test in 1974, seven nuclear supplier governments were convinced that the Nuclear Non-Proliferation Treaty (NPT) alone would not halt the spread of nuclear weapons. The seven governments formed the Nuclear Suppliers Group (NSG), and over the course of more than three decades, it has become the world's leading multilateral nuclear export control arrangement, establishing guidelines that govern transfers of nuclear-related materials, equipment, and technology.[1]

During its three decades, the NSG had quadrupled its membership to embrace nearly all nuclear supplier states. However, some countries are exporting nuclear power plant for the benefit of their countries to the countries that are not reliable. This weakens the credibility of NSG a lot. Accordingly, we reviewed the priority that we have to consider as a member state of NSG through the controversial case of nuclear power plant export.[2]

2. Example of Nuclear Power Plant Export

2.1. China and Pakistan

China, a nuclear weapon state since 1964, set up a nuclear power infrastructure very gradually beginning in the 1980s through the end of the 1990s. Since then, China has dramatically accelerated its nuclear power development. China now operates fourteen nuclear power reactors and may have as many as 75 units online by 2020.

For many years after China joined the ranks of the world's nuclear-armed states, it assisted both civil and military nuclear programs in Pakistan and provided assistance to some other undeclared nuclear projects, notably in Algeria. Because of China's record of previous assistance to Pakistan's undeclared nuclear program, the prospect of China joining the NSG unsettled some nuclear trade experts.

China has assisted Pakistan's nuclear program from its inception in the 1970s. It concluded sales of two power reactors to Pakistan before China joined the NSG in 2004, and it may have been considering additional power reactor exports to Pakistan when the United

States and India announced plans for bilateral civilian nuclear cooperation in 2005. China informed the NSG that it planned to supply fuel and services for the Chashma-1 and -2 power reactors exported to Pakistan before 2004, but in outlining the scope of its anticipated future nuclear cooperation with Pakistan, China did not disclose that it planned to export any additional power reactors to that country.

As in 2010, NSG participating governments requested additional information from China to explain its planned export to Pakistan and, in particular, to provide documentation that the transaction was called for under the 1991 Sino-Pakistani nuclear trade pact. China has not provided any such documentation to validate its assertion that the export of the new reactors was called for by its previous arrangement with Pakistan. Without such documentation, the export of Chashma-3 and -4 by China must be considered a new supply arrangement requiring Pakistan to commit to full-scope safeguards as a condition for the transaction.

If China goes through with the export of the two reactors to Pakistan without demonstrating that the trade is legitimately grandfathered, the NSG's credibility will be damaged.

2.2. Russia and India

Russia concluded a power reactor export deal with India, which it claimed did not violate the NSG's full-scope safeguards condition because the transaction was "grandfathered" by a bilateral nuclear cooperation agreement concluded four years before the NSG established the full-scope safeguards requirement in 1992. During the 1998 NSG plenary meeting, the United States objected to this argument and later requested that Russia provide documentation that its 1988 bilateral agreement with India specifically included supply of the power reactors to India. Russia did not provide any documentation, and the transaction went forward.

In 2001, Russia exported nuclear fuel to India for two power reactors located at Tarapur and invoked a clause in the NSG guidelines that permits a supplier to export items to a recipient without full-scope safeguards "in exceptional cases when they are deemed essential for the safe operation of existing facilities." Many NSG-

participating governments objected that the planned export would violate the guidelines, and in 2004 Russia suspended fuel supply to the Indian reactors. In 2006, when Russia again invoked the safety exception, there was little opposition from NSG-participating governments. Instead, there was an internal discussion about how the safety exception should be interpreted, with some parties, including Russia, arguing that the exception could be invoked if a decision not to supply the items in question would mean that the reactor would have to be shut down. Russia supplied the fuel to India. In 2008, Russian nuclear fuel vendor TVEL signed a contract with the Nuclear Power Corporation of India (Npcil) for continued supply of uranium for the reactors in Tarapur.

2.3. United States and India

In 2005, the United States and India had announced that they would negotiate an agreement for peaceful nuclear cooperation that, to permit entry into force, would require the NSG to make an exception to the condition that export of trigger list items to all states except the NPT's five nuclear weapon powers requires full-scope safeguards. When the U.S.-India bilateral agreement was first conceived, U.S. officials had considered presenting the NSG with a list of proposed criteria that might serve as the basis for awarding India an exception to the NSG requirement for full-scope safeguards.

Two other states outside the NPT with nuclear arsenals, Israel and Pakistan, at that time pressed the United States to support their efforts to obtain a similar waiver from NSG trade restrictions on the basis of specific criteria.

The United States, Russia, and France, all of which sought to export nuclear equipment to India, opposed providing exceptions for Israel and Pakistan. Instead, they argued that a unique exception should be made for India without reference to criteria. In September 2008, the NSG granted that exception for India by consensus, and India may now import controlled items from NSG supplier states.

India, freed from most NSG trade sanctions in 2008, now harbors similar ambitions. In late 2010, India began operating its twentieth power reactor, bringing its total installed generating capacity to about 5 GW; Indian industry aims to increase that capacity to as much as 63 GW by 2032. About two-thirds of this capacity expansion would be contributed by projects with foreign suppliers made possible by the NSG exception for India.

3. Conclusion

Looking at the previous three cases, some of the NSG countries are willing to fight for their national interests and compete for the preoccupancy in the emerging market countries of nuclear power plant rather than strengthening the nuclear non-proliferation.

Even if it is clear that Pakistan has a desire for nuclear weapons like Iran and North Korea, China is putting a lot of effort to export nuclear power plant to Pakistan recently. It is against the nuclear non-proliferation effort of NSG.

In addition, considering that the cause of the establishment of NSG was India's nuclear test in 1974, it is difficult to accept the U.S. position trying to enter into the big Indian market looking away from India's nuclear ambition.

NSG was established because nuclear proliferation can't be prevented by NPT only. NSG member countries should think about the reason why NSG was established prior to exporting nuclear power plant.

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