

A study on the nuclear energy cooperation agreement of the India

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1. Introduction

India, which has not signed the Nuclear Non-proliferation Treaty and does not have International Atomic Energy Agency safeguards, even has an IAEA-India specific safeguards agreements, on all of its nuclear material, exploded a “peaceful” nuclear device in 1974, convincing the world of the need for greater restrictions on nuclear trade. The United States created the Nuclear Suppliers Group (NSG) as a direct response to India’s test, halted nuclear exports to India a few years later, and worked to convince other states to do the same. India tested nuclear weapons again in 1998.

However, President Bush announced July 18, 2005, he would “work to achieve full civil nuclear energy cooperation with India” and would “also seek agreement from Congress to adjust U.S. laws and policies,” in the context of a broader partnership with India.

The NSG, at the behest of the Bush Administration, agreed in September 2008 to exempt India from some of its export guidelines. That decision has effectively left decisions regarding nuclear commerce with India almost entirely up to individual governments. Since the NSG decision, India has concluded nuclear cooperation agreements with foreign suppliers.

Due to these trade bans and lack of indigenous uranium, India has uniquely been developing a nuclear fuel cycle to exploit its reserves of thorium. India’s ambitious plan to expand its nuclear power generation capacity to 63,000MW by 2032 necessitates concluding agreements with uranium-rich and technologically advanced countries. Now, foreign technology and fuel are expected to boost India’s nuclear power plants considerably. All plants will have high indigenous engineering content. India has a vision of becoming a world leader in nuclear technology due to its expertise in fast reactors and thorium fuel cycle.

The Republic of Korea, especially KEPCO, is also very interested in the cooperation with the India and nuclear cooperation agreement is needed. And finally Republic of Korea and India signed a nuclear energy cooperation agreement last July 25. It will be a pave the way for the Republic of Korea to export its nuclear power plants for the future.

2. Nuclear Energy Cooperation Agreements

2.1 Nuclear Energy Cooperation Agreement between France and India

On September 30, 2008, India and France signed a civil nuclear cooperation agreement that includes the possible provision of nuclear reactors and nuclear fuel. The agreement, which entered into force January 14, 2010, does not, however, include the transfer of enrichment or reprocessing technology. France would like India to reprocess spent nuclear fuel in an IAEA-safeguarded facility. AREVA agreed to supply the Nuclear Power Corporation of India Limited (NPCIL) with 300 metric tons of uranium. Those two companies also signed a memorandum of understanding February 4, 2009, expressing their “willingness to build up to six” nuclear reactors. Both parties “intend to discuss the elements of a commercial contract to supply” two reactors “as a first step,” according to the memorandum. However, several steps remain before construction on the reactors can begin.

2.2 Nuclear Energy Cooperation Agreement between Russia and India

Russia and India signed a nuclear cooperation agreement December 5, 2008. According to a joint declaration issued that day, “the two countries have agreed to collaborate on constructing additional nuclear power plants” and “to expand and pursue further areas for bilateral cooperation in the field of peaceful uses of nuclear energy.” Russia is currently constructing two reactors in India at Kudankulam. Notably, Russian President Dmitry Medvedev reportedly amended in February 2009 a 1992 presidential decree on nuclear export controls in order to permit Russian nuclear exports to a country without comprehensive IAEA safeguards. However, the decree now states that nuclear materials, as well as technologies, equipment and special non-nuclear materials intended for their processing, utilization or production may be exported from the Russian Federation to India only if they are used in nuclear installations placed under IAEA’s auspices. The Russian TVEL Corporation also reportedly signed a nuclear fuel supply contract in February 2009 with India’s Department of Atomic Energy. The two countries initialed another agreement December 7, 2009, which expands on the 2008 agreement. According to a statement from India’s

Ministry of External Affairs, the agreement includes cooperation on research and development, the construction of additional nuclear power plants, and fuel-supply arrangements. The agreement also grants “up-front consent” for India to reprocess spent nuclear fuel and says that Russia would continue to supply fuel even if the agreement is terminated in the future.

2.3 Nuclear Energy Cooperation Agreement between Canada and India

India and Canada signed an Agreement in June 27, 2010, which provides for cooperation in nuclear reactor design and construction, as well as the “supply of uranium.”

2.4 Nuclear Energy Cooperation Agreement between the Republic of Korea and India

The Republic of Korea and India negotiate the agreements and finally signed an agreement on July 25, 2011 for “Cooperation in the Peaceful Uses of Nuclear Energy”.

Both India and Korea have the potential to emerge as the leaders of the next generation of nuclear energy. Sharing knowledge and experiences by both the countries might help them in becoming role models in the field of civil nuclear cooperation. The recent deal could also be instrumental in bringing them closer in economic and strategic fields. Our willingness to share the nuclear expertise with India would certainly usher a new era in India-Korea relations.

However, the negotiation was not easy in many reasons. India had opened only the United States and France case - nuclear weapon states - we had to set our own standard to fit the agreement as a non-weapon state. Moreover, even India is not a weapon states, *de facto* state, it already has sensitive nuclear technologies.

Another issue was a nuclear fuel assurance. India had suffered from its nuclear fuel supply owing to its nuclear test, India consistently put this provision for their agreements. However, both, the Republic of Korea and India finally agreed not to include this provision to the agreement.

However, liability issue is still remaining and that is a problem not only for the ROK but for the all other countries. Therefore, the U.S. companies have not yet started nuclear trade with India and may be reluctant to do so if New Delhi does not resolve concerns regarding its policies on liability for nuclear reactor operators and suppliers. Taking a step to resolve such concerns, India signed the Convention on Supplementary Compensation for Nuclear Damage, which has not yet entered into force, October 27, 2010. However, some have argued that Indian nuclear liability legislation adopted in August 2010 is inconsistent with the Convention.

3. Conclusions

The ROK has been seeking its market to sell as a nuclear exporter and India is the most suitable in this purpose. However, the cooperation with India, which has not signed the NPT and does not have IAEA safeguards on all of its nuclear material, was expected to be dealt with in a careful manner. As the nuclear cooperation agreement between the ROK and India was needed for facilitating its cooperation, the establishment of the optimized scheme was essential.

As the nuclear export control regimes of both countries are based on the NSG Guidelines, the nuclear agreement between two countries are expected to be built based on the mutual respects of each other's national nuclear policy and the recognition on the optimized export control.

Nuclear liability is still pending issue and jeopardizes for exporting nuclear plants for India. We hope this issue can be resolve at the earliest possible manner.

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