

Nuclear Power Tops Putin's Agenda in India

by Rachel Douglas

During Russian President Vladimir Putin's two-day trip to India, Russian and Indian nuclear officials signed a memorandum of understanding on the construction of four additional one-gigawatt nuclear reactors at the Koodankulam plant in Tamil Nadu, where Russia's Atomstroyexport is already building two units. The memo said that Russian contractors would construct still more reactors at unspecified new sites. Russia's Ambassador in New Delhi, Vyacheslav Trubnikov, said a few days earlier, that nuclear cooperation was "the most important issue on the agenda" during Putin's visit.

First Deputy Prime Minister Alexander Zhukov, traveling with Putin, said on Jan. 26 that Russia would seek contracts for as many as ten new nuclear power units in India,

provided such projects are cleared with the Nuclear Suppliers Group (NSG). That is an issue, because India is a non-signatory of the Non-Proliferation Treaty (NPT). Under the U.S.-India Nuclear Agreement, signed and ratified in 2006, the U.S.A. agreed to end its restrictions on nuclear fuel sales to India and to support NSG exceptions for India, but such NSG approval has not yet followed.

"It all depends on how India's relations with the NSG develop," said Zhukov. "If all goes well, Russia could build as many as ten units." Russian Federal Atomic Energy Agency (Rosatom) head Sergei Kiriyenko stressed to journalists that Russia, too, will continue to support NSG rules exceptions for India. He also noted that Putin and Prime Minister Singh had signed a memorandum on preparing a comprehensive nuclear power cooperation agreement, which Kiriyenko said would be done during 2007.

Plenty of Work for All

Other Russian nuclear power specialists, as well as Zhukov, suggested that there could be stiff competition for Indian contracts. (U.S. firms, for example, have not contracted for any nuclear plant in India since the NPT went into effect in 1968. Prior to that, India got two 220 MW GE Boiling Water Reactors from the United States in 1964.) But with India committed to bringing 40 gigawatts of new capacity on line by 2025, Zhukov said, "there should be plenty of work for everybody."

Yuri Sentyurin, head of the Russian State Duma's Committee on Transportation, Communications, and Energy, called the new agreements a turning point for Russia, saying that the new contracts will keep existing production facilities



Russian Presidential Press and Information Office

Russian President Putin with Indian Prime Minister Singh during the ceremony in New Delhi on Jan. 25, 2007, at which they signed documents for cooperation in energy, space, transportation, and military affairs.

busy, create new jobs, and provide opportunities to modernize Russian nuclear machine production. Former Rosatom head Victor Mikhailov told the news agency Novosti that the new Russian-Indian agreement is “a step forward in what we call the renaissance of nuclear power.”

Independent of and several days after Putin’s visit, India announced another new phase of its nuclear program, moving beyond the technologies involved in the Russia-India deals. Indian Department of Atomic Energy (DAE) official Baldev Raj, director of the Indira Gandhi Center for Atomic Research (IGCAR), Kalpakkam, told reporters on Jan. 31 that India will simultaneously build four 500 MW fast breeder reactors. Two of them will be based in Kalpakkam, where the prototype fast breeder reactor of 500 MW capacity will go critical in 2010. The 20 MW Fast Breeder Test Reactor, in operation for 20 years, is located there. The location of the other two 500 MW reactors has not been decided yet, but the state of Tamil Nadu, where Kalpakkam is situated, is making a bid to get those reactors as well. (See article in *Economics*.)

The new breeders would first use uranium-plutonium oxide as fuel, with thorium oxide as a blanket on the reactor wall, to breed fissile U-233, and later switch over to metallic fuel. A uranium-plutonium oxide mix provides a breeding ratio of 1.1 (ten years to double), while the metallic fuel could breed as high as 1.4, bringing the doubling time down to seven years. “We can breed much faster with the metallic fuel. By 2020, the technology of making the metallic fuel will be ready,” Baldev Raj said. The IGCAR has fathered breeder reactor technology in India.

Eleven Agreements

Putin was hosted at a state dinner by President Abdul Kalam. In a packed schedule, he held talks with Prime Minister Manmohan Singh, met with Indian National Congress leader Sonia Gandhi, addressed a meeting of business leaders, and was the guest of honor at India’s national holiday ceremonies. He was accompanied by the CEOs of 28 leading Russian companies (and that’s with several of Russia’s top energy company leaders being off at the World Economic Forum in Davos).

Russian Defense Minister Sergei Ivanov had arrived several days earlier. On Jan. 22, Ivanov spoke to industrialists in Bangalore about the prospects for nuclear energy cooperation. On Jan. 23, the Defense Minister announced Russia’s intention to bid for a new contract in its more traditional sphere of trade with India: weapons sales, offering the MiG-35 for an Indian tender for 126 planes. In addition, reports from India indicate that there was some progress towards Russian agreement to India’s desire to sell the jointly developed BrahMos supersonic cruise missiles to third parties, as well as for the production of Amur-class submarines in India.

In all, 11 agreements were signed during Putin’s visit, including two on use of the Russian satellite system GLO-NASS, and other areas of cooperation in culture, transportation, and space.

Strategic Triangle

An announcement made on Jan. 29, several days after Putin’s visit, underscored that the Russian-Indian discussions went beyond bilateral relations: On Feb. 14, the foreign ministers of India, Russia and China will meet in New Delhi for the first formal diplomatic meeting of the three countries as a regular forum. The ministers had three less formal get-togethers on the sidelines of the UN General Assembly and in Vladivostok over the past two years.

Putin and Singh were asked at their post-summit press conference about the “Russia-China-India triangle” idea, originally put forward by then-Russian Prime Minister Yevgeni Primakov in 1998. Putin replied, “The Prime Minister and I discussed trilateral cooperation today. We did not discuss the matter in detail, but we noted that it is an interesting and useful format.” In addition to these nations’ potential as centers of economic growth, Putin said, “furthermore, we are united by our desire to resolve regional problems in a way acceptable to all sides. We therefore think that there are good prospects for work together in a trilateral format.”

Singh added that he, Putin, and Chinese President Hu Jintao had met and had useful discussions in St. Petersburg. Hu Jintao visited New Delhi in November 2006.