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‘PRESIDENT YELTSIN STOPPED ME FROM FINISHING THE CUBAN NUCLEAR POWER PLANT’¹

*The Russian nuclear energy industry has established a solid presence abroad. It has launched two reactors at the Tianwan NPP and built three stages of a uranium enrichment plant in China. In the next few months Russian specialists will oversee the commercial launch of the Bushehr NPP, two reactors at the Kudankulam NPP in India and the fourth stage of the centrifuge uranium enrichment plant in China. The foundations of these achievements were laid back when the Russian nuclear energy industry was led by **Viktor Mikhailov**, who served as the nuclear energy minister in 1992-1998. The editor-in-chief of *The Nuclear Club*, **Anton Khlopkov**, has met Dr. Mikhailov to discuss the Russian nuclear industry's strategy of winning foreign markets in the early 1990s and building relations with countries such as India, Iran and China.*

KHLOPKOV: In the early 1990s Russia's foreign policy prioritized partnership with the West – but the Russian nuclear energy companies were breaking into new markets predominantly in the East. Suffice is to recall the intergovernmental agreements signed with China and Iran in 1992, the MoU signed that same year with Pakistan, or the 1994 protocol to the 1988 agreement on building an NPP in India in Kudankulam. What was the reason for such an apparent contradiction? Was it because the Western countries were reluctant to let Russia, with its technologies and materials, enter their own markets? Was it because nuclear energy itself was in a period of stagnation in the West, resulting in a lack of interest in cooperation with Russia? Or maybe Russia simply did not have much to offer to the Western nuclear energy companies?

MIKHAILOV: Most of my early foreign trips were to Western European capitals and the United States, where I offered partnership. But it soon became clear to me that they had double standards regarding Russia. The priority for the Western countries was to protect their own markets from any competitors. We were not welcome in the West. The United States even accused us of price dumping, saying that back in Soviet times we were selling them natural uranium too cheaply.

I said to the Americans: if you do not want to sign a peaceful nuclear energy cooperation agreement with us, if you carry on treating us like that, by accusing us of price dumping, we will have to go East - to China, India and Iran. And that is exactly where I went. I am proud of the fact that during the difficult early 1990s I managed to keep our nuclear energy industry and nuclear centers from going under. When I was appointed nuclear energy minister, I worked hard to boost our exports rather than hoping for budget subsidies. When I became minister, our exports were about 700 million USD a year. When I left six years later, the figure was 2.2 billion USD.

¹ Victor Mikhailov and Anton Khlopkov would like to thank CENESS Research Associate Dmitry Konukhov for his help in preparing the text of this interview.



KHLOPKOV: One of our most important partners in the 1990s was China, where Russia started building two VVER-1000 power reactors and three stages of a uranium enrichment plant using centrifuge technology. But the decision to start building the enrichment plant in China was very difficult, it was uncertain until the very last moment. As far as I know, the final approval to that project was given very shortly before the official signing ceremony during the meeting, where Prime Minister Viktor Chernomyrdin took part among others. The Russian Foreign Ministry was opposed to the enrichment deal. What were the main reasons for that opposition?

MIKHAILOV: That is not quite accurate. There were no objections by the government agencies. We had a different problem. Viktor Chernomyrdin was always very cautious on such issues, he always sought the backing of the president. That was our first contract that involved supplying the enrichment plants and centrifuges abroad. Boris Yeltsin, who was quite an extraordinary figure, was directly involved in those nuclear decisions, and his position was taken into account by the prime minister's office. We had established good relations with him. As a minister, I had meetings with the president about once every three or four months. Sometimes he would even jokingly chide me for not coming more often. I would always say to that, "No problem, Boris Nikolayevich, I will come more often." We would discuss all the problems of the Russian nuclear industry with him, and he would be very much involved in the decision making.

KHLOPKOV: They say they have even built a statue in your honor in China, in gratitude for your role in the building of the enrichment plant?

MIKHAILOV: It happened after the launch of the first stage of the uranium enrichment plant in Hanzhong in 1996. It had taken us just 700 days to launch the plant, although our specialists had initially estimated the time the project would take at 1,000 days, and the Chinese were prepared to accept that longer schedule. But I said to our builders, "I give you 700 days" - and they had done it in 700 days. As a sign of their gratitude, the Chinese built a statue in my honor in the shape of a falcon. The plaque reads, "To the Falcon of Russia".

Among all our foreign partners, the Chinese were the easiest to work with for me. They understand everything very quickly, and they were very diligent. Working with the Indians was a bit more difficult. The Iranians, meanwhile, were very stubborn when we were negotiating the cost of the project.

KHLOPKOV: Cooperation with Iran had probably caused the most controversy when you were in charge of the Ministry of Atomic Energy. Were you ever tempted to just abandon the Bushehr NPP project, which was the source of constant headache due to American pressure, and also because of the numerous difficulties that arose during the implementation of the project in Iran and opposition to the project by some senior Russian officials?



MIKHAILOV: For us cooperation with Iran was not only a chance to support Russia's own nuclear industry, which was undergoing a very difficult period in the early 1990s. Another important goal was to support Iran. It was important to us to develop cooperation with the leading Muslim countries. There is a large Muslim minority in Russia, so it is important for us to develop our relations with countries such as Iran. Boris Yeltsin once told his assistant to get him in touch with me on the phone. They found me in the Iranian Embassy. President said, "What are you doing there?" And I replied, "What do you mean, Boris Nikolayevich? I am implementing your own policy of developing cooperation with Iran!" He liked that.

Q: Some people still recall the signing of the protocol in Tehran on January 8, 1995, in which Russia confirmed its readiness to discuss the possibility of building a centrifuge enrichment plant in Iran. Many people in Russia criticized you for that. They accused you of not having agreed that position with the other government agencies and ministries. You were avoiding the issue in you public interviews. Can you tell us now how the idea of that project came about? And why was it never launched? Some believe that the decision was made personally by Boris Yeltsin upon your return from Tehran.

MIKHAILOV: The Iranians had asked me to build them the same kind of plant that we were planning to build in China. But I did not have any detailed proposals for uranium enrichment in Iran. The protocol we had signed, which mentioned the supply of centrifuges to Iran - it was not compulsory in itself. It was said in that protocol that we welcomed such a prospect, but that we would discuss it later. The idea of the document was that we would begin nuclear energy cooperation, we would build two or four nuclear power reactors, and then discuss further steps based on the results already achieved.

Our reasoning for signing the protocol was simple. A country such as Iran needs to make its research sector attractive to its young people, it needs to develop its R&D capability. To do that it needs new and ambitious high-tech projects. The proposed enrichment plant would be a chance for the Iranians to develop advanced technologies in their own country. Without such projects, the drain of young Iranians to the West would continue. I saw it as a promising future project, based on the notion that we would discuss it in greater detail only once the second nuclear power reactor at Bushehr has been completed, once we have achieved tangible results of our cooperation, and once both sides have clearly demonstrated their interest in further cooperation.

There was of course some pressure from the Americans on that issue. They wanted Russia to limit its international cooperation in this area to China. There was also some criticism of cooperation with Iran coming from Russia itself. But it was coming mainly from the "greens", who were just repeating the argument made by the United States and Europe, claiming that Iran does not need nuclear energy because it has large oil and gas reserves.



KHLOPKOV: How do you think Russia should formulate its policy on exporting centrifuge enrichment equipment? India, China, the United States, Japan and maybe other countries as well have all expressed their interest in Russian-designed centrifuge enrichment facilities.

MIKHAILOV: I believe that in the next few years our policy on enrichment will reach the stage when the transfer of such facilities will become possible, rather than limiting ourselves to selling enrichment services. This is not the kind of technology that the Chinese cannot develop on their own, given time. So let us instead transfer it to them, and extract some gain in the process. In any event, sooner or later the interested countries will find a way to enrich uranium. The transfer of uranium centrifuge enrichment facilities to such countries would constitute our help to them in developing nuclear energy, and it will gradually enable them to enrich uranium independently.

I do not believe that Japan is one of those interested partners, despite its declarations that it wants to diversify its supplies of uranium and its complaints about working with Urenco. Working with us would not be any easier for them. In the early 1990s our attempts to develop nuclear energy cooperation with Japan were not very successful, and our exports to that country were limited to selling them natural uranium. Meanwhile, we already have years of experience of productive cooperation with China and India. We have already achieved very tangible results from such cooperation, and they are suitable partners for such exports. There are clear prospects for selling enrichment facilities to these two countries.

By the way, some time ago, when we had some spare capacity, I said to the Americans: why don't you take over one of the centrifuge enrichment plants in Russia? We will operate it together, and produce enriched uranium for the American nuclear energy industry. The United States would own a stake in the plant, but it would be physically located in Russia. But the Americans did not want that - they wanted us to build them such a plant on their own territory. I said no.

KHLOPKOV: Were there any foreign markets in the 1990s which you tried but failed to break into? We have managed to enter the Indian market, and there are now plans to build up to 16 reactors there. That is largely the result of Russia having been the first to enter the Indian market back in the early 1990s. In China we have built two reactors as the Tianwan NPP, and we may build another two. We have also entered the Bushehr project, but the decision on whether we should continue our involvement is political. Were there any other markets which we tried to enter, but couldn't?

MIKHAILOV: There was really only one country which we could potentially enter, but we either decided not to or we could not for political reasons. That country is Cuba. It does not have any large oil or gas resources of its own, so it would be very interested in having a reliable source of electricity. Even now they have constant power shortages and blackouts. As they continue to develop their tourism industry, energy problems will become even more pressing.



It was my dream to complete the NPP in Juragua. But the construction of that NPP was suspended in 1992 for political motives. At that time, one of the two VVER-440 reactors that were supposed to be built there was 80 per cent ready. In early 1995 I spent almost a week in Cuba, where I lived in one of Fidel Castro's residences. We had spent more than 4 hours talking; the future of the NPP was one of the issues we discussed. We began at nine in the afternoon, and finished at almost two in the morning - and that is only because I said I could not carry on because I was falling asleep where I sat.

Once back in Moscow, I said to the Russian president that we need to finish the construction of the Cuban NPP – but he did not let me do that. The political leadership of the two countries, Fidel Castro and Boris Yeltsin, could not reach an understanding on that issue. It seems that they did not get along very well. My opinion was that the Russian president's position on that issue was a mistake, and I said it to him openly. And although Boris Nikolayevich usually cut me a lot of slack, he was uncompromising on Cuba. That was very unfortunate. I believe that every country, even such a small country as Cuba, has the right to use peaceful nuclear energy. The Cuban scientists are well capable of that. Cuban research in areas such as medicine or biotechnologies is internationally recognized. Unfortunately, the issue of finishing the construction of the NPP in Cuba is not on the agenda at this time. But as Rosatom is becoming increasingly active in Latin America, I hope that the reactor will be finished at some point in the future.