



Rosatom Takes Interest in Constructing Czech NPP

Russia's state-run nuclear corporation Rosatom has confirmed its interest in the construction of nuclear reactors in the Czech Republic. Last November, Rosatom submitted a set of documents presenting its potential involvement in the Czech project as a nuclear vendor. In the meantime, the Czech government approved the new State Energy Policy and the National Action Plan for Nuclear Development.

Requests for information were sent to several nuclear vendors as the country established the Standing Committee for Nuclear Energy and appointed a special representative in charge of nuclear energy. According to Petr Zavodsky, Director of Nuclear Construction at ČEZ Group, the first round of talks with

Rosatom is completed. The Russian company has proposed to build a Generation 3+ reactor while project finance options are left to be considered by the Czech government (for more information please read the interview of Rosatom's Deputy CEO Kirill Komarov). Other project bidders are Westinghouse (USA), EDF (France), KHNP (South Korea) and Atmea, a joint venture of Areva and Mitsubishi Heavy Industries. China's CGNP also stepped in and wanted the Czech government to award the contract without the bidding. ČEZ admitted that this approach to the project could be much easier.

Temelin or Dukovany

It is yet unclear which of the two sites – Temelin or Dukovany – will be chosen for the project. Announced in 2009, the initial tender provided for Temelin as a venue for the construction of new power units, but the project was subsequently mothballed. One of the then bidders was MIR.1200, a Russian-Czech consortium whose offer was repeatedly mentioned by Czech experts as highly attractive.

Lenka Kovačovská from the Department of Strategy and International Cooperation in Energy at the Czech Ministry of Industry and Trade noted that this time the government leaned towards Dukovany. The yet-to-be-built reactors will replace those currently in operation. According to Ms. Kovačovská, the new State Energy Policy provides for the reactors operating at Dukovany to be decommissioned in 2030–2037.

Engaging local businesses as Rosatom's strong point

The Czech government views energy security and economic benefits for the local community as top priorities of the project, says Lenka Kovačovská. "It is not only the price per kilowatt of installed capacity that matters, but also the

vendor's ability to engage local suppliers both in and outside the Czech Republic," she noted. Rosatom's offer provides for the maximum involvement of local businesses in the project. What's important is that Czech companies are familiar with Russia's VVER nuclear technology that is used at the country's both nuclear stations. Czech nuclear engineers have mastered the technology to an extent that they are now capable of independently delivering modernization projects at VVER-based power units. Rosatom's Deputy CEO for Corporate Development and International Business Kirill Komarov noted in his interview to the Mladá Fronta Dnes newspaper that Rosatom would take part in the bidding if it was organized by the Czech Republic.

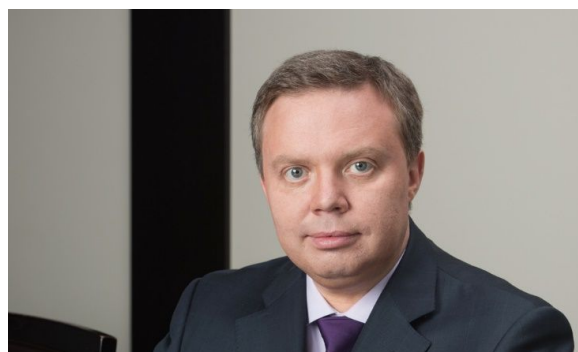
INTERVIEW

Kirill Komarov: No Other Country is a Closer Partner

Rosatom's Deputy CEO for Corporate Development and International Business Kirill Komarov speaks to the Mladá Fronta Dnes newspaper about the prospects of cooperation with Czech Republic.

The Czech government has approved the National Action Plan for Nuclear Development. Sooner or later, the country will begin construction of new reactors, and Rosatom is set to win the contract.

– You have arrived in Prague to hold talks with Ján Štuller, the government's authorized representative in charge of nuclear energy. What are these talks about? What is the result?



– I would not call them talks. Nor even preliminary talks. It is a kind of ongoing process. Last year, we received an official request from Czech authorities whether we were interested in the project and, if interested, what terms we could offer. The information requested was provided by us in October. The Czech government will now make detailed inquiries; we will respond, and it will take certain time to clear up all the details.

– Since you are here, it can be assumed that Rosatom is willing to win the contract.

– Rosatom is a long-standing partner of the Czech Republic. All of the country's operating power units are Russian-designed and supplied with nuclear fuel by Rosatom. We have been providing nuclear maintenance services over the recent years. One of Rosatom's subsidiaries is ARAKO, a local manufacturer of industrial valves. The list of Rosatom's suppliers includes 37 Czech companies, and 12 of them are involved in the nuclear construction project in Belarus.

– You took part in the bidding for the Temelin expansion project which cost you a vast deal of money and was subsequently canceled by ČEZ. The Czech Republic is also unable to agree on how to finance the construction of new power units. Czech Finance Minister Andrej Babiš refuses to provide the government support. What drives Rosatom's interest in Czech projects in such conditions?

– We see that the Czech government is strongly committed to the construction of new reactors. The government has adopted the new State Energy Policy and the National Action Plan for Nuclear Development. It has also sent out requests for information to several vendors, established the Standing Committee for Nuclear Energy and appointed an authorized representative in charge of nuclear energy. All these facts speak for the government's strong commitment. However, finance is a key issue that needs to be solved. And the government's guarantees are obviously not the only solution.

– What do you mean?

– At present, we are building 34 power units all over the world. We have a track record of using different financing solutions. Rosatom is not a company to

say “Give us your money, and we will build a nuclear station”. We can cooperate with the Czech government in fundraising, act as a junior partner or invest in the project.

– Are you ready to employ the same investment model you used for Hungary's Paks, with the construction to be financed with Russia's sovereign loan?

– We are ready to employ any model, including the one used in Hungary. We can also arrange it the same way we are doing it in Turkey, with the station to be financed and built by us and the government buying power at a fixed price. Besides, we can combine financing methods when, say, a portion of the total cost is borrowed, the remaining portion invested. We usually help the government of every country to estimate benefits the nuclear station will bring. In Russia, each ruble spent on nuclear construction brings 4.5 rubles in taxes since there are many industries involved. My forecast is that the involvement of Czech companies in the project will bring back more money in the Czech economy than will be invested in the construction project.

- Let us assume that the Czech government flatly refuses to provide any financial guarantees for the expansion of the nuclear facility, with the bidding terms being literally the same as the conditions of the tender canceled three years ago. Will you be ready to participate?

- Bidders must be sure that the order will be placed finally and the winner will sign the contract. When the Temelin expansion project was put out to tender, no one ever said that ČEZ was unable to pay. If the bidding process to construct a nuclear station is launched today, no one will want to participate until it becomes clear

who pays for the facility. But my personal opinion is that inviting bids is a wrong way to build a nuclear station.

- Why?

- I am not arguing against competition. Competition is crucial, but bidding as an approach to constructing a nuclear power plant is a poor idea. A tender is good to buy a bottle of water as it is easy to clearly specify that the bottle should be made of glass, water should be clean and so on.

When it comes to building a nuclear station, there are too many questions to be answered at once. This creates a sort of a gray zone with no apparent criteria for selecting the winner. Any nuclear station features 50,000 types – not even items – of equipment. All of them may differ depending on the vendor – be it Russia, the United States, France or South Korea. How can all of them be compared with each other?

Bidding is the most inappropriate way of selecting a vendor. No nuclear station project has been put out to tender recently. Neither France with its Flamanville now under construction nor the UK with Hinkley Point, where the construction is about to start, has organized tenders.

- Does it mean that you will try to talk the Czech government out of inviting bids this time?

- As the world's largest nuclear construction specialist, we think that our goal at this stage is to transfer our technologies and expertise to the Czech government so that it will later take its independent decision. I am not saying that it is impossible to start the bidding process. My point is that it is not the most effective way of decision-making. But if they decide to invite bids, we will step in.

- It seems that this project will attract more bidders than Temelin expansion did. What do you think of your competitors?

- It is too early to talk about it. We do not even know yet what criteria will be applied to prospective vendors. In terms of technology, Rosatom is the only company to offer field-proven Generation 3+ reactors that have no counterparts in the USA, France, China or South Korea. When it comes to the involvement of Czech producers, Rosatom offers the opportunities other companies simply do not have. Last year's bidding to expand the Temelin nuclear station did not require local business involvement at all. This is why it is not yet possible to define strong and weak points of the competition.

- Rosatom is the only company to have Generation 3+ reactors in its product portfolio, but it was you who said that building a reactor in a foreign country was a totally different matter. To what extent are such projects replicable and what conditions does it require?

- There is no universal recipe as new standards, regulations and laws are changing the landscape almost every day. Whatever the challenges, preparations are now underway for the construction of Hanhikivi in Finland, where we are in charge of design, site preparation and licensing. The construction project in Hungary is about to kick off. By the time the construction in the Czech Republic gets going, we will gain a solid experience of constructing nuclear facilities in the EU. Each of the EU countries has its own standards, but they are rapidly harmonized.

It is important for us that Russia and the Czech Republic have been cooperating for decades. No other country is a much closer partner for us in nuclear energy.

IN FOCUS



Uncertainty Over AP1000 Reactors in India

The Indian nuclear community is uncertain about the construction of nuclear reactors with the US assistance after Toshiba Corp decided to move out of the reactor building business.

After Toshiba announced the closure of its nuclear construction business, India has not received any comment yet from either Toshiba or its subsidiary Westinghouse. “We have no official information on this matter. We have learned from media and press releases only that the construction of AP1000 reactors in the United States will be completed. As to other projects, including those in the UK and India, no decision has been made yet,” said Dr. Sekhar Basu, head of India's Department of Nuclear Energy.

India is keeping alive the hope that Toshiba's financial problems will somehow be resolved and the projects will be delivered as planned.

“Such big companies do not usually go out of their existence. We heard that someone

is going to finance Toshiba – be it the Japanese government or a Japanese bank,” The Hindu newspaper cites an unknown Indian official. Although the construction of AP1000 reactors has not been started yet, the parties have earlier agreed to start site preparations. Toshiba's decision is related to the future write-off of its losses worth 6 billion dollars. It was also reported that Toshiba may dismiss some of its top managers due to massive financial losses incurred in its nuclear business. Another rumor circulating in the press has it that Toshiba may sell its share in Westinghouse. Japan's Mitsubishi Heavy Industries is said to be one of potential buyers. The problem is, however, that MHI is collaborating with Areva on designing the ATMEA-1 Generation 3+ light-water reactor.

Another prospective buyer is South Korea's KEPCO, a supplier of components for AP1000 reactors. Besides, KEPCO is holding talks on investing in the construction of AP1000-based Moorside nuclear power plant in the UK. KEPCO has its own successful nuclear reactor APR-1400, and it is therefore unclear whether the company needs to have control over the rival project.

It should be noted that Toshiba has its own Advanced Boiling Water Reactor (ABWR) designed jointly with General Electric when the two companies were partners. The technology is in no demand after the Fukushima accident.

IN BRIEF

First Tranche for Bushehr-2

Iran made its first payment to Russia for the construction of Bushehr-2.

In December 2016, Tehran paid the first tranche of the payment for the construction of Phase 2 of the Bushehr

nuclear power plant, said Russia's ambassador to Iran Levon Dzhagaryan in an interview to RIA Novosti. “The tranche was paid in full in December 2016,” said the ambassador. The groundbreaking ceremony dedicated to the construction

of Bushehr Units 2 and 3 was held on 10 September 2016 in Iran. The Bushehr-2 project is expected to take 10 years, with its cost estimated by the Iranian party at roughly 10 billion dollars.

U1 Wins Bid in Brazil

Uranium One Inc. (a part of Uranium One, Rosatom's international mining division) won a contract to supply 982,000 pounds (roughly 400 tons) of natural uranium in 2017 to Indústrias Nucleares do Brasil (INB), *Brazil's nuclear fuel manufacturer.*

The bidding results were published in the official newspaper of the Brazilian government. “This is our company’s first shipment to South America and, particularly, to Brazil,” noted Vasily Konstantinov, Chairman of Uranium One Inc. “We are glad that our offer was found to be the best. We are looking forward to working with INB. This contract opens up new opportunities for expanding our sales geography and lays the groundwork for successful performance in this region.”