



By: *Tomorrow's Affairs Staff*

Europe is not dependent on Russian gas and oil - can it free itself from dependence in the nuclear sector?



Despite the ban, a Russian cargo plane flew over Belarus and Poland and landed in Slovakia at the beginning of March last year.

It was a significant exception to the general ban on flights from Russia, and the reason was its cargo. It supplied nuclear fuel for two Slovak power plants and their six reactors.

Over the past year, Europe has quite successfully coped with its heavy dependence on Russian gas, oil, and coal. However, there remains a heavy reliance in the nuclear sector, both in terms of technology and supply.

Every sixth nuclear reactor in the European Union was built by Russia, and Russia supplies them with fuel and technology.

Out of the 13 EU countries that have power generation from nuclear power plants, five have plants built by Russia: the Czech Republic, Hungary, Slovakia, Bulgaria, and Finland.

Out of a total of 106 nuclear reactors in the EU, 18 are of Soviet or Russian production.

Sanctions bypassed the Russian nuclear sector

It is arguable that Russian participation in the European production of electricity from nuclear fuel is not large, so it could be risky for the electricity supply.

Nuclear energy produces one-quarter of the total electricity in the EU. But its participation in the national energy balance is quite large in some countries, for example in Slovakia and Hungary, whose Russian reactors produce about half of domestic consumption.

Due to its aggression against Ukraine, economic sanctions against Russia have almost stopped Russian exports of oil, gas, and coal. However, the nuclear sector has remained untouched by European sanctions.

Last February, the imposition of sanctions against Russia's state nuclear giant Rosatom was on Euro bureaucrats' table as they decided on a new package of sanctions.

However, the opposition of several states removed this topic from the list, because there was simply no alternative. Or, at least, there was no quick alternative solution in sight that would break the tie with their Russian nuclear partner.

The beginning of the shift

The Russian state-owned nuclear giant Rosatom does not have much reason to be complacent either, given several major decisions by its current European partners to reduce dependence on Russia.

Last year, the Finnish energy company Fennovoima terminated its deal with Rosatom regarding the construction of a new reactor, and another company, Fortum, finalised a contract with Westinghouse for fuel supply, after its contracts with Rosatom expire in 2027 and 2030, respectively.

The Czech energy giant ČEZ also signed contracts with Westinghouse and the French Framatome to supply fuel assemblies for its nuclear plant in Temelin.

In late 2022, Westinghouse announced that it had entered into a ten-year fuel supply agreement with the Bulgarian Kozloduy power plant.

A month ago, the partners announced that they had signed a Memorandum on Understanding (MoU) on the planning and development of one or several reactors at the Kozloduy nuclear power plant.

However, the most interesting in the series of moves to separate from the Russian nuclear presence in the EU came this week from the country that until now has been the biggest opponent of European nuclear distancing from Russia.

Hungarian surprise

Hungary surprised many in Europe when it recently announced that it was in talks with France about its greater involvement in the Hungarian nuclear complex.

"In order to have a Western European control system in the Paks nuclear power plant, we will further expand the Hungarian-French nuclear cooperation, and we will further increase the role of Framatome in the Paks investments", minister of Foreign Affairs Peter Szijjarto told the Hungarian agency MTI.

The expansion of capacities in the Hungarian nuclear plant was agreed back in 2014 between Prime Minister Victor Orbán and Russian President Vladimir Putin.

This business, worth around EUR 12 billion, was entrusted to the Russian Rosat and financed for the most part from a Russian state loan.

Its size and strategic importance have been considered for years as the foundation of Russian-Hungarian economic cooperation, but also an important factor in shaping Orbán's favourable policy towards Moscow, despite its aggression towards Ukraine.

Supply risks and green subsidies

Hungary's introduction of the French into its strategic business, and particularly the replacement of Russian partners, has been the result of the assessed risk that Russia would not be able to be a reliable partner for a long time, and that diversification is needed.

Other EU members, who use Russian nuclear technology, and Rosatom and its companies as fuel suppliers, follow the same logic.

Electricity produced from nuclear plants is becoming more and more desirable for achieving green goals and decarbonising the industry.

Those two factors act simultaneously: the weakening of the Russian supply chain due to sanctions and the acceptability of nuclear energy for achieving net-zero emissions, lead to a shift that has been noticeable in all European countries that still use Russian nuclear technology.

The motive for this shift is also the fact that the production of electricity from nuclear capacities has been included in the recently adopted European Net-Zero Industry Act, which envisages large subsidies for technologies that would contribute to the reduction of greenhouse emissions in the next decade.

Reducing nuclear dependence on Russia will be slower than in the case of gas and oil. But the latest steps in all five EU countries that have Russian reactors indicate that diversification has begun, and that its outcome is certain.