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MURCIR Analiz

Krško 2 and the Future of European Energy Security: Lessons from Slovenia's Nuclear Dilemma

The Slovenian case illustrates the European struggle to achieve energy security without disrupting existing foreign relations while maintaining carbon neutrality goals. During the 2000s, the solution for efficient economy and serving the carbon neutrality goals were through Russian natural gas, since it was economically feasible and relatively less-polluting than other fossil fuels. This made natural gas considered as an intermediary fuel type, allowing some greater countries to decommission their NPPs while combining a mixture of renewable energy sources and natural gas in their energy mix, planning to expand the share of the former continuously.

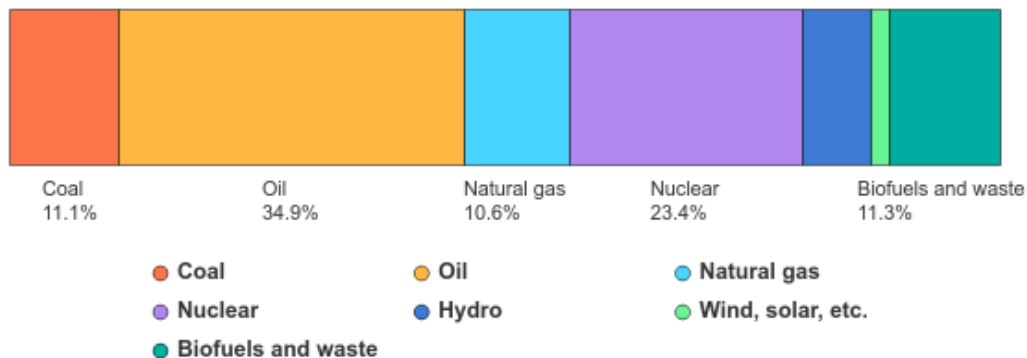
Eray Mutlu

In October 2024, under the shadow of the Energy Crisis in Europe, a small country named Slovenia was shaken by a scandal, leading to the cancellation of a national referendum on its brand-new Nuclear Power Plant (NPP) project, Krško 2. The country already had one NPP, which was built during the Yugoslav era and operated jointly with Croatia. However, due to growing concerns over energy security and decarbonisation goals, Slovenia had been planning to build another one, Krško 2. Faced with enormous costs and environmental concerns, the parliament decided not to proceed with the project on its own. Abiding by the Slovenian Constitution, which mandates a consultative referendum for important decisions, the parliament decided to hold a referendum on November 24, 2024. However, an audio recording of a leak conversation between government and opposition parliamentarians, suggesting that the consultative referendum could be nullified in the final decision, sparked controversy and faced with harsh public criticism. Under such conditions, the Slovenian parliament cancelled the referendum. Nevertheless, the attention here shall be given to the project itself and not the controversy. Therefore, this essay aims to explore why Slovenia aspired to expand its nuclear energy infrastructure, why a “nuclear renaissance” is necessary for Europe, and what Slovenian case may tell us, aspiring Political Science and International Relations students, about the future of the European Union’s (EU) energy policies and regional energy security of both Southeastern and Central and Eastern Europe (CEE).

Why were Slovenia aspiring to expand its nuclear energy infrastructure?

Slovenia is one of the most energy resource deprived countries on the continent, yet it is 13% above the EU average in energy consumption per capita, and the country is a net energy importer.

Total energy supply, Slovenia, 2023



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The energy mix of the country is comprised of 34.9% oil, 23.4% nuclear energy 11.1% coal, 10.06% natural gas and 20% renewable energy resources. Although most of the oil imports were consumed by the transportation sector and not used in the electricity generation, the country still has to import all of its oil and natural gas, followed by a considerable amount of coal to sustain its economy. In electricity production, the importance of nuclear energy became evident, meeting 44.4% of the country's total electricity production, followed by coal at a mere 20.6%. Under such circumstances, the country is aiming to complete its renewable energy transition by decommissioning coal use in electricity production. It is expected that these endeavours are well aligned with the Paris Climate Agreement and following Integrated National Energy and Climate Plan of Republic of Slovenia (hereinafter, Plan). According to the Plan, the country was either going to use natural gas and synthetic gas to replace coal by 2030 or rely on its existing nuclear energy experience and build another NPP. The Plan envisaged that, under the existing economic and political atmosphere, such a NPP construction decision could be made by 2027 at the latest. Although the country had already been debating opening a second NPP to increase its energy security since early 2000's, following a Russian-Ukrainian gas dispute, and due to unexpected developments in international relations and the subsequent energy crisis in Europe, Slovenia had to accelerate its energy transition. Thus, the path for cancelled referendum was paved.

Based on the cancelled referendum, the country chooses the nuclear future for itself, rather than a gaseous one. This makes sense, since the country has substantial experience and expertise with commercial utilisation of nuclear energy. NPPs meet decarbonisation goals, and neither NPP reactors nor their fuel supplies pose a threat to the Slovenian energy security. Krško NPP is using U.S. based Westinghouse Energy Systems reactors, supplied by the same company, making Slovenian NPPs more “secure” than other Balkan NPPs[1]. Also, as a country aspiring to be carbon neutral by 2050, NPP’s offer a reliable carbon-free solution.

What were the perceptions of different political actors regarding nuclear energy?

Despite all that, it would be wrong to assume nuclear energy utilisation is free from opposition. When the existing power plant’s lifetime was prolonged by 20 years (until 2043) in 2012, the decision makers faced harsh resistance from the opposition and NGOs. Moreover, the nuclear waste management (NWM) of Krško created a bilateral dispute between its owners, resulting in two separate NWM facilities in Slovenia and Croatia. Lastly, both the prolonged lifetime of the Krško NPP and potential construction of another NPP has been criticised by neighbouring Austria, which has opposed the idea of NPP in Slovenia for decades.

Why is a “nuclear renaissance” necessary for Europe?

The ongoing energy crisis and US-China Trade War showed that, we are entering an entirely different era than the 2000s. This era is marked by tariff barriers, conflicts and an unstable international environment. Both during the Cold War and its immediate aftermath, Europe enjoyed predictability and stability, which also provided a fertile ground to foster European Union (EU) idea. However, since the last decade, we have entered a new, multi-polar environment that is more unstable, making states more vulnerable to coercion and, overall, more insecure for the members of international community. This shift, along with the EU’s tardiness in adapting to the changing international environment, has created an over-dependent EU, which has undermined its competitiveness, as Mario Draghi has pointed out in his report on EU competitiveness. Ongoing war in Ukraine and the subsequent Energy Crisis in the EU have only made these vulnerabilities surface to the EU public. The EU now should curb its dependencies on imported energy resources as a first step to increase its resilience toward any potential shocks or energy supply disruptions.

[1] As an example, VVR-440 reactors in Bulgaria was both constructed and fuelled by the Russian (back then, Soviet) companies and it became highly problematised with the Russian invasion of Ukraine and subsequent sanctions. The country only managed to sign a Memorandum of Understanding with Westinghouse Energy Systems in 2023 to maintain its nuclear energy production.

The union has two existing energy governance models amongst its members. France and Poland. Both countries have been relatively less effected by energy crisis since France has relied on its NPP capabilities and Poland has used its domestic coal production to generate energy. Of course, accelerating transition towards renewable energy is also an option, yet it is still on its relative infancy^[2] and far from offering immediate solutions.

The Polish model also conflicts with decarbonisation goals and has the potential to jeopardise all the progress made toward carbon neutrality so far. Therefore, it should also be set aside. This leaves us with the French model as the most reliable method to deal with such turbulent times and leverage EU competitiveness.

What does the Slovenian case reveal about the EU's energy policies and regional energy security?

The Slovenian case illustrates the European struggle to achieve energy security without disrupting existing foreign relations while maintaining carbon neutrality goals. During the 2000s, the solution for efficient economy and serving the carbon neutrality goals were through Russian natural gas, since it was economically feasible and relatively less-polluting than other fossil fuels. This made natural gas considered as an intermediary fuel type, allowing some greater countries to decommission their NPPs while combining a mixture of renewable energy sources and natural gas in their energy mix, planning to expand the share of the former continuously. However, it is evident that in the 2024s world, such policies are not sustainable, even though the EU has capacity to diversify its suppliers. This case may tell us, International Relations students, that the era of end of history has concluded. Once-praised ideas of trade liberalisation and the benefits of mutual dependencies have been crumbled as these dependencies are weaponised against antagonists. As we speak today, we may be witnessing the rise of a new era where trade is replaced by tariffs and gas replaced by uranium.

[2] Despite some recent breakthroughs and EU's relative development in the renewable energy sector, especially on the wind power, this type of energy resources' space dependency hinders their ability to offer a generalisable solution.

About the Author



Eray Mutlu, After earning a BA in International Relations from Marmara University, he completed two master's degrees: one in Southeast European Studies at the University of Graz, with a thesis on energy security in Southeast Europe, and the other in International Relations at the University of Ljubljana. He is currently pursuing a PhD in Law & Politics at the University of Graz, with a thesis focusing on the hedging behavior of small states.

He worked for two years at the Centre for Southeast European Studies, where he assisted in academic research, prepared reports, and supported the organization of workshops and conferences. His main interests are small states, systemic crises, power transition theory, and the concept of hedging. He also has a special interest in trade policy, international trade, energy security, and energy transition. His work often involves Southeast European states and their Europeanisation process.

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