# ENERGY, ASYMMETRIC DEPENDENCE, AND NATIONAL SECURITY: EXPLAINING HUNGARY AND POLAND'S DIFFERENT RESPONSES TO THE WAR IN UKRAINE 

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On February $24^{\text {th }}$, 2022, Russia invaded parts of eastern Ukraine, significantly escalating the war that began in 2014 with the Russian annexation of Crimea. Since the invasion, the European Union (EU) has rallied support from its member countries to support Ukraine with military arms, by imposing sweeping sanctions on Russia, and by continuing to support Ukrainian territorial integrity. Hungary has been a unique exception in the EU, withholding support for Ukraine in a number of ways. Poland, a country with a similar recent political history and ideological leadership, has done the opposite, arguably supporting Ukraine the most of any EU country. This paper uses a most similar systems design method approach to examine what is causing these two countries to respond so differently to the invasion of Ukraine. This paper finds that the difference in each country's energy infrastructure is the most likely explanation for their difference in response to the war in Ukraine. With these findings, it discusses new factors that international alliances should consider when constructing their security policies.
"Oil may come from the East, but freedom always comes from the west." - Victor Orbán, 2007

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## Introduction

Understanding state actions has been the central challenge of international relations since its inception. Realism, liberalism, constructivism, and other theories have all attempted to explain state behavior. In recent times, the Russian invasion of Ukraine has become a focal point for assessing the actions of different states, particularly those within the EU and NATO. Hungary's unique position in 2023 presents a compelling case study due to its EU and NATO membership, coupled with its heavy reliance on Russia for energy supplies. Why is a NATO and EU country remaining neutral in a European war?

This complex relationship raises the question: what explains the difference in response between Hungary and Poland to the invasion of Ukraine? Currently, many Western political media outlets and leaders portray Hungary as being influenced or puppeted by Russia. This paper aims to investigate whether this depiction is accurate or if Hungary is responding to strategic constraints that may contradict its alliances. Hungary has threatened to veto EU sanction packages, not cooperated with the EU and NATO's plans to support Ukraine militarily, and has continued to voice support for a peace settlement, even at the expense of Ukrainian territory.

In this paper I use a most similar systems design to compare Hungary and Poland, as both countries share commonalities such as EU and NATO membership, a history within the USSR, illiberal leadership, and antagonistic relationships with the EU. This comparison allows for a focus on specific independent variables that could explain the variation in response to the Ukrainian crisis without introducing too many confounding factors.

The study will first discuss the methodology and provide background information on the selected variables, including a brief overview of energy infrastructure and dependence in the EU. Next, the differences in response between Hungary and Poland will be presented, followed by an examination of the four potential independent variables: energy infrastructure and dependence on Russia, perception of threat from Russia, relationships with the EU, and domestic politics. Finally, policy implications arising from the findings will be discussed, allowing the EU to make better decisions in attempting to bring Hungary back into the fold.

## Methods

To answer my research question, I will conduct a controlled comparison between Poland and Hungary using the Most Similar Systems Design (MSSD) method. As Anckar explains, the goal of an MSSD method is to "test the effect of an independent variable on the dependent variable, while keeping extraneous variance constant. ${ }^{" 1}$ For this thesis, I will use a specific kind of MSSD as outlined by Charles Ragin, in which the goal is to identify which difference between two objects is to explain the contradictory outcome. ${ }^{2}$ To do this, the investigator uses theory to identify the relevant differences, shows how they are causally relevant to the results, and then explain how certain differences cause the variation in results. The main benefit of this method is that it allows us to, as Ragin writes, "exclude certain types of explanations or certain cofounding variables categorically. ${ }^{3}$ For example, NATO is an important institution that certainly impacts how states act in eastern Europe, but both Poland and Hungary are NATO members, and so membership in NATO cannot explain their variation in response to Russia's invasion.

As Ragin explains, one problem with this method is that while two countries can be similar in the case of a specific variable, such as NATO membership, that variable can still potentially differ in causal significance based on how it interacts with another non-similar variable. ${ }^{4}$ For example, while being in NATO alone might not cause Hungary and Poland to act differently regarding Russia, the difference in each country's

1 Anckar, "On the Applicability of the Most Similar Systems Design and the Most Different Systems Design in Comparative Research," 391.
2 Ragin, The Comparative Method, 47.
3 Ragin, 47.
4 Ragin, 48.
historical relationship to Russian aggression could cause it to treat NATO membership differently. Therefore, such shared variables could cause significant differences in behavior. Poland could be more loyal to NATO due to its experience in World War Two or the Cold War. It could therefore treat its membership entirely differently than Hungary, even if they are on the surface both just simply members of the alliance. To account for this, Ragin recommends examining the similarities and differences of cases in context. It is not enough to forget about NATO because Poland and Hungary are both members. While that variable likely does not explain their variation on its own, it can still be an essential piece of the puzzle.

To conduct this MSSD, I will first need to choose variables to examine. I have chosen four variables that political scientists generally agree can impact state decision making. Then, I must demonstrate which variables are similar or different between the two countries. Next, I will analyze if the variables that are different between the two countries are causally related to the outcome. Finally, I will need explain how certain variables caused the difference in outcome.

The variables I will be examining are energy security, the threat each country experiences from Russia, the relationship each country has with the EU, and domestic political factors. Of course, other variables could affect how a country reacts to the invasion of Ukraine. Nevertheless, these four stand out as being particularly relevant to Hungary and Poland's current situations. First, if a state perceives a threat from another, political scientists expect a state to act to preserve its security against such a threat. Second, if a state is in a political or military alliance with other states, economic or security incentives can be different than if a state was not in an alliance, resulting in
different state action. For example, the United Kingdom may not have joined the United States in invading Iraq if it was not in NATO. Third, the domestic politics of a state can often change what action a state takes. For example, if the United States Senate committee on foreign policy was not so isolationist, the United States may have joined World War 2 much earlier. Resource security has also been an important factor that states have considered when formulating foreign policy in the past. For example, when the United States cut off Japan's oil supply before World War 2, they invaded other countries to resecure access to oil. These variables allow us to form testable propositions regarding the expected responses by Poland and Hungary to the Russian attack. I begin by discussing the role energy security has played in influencing their policies.

## Energy Background

In this section, I will first discuss the status of energy security in Europe before the invasion of Ukraine. Next, I will discuss liquified natural gas, or LNG, how it works, and background of its current usage in Europe to give context on European natural gas infrastructure that will be important to understand when discussing energy dependence later in this paper.

## Energy security

In 1913, Winston Churchill told the British parliament that "safety and security in oil lies in variety and variety alone." The same is true for all kinds of energy imports that comprise a large portion of a country's needs. States have often tried to weaponize the economic dependence of other states to their advantage. ${ }^{5}$ In 1993, Russia cut off gas supplies to Estonia because they were unhappy with a new residency law enacted by the government. ${ }^{6}$ No country wishes to completely depend on another country for imports of a critical good, as it leaves them vulnerable.

The World Energy Council defines the idea of the energy trilemma as governments balancing energy security, environmental sustainability, and energy equity. ${ }^{7}$ Ozawa and Iftimie argue that this trilemma can help explain why certain governments choose different courses of action based on their economic profiles, resource endowments, and geographic circumstances. ${ }^{8}$ For example, they write that "a highly industrialized resource-poor state such as Germany will prioritize security of

[^0]supply more than a resource-rich country such as Denmark (hydrocarbons and wind)." ${ }^{9}$ These concepts alert us to the likelihood that a state's degree of energy dependence on another will influence its foreign policy.

Energy infrastructure in Europe has not always followed economic incentives but has instead followed security concerns. Russia cares most about selling its natural resources to the largest economies in Europe as they purchase the most. Smaller countries in the East are less relevant in terms of total export value. When Russia and importing countries construct pipelines to transport natural gas, such pipelines are the cheapest to construct when they go overland directly to the buyer. However, land-based pipelines are subject to the control and influence of the countries they pass through. Therefore, Russia and its purchasing partners prefer building more expensive underwater pipelines to maintain security over their operations, such as Nord Stream and TurkStream. ${ }^{10}$ Germany prefers having the Nord Stream pipeline run underwater directly between Russia and Germany, not because it makes the most sense economically, but because they do not want their energy security to rely on neighboring states.

At the start of the war, as general European dependence on Russian energy was high, Europe had few options to pressure Russia to halt its war in Ukraine. Europe was in a poor strategic position. ${ }^{11}$ It was reliant on Russia for its energy and could not afford to have the supplies cut off. Adding strength to Russia's position were its efforts to diversify its economy since the invasion of Crimea in 2014. Thanks to construction of

[^1]LNG terminals to sell gas to China, India, and other countries, Russia could likely withstand significant European sanctions.

## LNG

Liquified natural gas (LNG) is how natural gas is transported on tanker ships. Many argue that expanding LNG infrastructure is critical to help wean the EU off Russian energy exports. However, it is far from that simple. First, the EU has already established ambitious climate goals for their energy consumption, and LNG expansion would threaten those goals. One report from the Natural Resources Defense Council found that "using LNG to replace other, dirtier fossil fuels, is not an effective strategy to reduce climate-warming emissions. In fact, if the LNG export industry expands as projected, it is likely to make it nearly impossible to keep global temperatures from increasing above the 1.5 degrees Celsius threshold for catastrophic climate impacts." ${ }^{12}$ Creating the infrastructure to enable LNG exports and imports is difficult. The gas needs to be liquified by cooling it to -163 degrees Celsius before it is transported by ship to a regasification terminal, where the liquid must be warmed back up before it can be injected into a pipeline. These terminals require permits, environmental impact assessments, large amounts of capital, and lots of construction time. ${ }^{13}$ The difficulty of infrastructure construction makes land-based LNG terminals not an ideal solution for the EU to solve its short-term energy crises, while its environmental impacts make it a poor solution for the EU's long-term energy goals.

One alternative to land-based regasification plants is Floating Storage Regasification Units, or FSRUs. FSRUs are large, specialized ships that can dock at a port and regasify LNG to be directly inserted into a country's energy infrastructure. Building an FSRU can take up to three years and cost $\$ 300$ million. ${ }^{14}$ This cost and timeline are much shorter than land-based terminals because while FSRUs require some port infrastructure for exporting natural gas, they do not require the "extensive berthing, piping, storage tanks, and associated infrastructure required for conventional LNG import terminals." ${ }^{15}$

At the end of 2021, there were four active FSRUs in Europe in Croatia, Lithuania, Italy, and Kaliningrad. ${ }^{16}$ Since the war in Ukraine began, multiple EU countries have begun seeking FSRUs to contract to expand their LNG capacity. Unfortunately, there are few available: At the end of 2021, there were only 48 total FSRUs worldwide. ${ }^{17}$ The small supply of FSRUs makes it difficult for countries to quickly expand their LNG import capacity. However, as demonstrated later in this paper, most EU countries except for Hungary have successfully cut off Russian natural gas imports. The EU is not out of the woods yet, however, and likely still needs to expand its LNG infrastructure further to protect itself from increased global demand and future harsh winters that could threaten the capacity of its current infrastructure. ${ }^{18}$

[^2]
## Responses to the invasion of Ukraine

The dependent variable in this research is Hungary and Poland's response to the war in Ukraine. As this section will demonstrate, there is significant deviation on this variable between the two responses. To demonstrate this deviation, I look at Hungary's decisions to threaten to veto multiple EU sanction packages, both countries public statements, both countries level of financial support for Ukraine, as well as some other policies implemented by both countries. By comparing the two, Poland has been much more supportive of Ukraine than Hungary has. After this discussion, I will begin examining the four variables outlined above that may influence this divergence in the dependent variable: energy policy, threat perception, relationship with the EU, and domestic political factors.

## Hungary's response

Hungary's response to the war in Ukraine has been neutral. It has stifled EU efforts to support Ukraine, but has not aided Russia in its invasion either. Since Russia invaded Ukraine, the EU has attempted to pass multiple policies to help Ukraine, many of which Hungary has vetoed or threatened to veto to secure concessions from the EU. On December $6^{\text {th }}, 2022$, Hungary vetoed an 18 -billion-euro aid package from the EU to Ukraine. ${ }^{19}$ One member of the EU parliament said, "Viktor Orbán is abusing the veto like no one before him... He even takes funds for Ukrainian hospitals for this." 20 "This" likely means a bargaining chip for Hungary to use in its negotiations with the EU over its threat to suspend regular EU funding to Hungary due to democratic backsliding and

[^3]mismanagement of EU money. After Hungary vetoed, Prime Minister Orbán said that the veto was not about Hungary's opposition to supporting Ukraine financially but instead was a statement about the EU's general financial structure. He said that the aid was "not the solution. If we continue to go down the road towards a debt community, we will not be able to turn back. ${ }^{" 21}$ However, this was most likely not the real reason, Just six days later, Hungary lifted its veto of the aid package in a deal with European Council that would unfreeze 5.8 billion euros in post-covid recovery funding for Hungary. ${ }^{22}$ Hungary's initial veto was likely a hardball tactic to secure those funds. ${ }^{23}$ On December $22^{\text {nd, }} 2022$, the EU executive overruled the agreement between the EU country ambassadors and Hungary and said it would freeze all 22 billion euros of cohesion funds for Hungary, including the 5.8 billion euros previously unfrozen, due to concerns about Hungary's democratic backsliding. ${ }^{24}$

On January $27^{\text {th }}, 2023$, Victor Orbán announced that Hungary would veto any EU sanctions against Russia that affect nuclear energy. ${ }^{25}$ Hungary is not the only EU country whose nuclear fuel comes from Russia. Bulgaria, Czechia, Finland, and Slovakia all operate Russian-made nuclear reactors. ${ }^{26}$ Hungary has consistently opposed EU actions that would affect its ability to afford energy supplies, with the foreign minister stating that they will not accept EU sanctions that threaten its energy security. ${ }^{27}$ Foreign minister Péter Szijjarto said on January $23{ }^{\text {rd }}$ that "We will never accept a single

[^4]decision that would even slightly limit Hungarian-Russian nuclear cooperation. It would put the security of our national energy supply at risk, and nobody should expect that from us." ${ }^{28}$

Hungary has been clear in their overall opinion on the war in Ukraine through its press statements. On May $31^{\text {st }}, 2022$, Hungary’s President Katalin Novák posted on Facebook that Hungary "unequivocally condemns the Russian aggression and the armed invasion of Ukraine. We demand the investigation of all war crimes and plea for an adequate punishment on those who committed these barbaric acts against mankind." ${ }^{29}$ While the Hungarian government does not support the invasion, Prime Minister Orbán has been clear in his opinion that the EU's general approach to the war in Ukraine is misguided. In February of 2023, he reemphasized that it is the EU's fault that the war has escalated to a larger conflict through the creation of sanctions and a general escalation of tensions. ${ }^{30}$ Orbán reiterated Hungary's commitment to providing humanitarian aid to those affected in Ukraine while not doing away with Hungary's relationship with Russia, as that would be "contrary to our national interests." Hungary sees sanctions and western military aid to Ukraine as an escalation of the war that does not help bring it to a peaceful conclusion. Orbán recommended that the West rescind its sanctions and revert to having strong economic ties with Russia because "without relations, there will not be a ceasefire nor peace talks." ${ }^{31}$

Another important example of Hungary's difference in response to the invasion of Ukraine compared to Poland and other EU countries is its refusal to provide any

[^5]military aid to Ukraine or to allow military aid from other countries to move across its borders. ${ }^{32}$ Hungary is the only country in the EU not to have supplied Ukraine with any military aid. ${ }^{33}$ On the other hand, Hungary has delivered humanitarian aid to Ukraine and has agreed to activate the European Peace Facility, which allows the EU to finance the purchase and delivery of military weapons to Ukraine. ${ }^{34}$ To try to maintain its relationship with both Russia and the EU, Hungary has chosen to be neutral in the war.

## Poland's response

In contrast to Hungary, Poland has been one of the strongest supporters of Ukraine in the EU since the invasion. It has accepted over 1.5 million refugees since the invasion began, significantly more than any other EU country. ${ }^{35}$ When the EU was debating where to set the price cap on Russian oil, Poland was fighting for the lowest price of any EU country to do the most damage to the Russian economy. ${ }^{36}$ Poland also has the second largest number of bilateral commitments to support Ukraine of any country in the EU as a percentage of GPD with .63 per cent, much higher than Hungary's .03 per cent. ${ }^{37}$ The Atlantic Council, an American think tank that promotes European American cooperation in international affairs, has called Poland the leader of the EU in terms of its response to the invasion. ${ }^{38}$ The Polish government has also been clear in their public statements admonishing Russia and supporting Ukraine. For

[^6]example, in January 2023 Polish President Andrzej Dude said "do we allow countries to be enslaved by tyrants like Putin who deny all democratic rules, who want to introduce terror, who try to enslave others and take advantage of their own potential for their own benefit? Or do we think that the free world can progress and every country has the right to self-determine? $?{ }^{39}$ Duda mentioned Poland's history with Russia that likely informs their strong views, saying that "Poland was partitioned for 123 years. Parts of Poland were under Tsarist rule, so we're perfectly aware what is happening. So that's why we're defending ourselves." These public statements, along with Poland's firm monetary commitments and military donations, demonstrate its firm support for Ukraine.

[^7]
## Energy

Before the invasion of Ukraine, many researchers argued that Eastern European countries were too dependent on Russian energy imports, especially natural gas, and would not be able to find alternatives if Russia threatened to halt exports. ${ }^{40}$ However, these researchers severely underestimated how forcefully EU countries would react to the invasion of Ukraine to upgrade their energy infrastructure, how quickly such upgrades could be completed, and how strong the political appetite was to do so. This section of the paper will first analyze Hungary and Poland's energy imports and infrastructures and will demonstrate why Hungary's dependence on Russian energy exports is much greater than Poland's. This is followed by a brief discussion of other Eastern European countries which were entirely or almost entirely reliant on Russian natural gas before the war in Ukraine, and of how they completely or almost completely cut off Russian gas imports in just two years. This analysis demonstrates that while some countries have had an opportunity to cut off Russian energy imports in two years, Hungary has not. This section unfortunately uses data from both 2020 and 2021. While of course data will be different between these two years, I was unable to find sources for just one year for each statistic and chose to cite mainly the International Energy Agency's statistics when possible due to their credibility.

[^8]
## Hungary



Figure 1: Hungarian energy production, TES (total energy share), and TFC (total final consumption) in 2020. ${ }^{41}$

As of 2021, Hungary's energy imports are mainly of natural gas and oil, with natural gas accounting for $35.3 \%$ and oil for $30.6 \%$ of Hungary's total energy consumption. ${ }^{42}$ In 2020, Hungary produced $41 \%$ of its energy domestically, $39 \%$ of which was nuclear. ${ }^{43}$

This nuclear energy is produced by one nuclear plant, the Paks NPP. ${ }^{44}$ The current four units at Paks are set to close as their operating licenses expire in 2032, 2034, 2036, and 2037, respectively, as they reach the end of their life cycles. ${ }^{45}$ As of 2020, the plant produced 1,916 MW. It is essential for Hungary's energy supply that these units be replaced to maintain some diversity of energy supply and to achieve its goal of becoming carbon neutral by 2050. In 2014, the Hungarian and Russian governments signed an agreement to construct two new units at the site, each with the capacity to produce $1,200 \mathrm{MWe} .{ }^{46}$ This expansion would create more energy than the

[^9]existing plant's output of $2.0 \mathrm{GW} .{ }^{47}$ Russia has agreed to finance 80 per cent of the project's cost up to 10 billion euros, with Hungary covering the other 20 per cent. ${ }^{48}$ Hungary currently does not produce or process its own nuclear fuel. It purchases nuclear fuel solely from Russia, has a two-year reserve of fuel on-site, and has the regulatory framework in place to diversify its nuclear fuel sources in the future. ${ }^{49}$

In 2020, Hungary consumed 10 billion cubic meters (bcm) of natural gas, its largest energy source. ${ }^{50}$ That same year, $95 \%$ of Hungary's gas imports came from Russia. ${ }^{51}$ Natural gas consumption accounts for $33 \%$ of Hungary's total energy use as of $2020,34 \%$ of which is used by residential buildings. ${ }^{52}$ In September 2021, Hungary agreed to a 15-year gas supply agreement with Gazprom, Russia's state-run natural gas company, to supply it with 4.5 bcm a year. ${ }^{53}$ According to the international energy agency, the Turkstream and Balkan Stream pipelines will allow more gas to be transported directly to Hungary from Russia without passing through Ukraine. ${ }^{54}$

Hungary does have limited options to begin to move away from Russian gas. The new Krk LNG terminal in Croatia has a capacity of 2.6 bcm , giving Hungary some limited access to foreign markets. ${ }^{55}$ The terminal is expected to be expanded to a capacity of 6.1 bcm by the 2024-2025 winter, a much larger capacity than Croatia needs, allowing it to export more gas to Hungary and others. ${ }^{56}$ Two interconnections

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47 IEA 2022a, 111.
48 IEA 2022a, 114.
49 IEA 2022a, 116.
50 IEA 2022a, 133.
51 IEA 2022a, 132.
52 IEA 2022a, 133.
53 Elliott, "Russia Begins Extra Gas Flows to Hungary on Top of Contracted Volume."
54 IEA 2022a, }132
55 "Croatia's Floating LNG Terminal Starts Commercial Operations."
5 6 \text { Patricolo, "Expansion of the Krk LNG Terminal Can Be Completed for the Gas Year 2024-2025."}
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bordering Serbia and Romania that have historically been used to export gas from Hungary have been recently upgraded to allow for the import of gas as well. ${ }^{57}$ These connections help open Hungary to a diversification of import methods, even if some of it will still come from Russia. Hungary has an interconnection point on the border with Austria giving it access to western European markets, but its capacity is only $1.2 \mathrm{bcm} .{ }^{58}$ Domestically, the New Energy Strategy plan 2030, or NES, written by the Hungarian Government in 2012 predicts that Hungary will increase its production of natural gas to 2.4 bcm in 2030 but it does not explain how. ${ }^{59}$ The IEA finds that Hungary "is likely to remain heavily, and increasingly, reliant on natural gas imports through 2030, and beyond." ${ }^{60}$

Currently, Hungary has a policy called the Universal Service Scheme for natural gas supply, which allows small gas consumers, both residential and industrial users, to purchase natural gas at a regulated price. This policy is intended to prevent market shocks and to keep prices low for Hungarian consumers. The IEA points out, however, that simply subsidizing gas prices for consumers discourages their investment into more sustainable heating infrastructure and keeps consumers relying on Russian gas.

As of 2020, Hungary domestically produced seventeen thousand barrels of crude oil a day, or $17 \mathrm{~kb} / \mathrm{d}$, while being a net importer of $123 \mathrm{~kb} / \mathrm{d}$. ${ }^{61}$ Fifty-five percent of oil consumption was used for transportation and $42 \%$ for industry in 2020. ${ }^{62}$ It consumed $163 \mathrm{~kb} / \mathrm{b}$, equal to about 9.3 million tons in 2020 . Hungary is expected to become
increasingly dependent on oil imports as an expansion in domestic production is not expected, while demand is expected to continue to increase. ${ }^{63}$ Hungarian dependence on Russian oil remains high, but it has been reduced in recent years. From 2010 to 2020, dependence on Russian oil dropped from $97 \%$ of total imports to $64 \%$, or $78.7 \mathrm{~kb} / \mathrm{d}$. ${ }^{64}$ Hungary has announced investments that look like they will increase dependence on Russian oil in the future. At the end of 2022, Hungary and Serbia announced plans to construct a 128 km long oil pipeline from Hungary to Serbia to allow Serbia access to cheap Russian oil. ${ }^{65}$

Unlike natural gas, Hungary currently has access to alternative oil sources that could replace Russia's imports entirely. Hungary imports oil from Croatia through the Adria pipeline, whose Hungarian section has a capacity of 14 million tons a year, much more than Hungary's total yearly oil consumption. ${ }^{66}$ However, it is currently unclear what capacity Hungarian refineries have to process non-Russian crude oil or what the cost would be to upgrade them. Different refining techniques are needed to refine different oil blends into oil products. Szijjártó claimed on May $11^{\text {th, }}$ 2022, that it would cost between 500 and 550 million euros to upgrade existing refineries to be able to process enough non-Russian oil to stop importing from Russia. ${ }^{67}$

Just six days later, Szijjártó stated on Facebook that the cost to completely modernize Hungary's electricity structure would cost between 15 and 18 billion euros. ${ }^{68}$ This statement underscores the fact that the various elements of the Hungarian energy

63 IEA 2022a, 146.
64 IEA 2022a, 146.
65 Derewenda, "Preparation for New Serbia-Hungary Oil Pipeline Begins - CEENERGYNEWS."
66 Honchar, "Hungary Can Switch to Non-Russian Oil in Less than a Year, Energy Expert Claims."
67 Honchar.
68 "Hungary Still Has No Acceptable Proposal from EU on Russia Oil Sanctions -Minister."
plan are ultimately tied together. While it certainly would cost far less than that amount to transition away from Russian oil and natural gas, Hungary must either construct a new nuclear power plant or source more electric power elsewhere. Adding that cost to the equation makes the $€ 15$ billion price tag a reasonable estimate.

## Poland



Figure 2: Polish energy production, TES, and TFC in 2020. ${ }^{69}$
In contrast to Hungary, Poland's main energy source is coal, making up 40.6\% of its total energy supply. ${ }^{70}$ Poland's use of coal has been declining, down from $54 \%$ in 2010. ${ }^{71}$ Most of this reduction has come from lessened demand from coal-fired electricity and heat generation plants. ${ }^{72}$ As of 2020, Poland produced $93 \%$ of the coal it used. ${ }^{73}$ While Poland plans to reduce coal usage to help achieve climate targets, it still sees coal as being a key player in its energy sector through 2050. ${ }^{74}$ The goal of its "Energy Policy of Poland 2040" is to reduce coal's share of electricity generation to between $11-28 \%$ by $2040 .{ }^{75}$

[^10]The country's next largest energy sources are oil, with $29.6 \%$, and natural gas, with $17.4 \% .{ }^{76}$ Poland imports $97 \%$ of its oil and $80 \%$ of its natural gas. ${ }^{77}$ Poland plans to expand natural gas infrastructure to help transition away from coal. The government estimates that natural gas consumption will increase from 21.3 bcm in 2020 to between 27.4 and 31.6 bcm in 2030. ${ }^{78}$ From 2010 to 2020, Poland's natural gas imports rose from $63 \%$ to $72 \%$ of total domestic supply as demand grew and domestic production shrank. ${ }^{79}$ In 2020, Poland imported 9.0 bcm of natural gas from Russia, just over half of its total natural gas imports.

In April of 2022, Gazprom halted sending natural gas to Poland because they refused to pay for the gas in Russian rubles, but Poland quickly secured alternative sources. ${ }^{80}$ With the opening of the LNG regasification terminal in 2016 and expansions of interconnection infrastructure with other EU countries, Poland's natural gas supply is becoming more diversified. ${ }^{81}$ The share of Poland's gas supply coming from LNG has risen from $8 \%$ in 2016 to $22 \%$ in $2020 .{ }^{82}$ Poland announced in 2022 that it was doubling the capacity of its planned FSRU fleet due to interest from Slovakia and the Czech Republic. ${ }^{83}$

On September $27^{\text {th }}, 2020$, the Baltic Pipe between Norway and Poland opened. ${ }^{84}$ The pipeline has an annual capacity of 10 bcm , while the Norwegian government has

[^11]agreed to sell 2.4 bcm per year to Poland's PGNiG, around 15\% of Poland's total natural gas consumption. ${ }^{85}$ In January of 2022, the Norwegian Petroleum Directorate estimated that the country would produce 118 bcm in 2026 , lower than their current production of about 122 bcm , but still more than enough to supply Poland and other EU countries. ${ }^{86}$ With the construction of the Baltic Pipe, Poland has easy access to Norwegian gas for the foreseeable future.

After being cut off from Gazprom natural gas in April, Poland could still fill their nationwide natural gas storage by the end of May. ${ }^{87}$ Poland's natural gas storage can hold 3.2 bcm , and PGNiG has announced plans to expand that capacity to $4 \mathrm{bcm} .{ }^{88}$ As shown in Figure 1, Poland has routinely filled its natural gas storage capacity every year around September. However, in 2022 Poland did so in June, even after being cut

[^12]off from Gazprom. Starting in January of 2023, its reserves have begun being used, and as of March $8^{\text {th, }} 2023$, they are at about $66 \%$ of capacity.


Figure 3: Polish natural gas storage information from March 2017 to March 2023. ${ }^{89}$

As of 2020 , oil is responsible for $92 \%$ of the country's transport energy demand and $27 \%$ of its industrial energy demand. ${ }^{90} 70 \%$ of imported oil came from Russia in $2020 .{ }^{91}$ Since the invasion of Ukraine, Poland has been able to make a rapid pivot and is now receiving none of its oil from Russia. $10 \%$ of its oil had been coming from Russia through the Druzhba pipeline, but Russia halted exports the day after Poland delivered its first Leopard tanks to Ukraine. ${ }^{92}$ PKN Orlen, a Polish oil refining company, had stated that they would have completely cut off Russian oil earlier if they could have. However, that would have voided their contract with the Russian supplier and led to

[^13]fines. ${ }^{93}$ The CEO of PKN Orlen stated that the company is prepared to handle an abrupt discontinuation of $10 \%$ of the country's oil supply by relying on oil from other sources. ${ }^{94}$

To help solidify their energy supply in the future, Poland has also signed an agreement with the American company, Westinghouse Electric Company, to begin consntructing the first nuclear power plant in Poland. The plant is expected to start construction in 2026 and begin producing power in 2032. ${ }^{95}$ Poland has also increased its use of renewable energy from $9.5 \%$ of its total energy use in 2010 to $16 \%$ in $2020 .{ }^{96}$ In just two years, Poland has been able to cut out Russia from its energy imports completely. While Poland is already importing enough non-Russian energy to sustain itself, it continues to expand its infrastructure to solidify its independence, has begun transitioning away from coal, and is helping neighboring land-locked countries gain access to non-Russian energy.

## Hungary and Poland Compared

Hungary and Poland could not be more different in their current energy situation in relation to Russia. Poland has completely cut off Russian imports of both natural gas and oil without imposing rationing. Their expansion of LNG import capacity, their plans to construct their first nuclear reactor, and their rapidly expanding investment in renewable energy show that Poland can easily power itself and support powering its neighbors without Russian energy.

[^14]Hungary is in a much more difficult situation. While transitioning to nonRussian oil seems possible through the Adria pipeline if significant investments are made to increase refining capacities, the same cannot be said for natural gas and nuclear. Hungary's dependence on Russian gas is extensive, and building infrastructure to allow Hungary to import ample amounts of LNG from other countries to cut off Russian imports entirely is difficult to fathom in the short term.

In terms of nuclear energy, while Hungary does potentially have the option to move away from the Russian nuclear industry, such a move comes with lots of complications. Their easiest path forward is certainly to continue to build Paks 2 with an opening expected in $2032 .{ }^{97}$ Funding has already been secured, the EU has already conducted its environmental impact statement and signed off on the construction, and the extensive design work as already been completed. However, there are western companies, such as the Westinghouse Electric Company that is working on constructing the first nuclear power plant in Poland, that would likely pounce on the opportunity to construct Hungary's new nuclear plant.

However, transitioning to a western nuclear company comes with many complications for Hungary. First, Hungary would need to secure financing equal to the current financing being offered by Russia. While the EU or the United States would perhaps fund such an investment to help their NATO ally become more independent of Russian energy, such an offer has not been made publicly. United States based funds

97 "Hungary Expects Paks II by 2032, Plans Fresh Paks Operating Extension : New Nuclear - World Nuclear News."
have committed four billion dollars in loans to support Poland's new nuclear plant, and potentially would do the same for Hungary. ${ }^{98}$

Second, such a transition would require new construction plans and a new environmental impact assessment from the EU and the Hungarian government. The Hungarian and Russian governments initially agreed to construct Paks 2 in 2014, and currently expect it to be operational nineteen years later in 2032. With the last section of the current Paks plant set to expire in 2037, Hungary does not have much leeway to delay the opening of their new plant. If they were to switch their plans and work with a western company, they would be on a very short timeframe to complete the project, but if Westinghouse's expected timeline for their Polish plant could be replicated in Hungary, such a timeline would be possible but tight.

Third, if Hungary was to make the switch to a western supply of their nuclear power, Russia may retaliate by refusing to support their current nuclear plant. Nuclear plants built on Russian technologies require specific parts and maintenance capabilities supplied by Russian companies. ${ }^{99}$ While some non-Russian companies have developed the ability to recreate some Russian technologies and parts to service Russian nuclear plants, it is unclear if Hungary would be able to fully service their plant's current needs without Russian companies. If they are not, having to shut down the current Paks plant before its scheduled decommission date would be catastrophic for their energy supply.

If Hungary was to completely cut off Russian energy imports, they would need a complete overhaul of their energy infrastructure; over a $\$ 10$ billion loan to construct

[^15]the new plant, a new source of nuclear fuel, new natural gas pipelines with increased capacity that source from newly constructed LNG terminals also with larger than normal capacities, funds to retrofit their oil refineries to process non-Russian fuel, and Croatia to greatly expand their oil imports to import through the Adria pipeline. And if they could accomplish all of this, they would likely still have to ration oil and natural gas before infrastructure upgrades could be complete.

In this way, energy dependence must be thought of both in terms of current and future dependency. Hungary could certainly completely cut off Russian energy imports today, but the cost on their energy grid would be catastrophic, and the future benefits of not being dependent on Russia would likely not be worth the immediate costs. Hungary must balance these interests, their current energy supply and future energy dependence, when deciding what actions to take. Of course, other EU countries must also balance their current energy supply versus their future dependence when making their decisions, but for countries such as Poland, the short-term cost associated with cutting off Russian energy was minimal, making their decision much easier. Because Hungary's short-term impacts would be extreme if they cut off Russian energy imports entirely, they are more likely to opt for a slower transition.

However, Hungary could potentially completely cut off Russian oil without an unbearable immediate cost because they have been slowly diversifying away from Russia oil in the recent years. Therefore, we must ask why they have not done so. First, even if they were to do so, they would still rely on Russia for their other energy sources. Second, it would likely cost Hungary over $€ 500$ million to upgrade their refineries to process other blends of oil. Third, the oil they purchase through Croatia will be more
expensive than the oil they purchase from Russia because it must arrive through seaports rather than the existing land-based pipelines. Given these factors, it does not make sense for Hungary to fully transition away from Russian oil without financial support from the EU. Even then, fully transitioning away from Russian oil may upset the Russians and jeopardize the financing and construction of their new nuclear power plant, a risk Hungary might consider too great. Therefore, Hungary understandably is resistant to EU proposals that would increase their energy costs without providing clear alternatives.

## Other EU Countries

In this section I discuss the responses that other EU countries have made to reduce their reliance on Russian energy. Many EU countries that were dependent on Russia for natural gas imports have already made significant efforts to end Russian imports, mainly through an expansion of LNG capacity, an option that Hungary does not have currently. Additionally, other EU countries that do not have easy alternatives for natural gas or oil imports, such as Slovakia, have joined Hungary in their opposition to EU energy sanctions, adding evidence to argument that such opposition can be based on strategic constraints rather than political expediency.

In 2013, Lithuania was $100 \%$ dependent on Russian imports for its natural gas supply. ${ }^{100}$ As of April 2022, it has completely cut off Russian imports from its interconnection with Belarus, and is now mainly relying on LNG imports. ${ }^{101}$ In 2019, Estonia imported $100 \%$ of its natural gas from Russia. ${ }^{102}$ As of December 31 ${ }^{\text {st }}, 2022$,

[^16]Estonia banned the import of all Russian natural gas. ${ }^{103}$ On August 31 ${ }^{\text {st }}$, 2022, Estonia completed the first stage of construction of their LNG terminal in Paldiski that allows FSRUs to dock to import natural gas. ${ }^{104}$ In 2017, Latvia was $100 \%$ dependent on Russia for natural gas imports. ${ }^{105}$ Since January $1^{\text {st }}$ of 2023, Latvia has banned the import of natural gas from Russia and is now receiving imports from the Klaipeda LNG terminal in Lithuania. ${ }^{106}$ Bulgaria imported $77 \%$ of its natural gas from Russia, just up until Russia stopped exporting it due to Hungary refusing to pay in rubles in April of 2022. ${ }^{107}$ Bulgaria had economic troubles during the winter due to low natural gas supplies but has secured a new agreement with Turkey to import natural gas from Turkey's LNG terminals for 1 bcm a year, enough to be comfortable without Russian gas. ${ }^{108}$ From 2015 to 2020, the Czech Republic imported $100 \%$ of its natural gas from Russia. ${ }^{109}$

Since 2020, the country has replaced its Russian imports with Norwegian and overseas LNG imports that are imported through an LNG terminal in the Netherlands. ${ }^{110}$ This has allowed the Czech Republic to completely cut off Russian imports as of February 2023. ${ }^{111}$

Slovakia is another EU country, which, along with Hungary, has had a difficult time finding easily accessible alternatives to Russian natural gas. It has therefore agreed to continue to purchase Russian gas with rubles to comply with the Russian demand that

[^17]all EU countries do so in order to prop up the value of the ruble. ${ }^{112}$ Slovakia is still importing Russian gas in high volumes and has not announced a clear plan to cease doing so. ${ }^{113}$ However, Slovakia and Poland have constructed a new natural gas interconnection allowing Slovakia to import up to 4.7 bcm of natural gas each year. ${ }^{114}$ This interconnection alone is almost enough to cover all of Slovakia's natural gas needs, as they consumed 5.5 bcm in 2021. ${ }^{115}$ While the interconnection does have a large capacity, it is still extremely difficult to secure LNG supplies in the current global market, which could explain why Slovakia has still not cut off Russian gas completely. Regarding oil imports, Slovakia joined Hungary in opposing EU sanctions on Russian oil, with their economy minister justifying the decision by pointing to the several years required to make their oil refineries capable of processing oil from non-Russian sources. ${ }^{116}$ Slovakia's difficulties in finding alternatives to Russian energy support the argument that Hungary is opposing energy sanctions out of economic necessity rather than political expediency.

Overall, my analysis of Eastern EU countries demonstrates that countries whose infrastructure and geography allow them to cut off Russian exports have, and those countries who are in a much more difficult energy security position have not. Slovakia and Hungary, while very different countries politically, are both standing up for their economic self-interest by opposing EU sanctions.

[^18]
## Alternative Explanations

In this section I discuss three other alternative explanations for the variation in response of Hungary and Poland: threat perception, relationship with the EU, and domestic political factors. I find that there is not enough variation between the two countries in terms of threat perception or their relationship with the EU to explain their difference in response. Domestic political factors are more difficult to fully account for, but my research suggests that Hungary and Poland's leaders are responding to reasonable strategic constraints created by their local politics.

## Threat Perception

Balance of threat theory argues that states formulate important aspects of their national security policy in response to threats. The theory deviates from the standard balance of power theory by arguing that states balance against threat from other states or alliances rather than just power. ${ }^{117}$ To Walt, threat is a function of aggregate power (as it is in balance of power theory), geographical proximity, offensive power, and aggressive intentions. ${ }^{118}$ Next, I demonstrate why none of these elements of threat explains the difference in response by Poland and Hungary to the Russian attack on Ukraine in 2022. Briefly, Poland and Hungary are equally threatened by Russia, which implies that the level of threat Russia poses to their security is unable to explain the different responses adopted by these two countries to that threat.

First, Russia's aggregate power is identical as far as Poland and Hungary are concerned. Russia's economy, population, natural resources, and overall power is the
same in terms of threat to both countries, so it cannot explain their different responses. There could be a difference in perception of that power between Poland and Hungary, meaning that one could believe Russia's economy or military is much weaker than it appears, but such a difference in perception is extremely unlikely due to the centralization of intelligence within the EU and the public nature of Russia's aggregate power.

Second, there is also no variation on the geographical proximity variable. The geographical distances between Poland and Russia and between Hungary and Russia are roughly the same. Both Poland and Hungary border Ukraine and neither directly borders the main Russian landmass. Poland does, however, border the Russian enclave of Kaliningrad. While the enclave is defended extremely well with air and coastal defense systems, its utility in supporting land invasions is limited. One report from 2022 detailed how Kaliningrad's main offensive utility would be to cut off ground access for the rest of NATO to the Baltic states if Russia was to launch an invasion of Estonia. ${ }^{119}$ Kaliningrad does not have the infrastructure currently to support a large enough army to threaten Poland with a land invasion, especially when approximately 10,000 US troops are stationed there. ${ }^{120}$

Third, Poland and Hungary are in the same position regarding a potential offensive Russian invasion. According to Walt, the difference between offensive power and aggregate power is that offensive power is "the ability to threaten the sovereignty or territorial integrity of another state at an acceptable cost. ${ }^{121}$ It is doubtful, especially

[^19]after the slow progression of the Russian invasion of Ukraine, whether Russia's offensive power gives it the ability to attack either Poland or Hungary. Besides, both are members of NATO and the EU and therefore are assured protection from their NATO allies. It seems reasonable to assume that Russia's offensive power does not give it the ability to invade either.

Fourth, given Russia's invasions of Ukraine and its operations in other former Soviet Republics after the end of the Cold War, both should assess Russia's intentions as aggressive. Since both Poland and Hungary are NATO members, they would presumably both be protected by Article 5 of the NATO Treaty. Crossing the line and attacking a NATO member directly is a step Russia is unlikely to take as it has potential to lead to escalate to a nuclear conflict. In short, there is reason why Hungary and Poland would assess the Russian intentions differently. On this dimension, however, there is not enough variation to explain Poland and Hungary's different responses to Russia's attack on Ukraine.

## Relationship with the EU

The modern relationship between Hungary and Poland with the EU has been recently defined by the two countries' rejection of rule of law reforms sought by the EU. In 2020, Poland and Hungary worked together to veto a long-term 1.8 trillion Euro EU budget because it linked funding to member states respect for the rule of law. ${ }^{122}$ The budget eventually passed with other EU countries conceding that rule of law-based sanctions could not be triggered until the European Court of Justice rules on the legality

[^20]of the sanction mechanism. ${ }^{123}$ Since January 1, 2021, the EU has had the power to withhold EU funds from member states in cases where breaches of rule of law principles risk or affect EU financial interests. ${ }^{124}$ On September 18, 2022, the EU Commission used this new power to propose withholding funds from Hungary until Hungary implemented a number of reforms designed to uphold the rule of law. ${ }^{125}$

The EU and Poland have been in a long battle over the erosion of judicial independence in Poland, which has caused the EU to withhold over $€ 35$ billion euros of COVID-19 recovery funds. This dispute has been continuing parallel to Poland's unwavering support of Ukraine. On February $8^{\text {th }}$, 2023, Poland's Parliament passed new laws it hopes will satisfy the EU's requirements. ${ }^{126}$

Hungary and Poland have similar relationships with the EU currently, with large amounts of funding being withheld from them by the EU for failing to implement rule of law reforms. Given this similarity, it seems reasonable to conclude that their differing responses to the war in Ukraine is not being materially influenced by their current relationship to the EU. While Hungary has decided to withhold supporting Ukraine as a negotiating chip to attempt to regain some of that withheld funding, Poland has not. Polish leaders publicly acknowledged that they could take the route and veto EU initiatives to try to receive their funding, with the secretary-general of the ruling party saying, "If there is an attempt to block the payment ... and the European Commission tries to pressure us, then we have no choice but to pull out all the cannons in our arsenal and respond with a barrage."

[^21]Hungary and Poland have very similar relationships with the EU in that they are both being pressured to abandon policies undermining the rule of law and they are both quite dependent on EU economic support. There is not enough difference in their relationship with the EU for it to contribute heavily to determining their different responses to the war in Ukraine. ${ }^{127}$

## Domestic Political Factors

In this section, I attempt to discuss the domestic political factors that exist in both countries to see if their leaders are responding to reasonable strategic pressures they face domestically. There is a large sentiment in western media that Prime Minister Orbán is not making decisions based on domestic political pressures, but rather is acting in ways that Vladimir Putin wishes. For example, a politico EU article from March of 2022 discussing the upcoming Hungarian election was led by a photo of Orbán and Putin shaking hands, even as most of the article was not about Hungary's relationship to Russia. ${ }^{128}$ There are so many different factors within domestic politics that could influence a country's decision making that discussing them all is not feasible here. This section of the paper will provide some background on the domestic similarities between the two countries to demonstrate that they are reasonably similar in terms of their current political landscape. Next, I will discuss polling information on the populations from both countries. Finally, I will discuss how the opposition in Hungary has not produced alternative solutions to Orbán's energy conundrum, supporting the argument that Hungary's decision to remain dependent on Russian energy is a reasonable strategic

127 "Poland Vows Fiery Response over Blocked EU Funds - DW - 08/09/2022."
128 Bayer, "Despite Putin Ties, Hungarian PM Orbán Leads Election Field."
decision. These pieces of evidence from the domestic political arena provide strong evidence that Orbán's actions in regard to Ukraine are largely based within strategic constraints and are not simply a result of his close relationship with Russia.

The governments in Hungary and Poland have adopted very similar domestic political positions. Since they were elected, Prime Minister Viktor Orbán of Hungary in 2011, and Prime Minister Mateusz Morawiecki in 2017, the leaders of both countries have banded together to create an illiberal alliance in the EU. Both leaders have worked to roll back democratic reforms in their countries. They have eroded the independence of their judiciaries. ${ }^{129}$ Inter alia, they have both fought to diminish press freedoms by putting media regulators under political control, turning public media outlets into propaganda machines, funding private media that supports the government while threatening new taxes against or revoking licenses from unfavorable media outlets. ${ }^{130}$ As a 2021 report from the London School of Economics puts it,

Poland and Hungary are distinctive in the power dynamic that they have created between the public and private spheres. Whereas the four other cases appear to be best described as states 'captured' by rentier, private interests, Law and Justice and Fidesz seek to construct systems of patronage in which the market is dominated by a nationalist partystate. ${ }^{131}$

While Hungary and Poland's leadership clearly disagree on how to respond to the war in Ukraine, there is no evidence that such a disagreement is caused by domestic political factors.

129 Kovács and Scheppele, "The Fragility of an Independent Judiciary."
130 Wójcik, "How the EU Can Defend Media Freedom and Pluralism in Hungary and Poland," 2.
131 Cooper, "Hungary and Poland," 20.

Polling data, although from the early stages of the war, do demonstrate that Hungary's population is far less concerned with the war in Ukraine than Poland's. One poll from IPSOS in Aril of 2022 found that $90 \%$ of Hungarian residents agreed with the statement that their country should avoid getting involved military in the Ukrainian war, compared to $61 \%$ for Poland. ${ }^{132}$ In the same poll, when asked if paying more for fuel and gas because of sanctions against Russia is worthwhile to defend another sovereign country, $38 \%$ of Hungarian residents agreed compared to $76 \%$ of Polish residents. And when asked if they believed doing nothing in Ukraine will encourage Russia to take further military action elsewhere in Europe and Asia, 47\% of Hungarian residents agreed compared to $76 \%$ of Polish residents. Another poll from April conducted in Hungary showed similar findings, with $44 \%$ of respondents sympathizing with the policies of Russia, and $50 \%$ with the policies of Ukraine. ${ }^{133}$ The researchers found that even as the opposition parties in Hungary were very pro-Ukraine, their voters only marginally shared that stance. Based on these results, Orbán's decision to remain neutral in the war seems entirely reasonable. If we expect a leader in a democracy, albeit a potentially illiberal one, to make decisions reflecting the views of their constituents, then it makes sense why Orbán would decide not to intervene militarily since $90 \%$ of Hungarians support non-intervention. This evidence supports the claim that Orbán is responding to reasonable domestic political strategic constraints, and not just demands made by Putin.

[^22]To analyze the opinions of the opposition party to Orbán's decision making, I relied on debates in the European and Hungarian Parliaments. In the European Parliament, debate continues surrounding what the EU's response should be to the war in Ukraine. On February 2, 2022, the EU Parliament passed a resolution calling for "an immediate and full embargo on EU imports of fossil fuels and uranium from Russia" among other things. ${ }^{134}$ Interestingly, MEPs from the opposition parties in Hungary supported the measure, while MEPs from the ruling Fidesz party abstained from voting. ${ }^{135}$ Fifteen days later, the Hungarian government posted a press release clarifying again that while Fidesz MEPs have condemned Russian aggression and support Ukraine, they still oppose energy sanctions that are "ruining Europe's national economies." ${ }^{136}$ Records in English of the debate in the Hungarian Parliament regarding Hungary's response to the war in Ukraine are currently unavailable.

While members of the opposition party in Hungary did vote to support EU sanctions against Russian energy imports in the EU Parliament, alternative policy proposal made by the opposition-or for that matter the ruling party-outlining what Hungary should do if these sanctions are implemented were not available. It is easy for an opposition party to vote for sanctions when such a measure will not come into effect because they will not have to face the consequences of their vote. It is difficult to give the opposition credit for their argument that Hungary can and should support EU sanctions on Russian energy when they have not created a proposal for what Hungary should do when those sanctions are imposed.

[^23]
## Policy Implications

EU countries have expressed their concern for allowing one of their allies to remain beholden to Russian energy. Austria's minister of energy and environment summarized this view in November of 2022 when she said, "it is extremely worrying that Russia is involved in the critical infrastructure of an EU country." ${ }^{137}$ The legislative process in the EU has many choke points that allow two, or sometimes just one member country, to veto proposals. Hungary being beholden to Russia for its energy supply is a threat to EU cohesion and cooperation, especially considering how easy it is for one member country to veto EU actions. Hungary is in a unique position where it seeks to reap the security benefits of being in NATO and the economic benefits of being in the EU while maintaining governmental and economic ties with Russia. If Hungary is not forced in some way to make significant changes to its energy infrastructure in the next decade, it could undermine the ability of the EU and NATO to respond forcefully to future Russian aggression. While Hungary has not taken every opportunity to disrupt the EU in its support of Ukraine, it is difficult to know whether Hungary will continue to act as a "neutral" country in the future.

Once Paks 2 begins construction, Russia's leverage over Hungary will grow significantly as it will become even more difficult for Hungary to find western companies to support their modern Russian made nuclear plant. If Russia was to blackmail Hungary by threatening to stop the plant's construction or continued maintenance, it would put Hungary and the EU in an extremely uncomfortable situation. Additionally, the loan from Russia to build Paks 2 will increase the level of financial

137 Kurmayer, "Austria Loses EU Court Case against Hungarian Nuclear Power Plant."
leverage that Russia has over Hungary. Currently, the "quantifiable economic influence of Russia over Hungary is low." ${ }^{138}$ This new leverage created by the Paks 2 loan likely could become "corrosive", giving Russia a powerful lever to exert influence over Hungary in a way that "can be highly efficient in changing policy outcomes and foreign policy decisions. ${ }^{139}$ While it is unclear if such a loan being for a nuclear power plant provides unique leverage that a loan for a different project would not, because Russia does not currently have any such potentially corrosive projects in Hungary, the impact of this loan would be likely be significant regardless of what it is being used for.

In the future, international alliances should be more careful regarding the economic interdependence of their member states with outside powers. In the past, realist thinking has stipulated that states will act in their best interest to preserve their security above all else. However, as we progress into a future where security for NATO members is plentiful thanks to a weakened Russian military, an increased European appetite for military expenditures, and the continued existence of mutually assured destruction thanks to nuclear weapons, international alliances must begin to worry even more about their allies becoming economically dependent on their enemies. Russia cannot realistically threaten Hungary or another NATO country with invading them, but they can threaten to cut them off from an economic lifeline. The EU should prioritize securing funding for Hungary to transition away from Russian energy imports. This should include financing an alternative to the Paks 2 nuclear plant, upgrading oil refineries to process non-Russian oil blends, and increasing natural gas pipeline

[^24]capacities to allow Hungary more access to an expanding global LNG market. By not investing to bring Hungary back into the economic fold, the EU risks allowing one of its members to become ever more dependent on an increasingly hostile country, something that threatens to undermine the vitality and perhaps even the viability of the EU itself.

## Conclusion

Hungary and Poland have responded very differently to the war in Ukraine due to a difference in energy security resulting from very different energy infrastructures. Hungary is highly dependent on Russia currently for imports of natural gas, oil, and nuclear fuel and is reliant on Russia to construct their next nuclear plant, Paks 2. On the other hand, Poland has been able to completely cut off Russian energy imports in the last two years and is now leading the EU in supporting Ukraine. While Hungary has avenues, albeit potentially expensive ones, to stop importing Russian oil soon, their paths to stop importing Russian natural gas and being reliant on Russia for the continued production of their nuclear energy puts them in a major bind.

Hungary's continued dependence on Russian energy imports is fundamentally drive by reasonable strategic constraints including economic factors, domestic political pressures, and continent-wide energy infrastructure capacities. If it were free to transition to more reliable and affordable European alternatives, Hungary likely would. Without significant financial support from the EU, Hungary will likely remain dependent on Russia for its energy imports for the foreseeable future.

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