

Balancing Between a Green Future and Energy Security: The Difficult Path the Czech Republic Has to Consider in Light of Russian Aggression in Ukraine



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As if the COVID-19 pandemic has not been enough of a strain on the Czech Republic, the European Union (EU), and the world, the Russian escalation of its war in Ukraine has become one of the most significant events of our lifetime. Amongst the many actual and potential consequences of this war is the threat to the energy security of the Czech Republic and the EU. Years of reliance on Russian natural gas have put the EU at a strategic disadvantage.

The states dependent on hostile countries for energy are restricted with respect to what they can do to counter the state they are reliant on, as can now be seen in Europe¹. While many European countries have long been aware of the dangers of relying on Russia for gas, they have done little to limit their reliance prior to the escalation of the Russian war in Ukraine. The Czech Republic and many other EU countries find themselves wavering between further harming the environment by maintaining or increasing reliance on coal or having to absorb increased energy prices that could cripple their economies and provide funding for their main geopolitical threat: Russia.

Countries such as Germany and Austria have decided to reinstitute coal as an energy source, to soften the blow of moving away from Russian energy². Firing up these

¹ Spero, J.E. (1973) "Energy Self-Sufficiency and National Security", [in]: *Proceedings of the Academy of Political Science*, No. 31, pp. 123-125. See also: Ericson, R.E. (2009) "Eurasian Natural Gas Pipelines: The Political Economy of Network Interdependence", [in]: *Eurasian Geography and Economics*, Vol. 50(28).

² John, T. and I. Kappeler (2022) "Germany to Fire up Coal Stations as Russia Squeezes Gas Supply", [in]: *CNN*, June 19. Available [online]: <https://edition.cnn.com/2022/06/19/energy/germany-russia-gas-supplies-winter-intl/index.html>; Flemming, S. and D. Sheppard (2022) "EU Warns against Fossil Fuel 'Backsliding' as Coal Replaces Russian Gas", [in]: *Financial Times*, June 20. Available [online]: <https://www.ft.com/content/a8b179e2-b565-42b6-bb41-90aea44536e1>

“YEARS OF RELIANCE ON RUSSIAN NATURAL GAS HAVE PUT THE EU AT A STRATEGIC DISADVANTAGE

coal plants will decrease the likelihood of reaching their green goals in the coming years. Thus, an important question to consider is whether the Czech Republic should also follow this route to reduce its dependence on energy from Russia. Let us attempt to explain the risks involved with whichever path decision makers elect to go down.

The Czech Republic, with its large coal reserves, gets approximately one-third of its energy from coal³. The country also gets a significant amount of energy from gas, oil, and nuclear, with renewables making up a small portion of the energy mix⁴. The Czech Republic plans to phase out coal by 2038 at the latest, but the Russian war in Ukraine might alter this deadline⁵. This goal is in line with European goals to reduce harmful emissions that further warm the planet.

³ International Energy Agency (2021) "Czech Republic 2021 – Analysis", [in]: *IEA*. Available [online]: <https://www.iea.org/reports/czech-republic-2021>

⁴ Ritchie, H. and M. Roser (2020) "Czechia: Energy Country Profile", [in]: *Our World in Data*. Available [online]: <https://ourworldindata.org/energy/country/czech-republic>

⁵ Ibid.

The country meets its additional energy needs with oil and gas, primarily from Germany, which at this stage in the war in Ukraine still gets at least one-third of its gas and 12% of its oil from Russia⁶. This level of dependence on oil and gas from Russia is a drastic reduction from the beginning of the war, but it is unlikely Germany will be able to reduce its reliance further in the near future. Russia has also been decreasing its supply to Europe, which could lead to a harsh economic impact on Germany, the Czech Republic, and many other member states⁷. The current energy situation tied to the geopolitical reality in Europe has put the Czech Republic and other EU nations in a precarious position.

CZECH RELIANCE ON GAS

Russian natural gas is crucial to the economic prosperity of the Czech Republic. It has recently been estimated that if Russia cut off gas flow to Europe, the Czech GDP could decrease by 6%⁸. The country is moving quickly to avoid this scenario. It has recently secured gas from a Dutch LNG Terminal starting in September 2022, which will reduce reliance on Russia by one-third⁹. Furthermore, the Czech authorities are working to fill reserves in the event Russia does cut off natural gas flows¹⁰,

⁶ <https://www.economist.com/the-economist-explains/2022/05/04/how-heavily-does-germany-rely-on-russian-energy>

⁷ Moulson, G. (2022) "Russia Again Cuts Natural Gas Exports thru European Pipeline", [in]: *AP News*, June 15. Available [online]: <https://apnews.com/article/russia-ukraine-germany-canada-478f16db40c4881a8b-4f64e0c0648b30>

⁸ Elliot, L. (2022) "Russian Gas Shutoff Would Send Some EU Countries into Recession, IMF Warns", [in]: *The Guardian*, July 19. Available [online]: <https://www.theguardian.com/business/2022/jul/19/russia-gas-shut-off-eu-countries-europe-recession-imf>

⁹ <https://ceenergynews.com/lng/czech-republic-to-source-3-bcm-of-lng-annually-through-dutch-terminal/>

¹⁰ <https://www.bloomberg.com/news/articles/2022-07-19/czechs-tap-lng-as-europe-braces-for-winter-without-russian-gas>



IF RUSSIA CUT OFF GAS FLOW TO EUROPE, THE CZECH GDP COULD DECREASE BY 6%

which would impact the Czech Industrial sector as it makes up approximately 28% of the economy¹¹.

In 2019, the Oxford Institute for Energy Studies published a comprehensive report on the challenges for natural gas demand in the Czech Republic. According to the report, the Czech industry makes up only around 45% of the country's total gas consumption¹². Although this high consumption has resulted in significant investment in energy efficiency and energy-saving technologies among different industries in the country¹³, the industrial economy requires significant energy inputs. In 2017, the industry and energy sector made up 44.2% of GDP, while the service sector contributed 46.8% and agriculture 2.2%¹⁴. In addition to the industry sector contributing to a significant percentage of the Czech GDP, it also employs over a quarter of the

¹¹ European Union (2022) *Czechia*. Available [online]: https://european-union.europa.eu/principles-countries-history/country-profiles/czechia_en

¹² Princova, Z. (2019) "Challenges of Industrial Gas Demand in the Czech Republic, Poland and Slovakia", [in]: *Oxford Institute for Energy Studies*, May, p. 13.

¹³ *Ibid.*

¹⁴ *Ibid.*, p. 14



A CUT-OFF OF RUSSIAN GAS WOULD BE DETRIMENTAL TO THE INDUS- TRIAL SECTOR AND THE OVER- ALL HEALTH OF THE CZECH ECONOMY

population¹⁵. Therefore, a cut-off of Russian gas would be detrimental to the industrial sector and the overall health of the Czech economy.

The Czech chemical and fertilizer industry is an example of an industry that is essential to the health of the Czech economy, as it makes up around 4.5% of the GDP and employs approximately 2.5% of the workforce¹⁶. *“The sector is largely dependent on coal (48%) and natural gas (40%) while oil, other gases[,] and waste account for the remaining 12%”*¹⁷. A sudden cut-off of Russian natural gas would severely impact this industry, as such a high percentage of its energy comes from gas. Not only does a large percentage of energy come from gas, but it is also used in the production

of fertilizer and other chemicals¹⁸. Czech company Lovochemie has moved away from natural gas-based fertilizers in recent years, though, so this might soften the blow some if gas supplies are reduced¹⁹.

Nevertheless, losing the jobs and output of this industry would make a significant dent in the Czech GDP. Thus, the chemical industry represents an industry that, in the short term, might feel that they would be better off relying more heavily on coal to make up for a potential lack of gas from Russia. The gas used to make certain chemicals and fertilizers would not be easily replaced, but the energy needed to run other operations could be supplemented by coal in the short term.

Another important sector is the Czech steel industry. It employs around 4% of the Czech workforce and accounts for almost 4% of the GDP²⁰. Furthermore, this industry relies mainly on coal, with natural gas making up only 12% of its energy consumption²¹. Since the industry already relies so heavily on coal, it would be much easier for this sector to react to a potential cut-off of gas. This resiliency is crucial in the current geopolitical context. Unfortunately, though, the steel industry is one of the highest polluters of any industry and will continue to negatively impact the environment²².

Furthermore, the Czech glass industry is another sector that would be severely impacted by Russia cutting off gas to Europe. While it does not make up a significant

¹⁵ Ibid., p.18.

¹⁶ Ibid., p. 20.

¹⁷ Ibid.

¹⁸ Ibid., pp. 22-23.

¹⁹ Ibid.

²⁰ Ibid., p.25.

²¹ Ibid., p. 26.

²² <https://www.theworldcounts.com/challenges/planet-earth/mining/environmental-impact-of-steel-production>



WHILE COMBATING THE EXISTENTIAL THREAT OF CLIMATE CHANGE IS A PRIORITY, THE CZECH REPUBLIC WILL BE UNABLE TO INVEST IN INNOVATION WITH A CRIPPLED ECONOMY

portion of the GDP, it does supply many other important industries in the country, particularly the automotive industry²³. The ripple effect from disruption of the glass industry has the potential to be substantial, as the automotive industry makes up 9% of the Czech GDP and accounts for 24% of Czech exports. Natural gas is required to make high-quality glass, so any cut-off of gas would gut this industry and increase the car industry's manufacturing costs²⁴.

The industrial sectors mentioned above are crucial to the health and growth of the Czech Republic. A major and extended natural gas supply disruption could se-

verely cripple these and other industries, downstream, which rely on their products to operate. Not only those but all industries would see their energy costs increase dramatically, which would have negative impacts on them and, ultimately, the consumer. While combating the existential threat of climate change is a priority, the Czech Republic will be unable to invest in innovation with a crippled economy. If Russia were to completely cut off gas from Europe, the Czech Republic might be forced to revert to coal to keep these critical industries afloat.

Needless to say, this article is in no way advocating for coal as a sustainable solution, just merely pointing out possible difficult decisions that might have to be made. In the longer-term, green and sustainable solutions should be the goal.

HISTORY OF RUSSIAN MANIPULATION

With tensions rising between the European Union and Russia, there is a real risk that Russia will cut off the natural gas supply to Europe, as it has already demonstrated its openness to reducing its flows²⁵. In early September, during the writing of this article, Gazprom cut off the gas flow from Nord Stream 1, citing Western sanctions as the cause²⁶. This seems like an obvious attempt to coerce the EU into lifting sanctions and could indicate more cut-offs in the near future. Of course, it is impossible to read Vladimir Putin's mind, but one can look at the past to better understand how Russia has used gas as a political tool and what is the likelihood of it doing it again.

²³ Princova, Z. (2019) "Challenges of Industrial Gas Demand in the Czech Republic, Poland and Slovakia", [in]: *Oxford Institute for Energy Studies*, May, p. 35

²⁴ Ibid.

²⁵ Miller, J. and G. Chazan (2022) "Russian Gas Cuts Threaten to Shutter Germany Industry", [in]: *Financial Times*, July 18. Available [online]: <https://www.ft.com/content/07df3f2e-6991-4842-a047-41f2b6fb853d>

²⁶ <https://www.theguardian.com/world/2022/sep/05/russia-will-not-resume-gas-supplies-to-europe-until-sanctions-lifted-says-moscow>

In 2021, Russia was the largest natural gas exporter in the world, with gas exports making up 2% of its GDP²⁷. Russia exported 74% of its natural gas to the Organization for Economic Co-operation and Development (OECD) European countries²⁸. Therefore, losing the major European market would be painful to a country already facing harsh sanctions.

In addition, it is crucial to mention the importance of Russia exporting oil to the world. Oil makes up a larger share of the Russian GDP (at around 10%)²⁹. Therefore, the level of oil prices has a direct impact on the GDP of Russia³⁰. *“Oil exports are the key to Russia’s wealth, while gas exports and control over pipelines are important to Russia’s influence abroad”*³¹. The sanctions resulting from Russia’s most recent invasion of Ukraine could reduce the GDP of Russia by 10% in 2022 alone, with the long-term implications being even more devastating³².

²⁷ U.S. Energy Information Administration (2022) *Europe Is a Key Destination for Russia’s Energy Exports*. Available [online]: <https://www.eia.gov/todayinenergy/detail.php?id=516182>; Austrian National Bank (2022) *The Russian Economy and World Energy Trade: Dependence of Russia Larger than Dependence on Russia*. Available [online]: <https://www.oenb.at/dam/jcr:c7d95c7b-c469-4834-ac94-98554c5e6f5f/2022-04-15-russian-economy-and-world-trade-in-energy.pdf>

²⁸ <http://www.russiamatters.org/blog/numbers-where-do-russias-energy-exports-go>

²⁹ Austrian National Bank (2022) *The Russian Economy and World Energy Trade: Dependence of Russia Larger than Dependence on Russia*. Available [online]: <https://www.oenb.at/dam/jcr:c7d95c7b-c469-4834-ac94-98554c5e6f5f/2022-04-15-russian-economy-and-world-trade-in-energy.pdf>

³⁰ Rossbach, N. (2018) *The Geopolitics of Russian Energy. Gas, Oil, and the Energy Security of Tomorrow*, p. 38. Available [online]: <https://www.foi.se/rest-api/report/FOI-R--4623--SE>

³¹ *Ibid.*, p. 35.

³² DiPippo, G. (2022) “Strangling the Bear? The Sanctions on Russia after Four Months”, [in]: *www.CSIS.org*, June 22. Available [online]: <https://www.csis.org/analysis/strangling-bear-sanctions-russia-after-four-months>



PUTIN VIEWS DEFEAT IN UKRAINE AS AN EXISTENTIAL THREAT TO RUSSIA

This brutal hit to the Russian economy is already disastrous, even without the potential loss of revenues from energy exports to Europe. One could try to argue that Russia would make up for the loss of the European market by looking to the East, but they would be wrong. While Russia is making money from selling oil to China and India in the short term, it is more expensive to get it there, and Russia is steadily decreasing the amount of oil it can process³³. Also, the G7 is working towards a price cap on Russian oil³⁴. Additionally, the infrastructure to export large amounts of natural gas is not available and would take years to develop, even without crippling sanctions³⁵. Russia might still be making profits now, but this model is not sustainable. Despite this, Putin views defeat in Ukraine as an existential threat to Russia and his regime³⁶. Consequently, causing the devastation of European economies that are assisting

³³ <https://thediplomat.com/2022/06/asia-cant-save-russias-energy-sector/>

³⁴ Race, M. (2022) “Ukraine War: G7 Agrees to Impose Price Cap on Russian Oil”, [in]: *BBC News*. Available [online]: <https://www.bbc.com/news/business-62770283>

³⁵ <https://thediplomat.com/2022/06/asia-cant-save-russias-energy-sector/>

³⁶ Mearsheimer, J. (2022) “Playing with Fire in Ukraine” [in]: *Foreign Affairs*. Available [online]: <https://www.foreignaffairs.com/ukraine/playing-fire-ukraine>



RUSSIA HAS A LONG HISTORY OF USING ITS CONTROL OF GAS AND OIL TO COERCE STATES AND ACHIEVE POLITICAL OBJECTIVES

Ukraine might seem like an inevitable measure Putin feels he has to take³⁷.

Many experts did not believe Russia would do something as drastic as a full-scale invasion of Ukraine³⁸. Clearly, they were wrong. Cutting off gas revenues in the midst of a war, thus exacerbating major economic problems, might also seem rash; however, it no longer seems inconceivable. Vladimir Putin has been preparing his country to withstand economic pain in light of its neo-imperialist ambitions since the initial invasion of Ukraine in 2014 and

³⁷ Stoner, K. (2022) "Why Putin Sees Ukraine as an Existential Threat", [in]: *Los Angeles Times*. Available [online]: <https://www.latimes.com/opinion/story/2022-02-23/ukraine-russia-putin-invasion-sanctions-biden>

³⁸ Judah, B. (2022) "The Terrible Truth so Many Experts Missed about Russia", [in]: *Slate Magazine*. Available [online]: <https://slate.com/news-and-politics/2022/02/ukraine-invasion-putin-is-ruling-alone.html>

may feel that Russia is capable of handling more³⁹. Putin prepared Russia for sanctions by building up foreign exchange reserves, reducing its dependence on the U.S. dollar, developing an internal payments system, increasing economic cooperation with China, and working to increase Europe's energy dependence on Russia⁴⁰. He did not, however, count on the unity and resolve of the West⁴¹.

Furthermore, Russia has a long history of using its control of gas and oil to coerce states and achieve political objectives⁴². Russia uses "pricing policy of energy supplies, asset control, supply cuts, contractual restrictions, and alternative supply routes"⁴³ to coerce other states to follow its geopolitical agenda⁴⁴. However, the country tries to hide this fact by having its state-owned energy companies provide a commercial reason for any sudden change in the pricing situation⁴⁵. Even though there are numerous examples of this phenomenon, let us focus on only several of these to illustrate how common this strategy is for Russia and why it is relevant to the Czech Republic and the rest of Europe.

³⁹ Fisher, M. (2022) "Putin, Facing Sanction Threats, Has Been Saving for This Day", [in]: *The New York Times*. Available [online]: <https://www.nytimes.com/2022/02/03/world/europe/putin-sanctions-proofing.html>

⁴⁰ <https://www.aei.org/op-eds/how-russias-sanction-proofing-failed/>

⁴¹ Ibid.

⁴² Korteweg, R. (2018) *Energy as a Tool of Foreign Policy of Authoritarian States, in Particular Russia, Policy Department, Directorate-General for External Policies*, p. 14. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU\(2018\)603868_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU(2018)603868_EN.pdf)

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Ibid.

With respect to the Czech Republic, in July 2008, Russia significantly reduced its oil supplies to the country⁴⁶. The authorities claimed that this was because of a technical problem, but it was most likely because the Czech Republic signed an agreement with the United States to host an anti-missile radar system. In the second week of August 2022, Russia cut off oil flow to the Czech Republic, Slovakia, and Hungary because of a dispute over payments⁴⁷. The issue was resolved after a week, and the oil resumed flowing, but it certainly came at a time when the Czech Republic should be very worried about the flow being stopped for a more extended period of time⁴⁸.

Another example of Russian and possibly German meddling in gas politics is exemplified by the fact that the Czech Republic used to import close to two-thirds of its gas from Norway⁴⁹. Germany during the early 2000's wanted to get Nord Stream 1 up and running to supply gas to Europe. It is rumored that the Germans helped Russia by altering the transit fees and making it too expensive for the Czech Republic to retrieve gas from Norway. As a result, the Czechs decided to switch to Russian gas

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⁴⁶ Korteweg, R. (2018) *Energy as a Tool of Foreign Policy of Authoritarian States, in Particular Russia*, Policy Department, Directorate-General for External Policies, p. 15. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU\(2018\)603868_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU(2018)603868_EN.pdf)

⁴⁷ Eddy, M. (2022) "Russia Says Oil Flows to Three European Union Members Have Been Halted", [in]: *The New York Times*, August 9. Available [online]: <https://www.nytimes.com/2022/08/09/business/russian-oil-druzhba-pipeline.html>

⁴⁸ Reuters (2022) *Russian Oil Flows to Czech Republic Have Resumed, Pipeline Operator Says*, August 12. Available [online]: <https://www.reuters.com/business/energy/russian-oil-flows-via-druzhba-czech-republic-resume-1800-gmt-friday-pipeline-2022-08-12/>

⁴⁹ Strouhal, J. (2022) "Rusové to Vypnou Do Zimy. Jak Podle Experta Zabránit Kolapsu Evropských Plynovodů?" [in]: *Forbes*, July 14. Available [online]: <https://forbes.cz/rusove-to-vypnou-do-zimy-jak-podle-experta-zabrani-kolapsu-evropskych-plynovodu/> [in Czech]

through Nord Stream 1, which was completed in 2011⁵⁰.

Furthermore, in December 2008 and January 2009, Russia cut the gas supply to Ukraine because the President of Ukraine, Viktor Yushchenko, had shown support for Georgia in the Russian invasion of Geor-

⁵⁰ Ibid. See also: Al Jazeera (2022) *What Is Nord Stream 1 and Why Is It Crucial to Europe?*, July 26. Available [online]: <https://www.aljazeera.com/news/2022/7/26/explainer-nord-stream-1-gas-pipeline-russia-germany-europe>





gia in 2008 and had expressed the desire to join NATO⁵¹. Russia claimed that the cut in gas supply was due to disagreements on payments and pricing⁵². Regardless, Europe suffered the consequences as this occurred in the dead of winter⁵³. The Czech Republic saw a 75% decrease in gas flows and was forced to tap into reserves and look elsewhere⁵⁴.

These examples occurred on a much smaller scale compared to what would transpire if Russia were to cut off all gas to Europe today. The consequences on both sides would be markedly worse. The most recent Russian invasion of Ukraine is an attempt to destroy the liberal world order and reinstate Russia as a great power. The consequences of this aggression are far-reaching, and many have yet to be realized. It seems irrational for Russia to further hurt itself economically in pursuit of its war with Ukraine and, by extension, the West. However, it cannot be ruled out because Russia has previously used its control over energy markets for geopolitical gain.

⁵¹ Korteweg, R. (2018) *Energy as a Tool of Foreign Policy of Authoritarian States, in Particular Russia*, Policy Department, Directorate-General for External Policies, p. 15. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU\(2018\)603868_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU(2018)603868_EN.pdf). See also: Kramer, A.E. (2009) "Russia Cuts Gas, and Europe Shivers", [in]: *The New York Times*, January 6. Available [online]: <https://www.nytimes.com/2009/01/07/world/europe/07gazprom.html>

⁵² Korteweg, R. (2018) *Energy as a Tool of Foreign Policy of Authoritarian States, in Particular Russia*, Policy Department, Directorate-General for External Policies, p. 15. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU\(2018\)603868_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU(2018)603868_EN.pdf)

⁵³ Kramer, A.E. (2009) "Russia Cuts Gas, and Europe Shivers", [in]: *The New York Times*, January 6. Available [online]: <https://www.nytimes.com/2009/01/07/world/europe/07gazprom.html>

⁵⁴ Ibid.



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Moreover, Putin sees the victory of this war as a necessary condition for Russia's future. The country has been almost completely cut out of the Western World and does not seem interested in mending this decoupling. Therefore, in the Czech Republic and other European states, the quick enactment of policies aimed at diversifying energy sources could potentially reduce the



A UNITED EU HAS THE ABILITY TO NOT ONLY LEAD BY EXAMPLE IN FIGHTING GLOBAL WARMING, BUT ALSO TO PUT PRESSURE ON HIGH EMITTER COUNTRIES TO CHANGE

negative economic impact if Russia decides to cut off gas flows to Europe.

RISKS FOR REVERTING TO COAL

Global warming is an existential threat to the world, but also poses a threat to the stability, economic prosperity, and national security of the Czech Republic. Reverting to coal as a major energy source will result in increased greenhouse gasses going into the atmosphere and further heating of the planet. While the Czech Republic's coal burning does not harm the environment nearly as much as China, India, nor the United States, which burn the majority of the world's coal, it is still important to contribute to the climate goals of the EU and the world⁵⁵. Every bit counts, and it signals to the world a willingness to deal with the problem, so they should deal with it as well. The warming of the earth will further

threaten people's lives around the globe and be a destabilizing factor in Europe and the Czech Republic. As a direct result of increasing temperatures, the Czech Republic is expected to experience less rain and more extreme weather events⁵⁶.

The most problematic events for central Europe are major river flooding and droughts⁵⁷. Europe is currently facing a severe drought that is affecting the transportation of goods on rivers, raising the costs of trade, or preventing it altogether⁵⁸. The more damaging effects of climate change on surrounding regions will also negatively impact the Czech Republic. Climate change has many other negative impacts, including impacts on the global food supply, increased risk of diseases, increased political instability, and increased risk to global supply chains⁵⁹.

As climate change worsens, we can expect destabilization in the Middle East and North Africa (MENA) region, which is expected to lead to more refugee crises and further destabilization in Europe⁶⁰. Researchers found that there was a correlation between severe droughts and worsening conflicts in the Arab Spring countries prior

⁵⁶ <https://climateknowledgeportal.worldbank.org/country/czech-republic>

⁵⁷ https://ec.europa.eu/clima/climate-change/consequences-climate-change_en

⁵⁸ Wilkes, W., Wittels, J. and I. Vilcu (2022) "Major Rivers across Europe Are Drying up at the Worst Possible Moment" [in]: *Bloomberg.com*. Available [online]: <https://www.bloomberg.com/news/features/2022-08-10/europe-s-low-water-levels-threaten-rhine-river-hit-80b-trade-lifeline2>

⁵⁹ U.S. Department of Defense, Office of the Undersecretary for Policy (Strategy, Plans, and Capabilities) (2021) *Department of Defense Climate Risk Analysis to the National Security Council*, pp. 8-9. Available [online]: <https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLIMATE-RISK-ANALYSIS-FINAL.PDF>

⁵⁵ <https://ember-climate.org/insights/research/top-25-coal-power-countries-in-2020/>

⁶⁰ <https://www.wilsoncenter.org/article/climate-change-mena-current-pressures-and-future-dangers>

to the 2015 refugee crisis⁶¹. They believe that worsening droughts put further strain on already weak and vulnerable governments⁶². This, combined with other factors, helped fuel the 2015 refugee crisis that caused bitter disagreements between EU member states and resulted in many deaths among refugees trying to get to Europe⁶³. This refugee crisis led to increased voting for far-right parties and fueled the Brexit movement in the UK as well as the rise of Victor Orban⁶⁴ in Hungary.

The knock-on effects of climate change have the potential to fuel the rise of the far right and lead to more EU member states making the decision to leave. Climate change has the potential to lead to the rise of authoritarianism, protectionism, and nationalism, which undermine the ability of EU countries to cooperate in the face of climate change⁶⁵. The rise of far-right parties is problematic for many reasons, but for the sake of this paper, the focus is on

⁶¹ Rowling, M. (2019) "Climate Stress Drove Wave of Arab Spring Refugees – Researchers", [in]: *Reuters*. Available [online]: <https://www.reuters.com/article/us-climatechange-conflict-arabspring-idUSKCN1PH23B>

⁶² Ibid.

⁶³ <https://www.cnbc.com/2021/08/18/europe-fears-repeat-of-2015-refugee-crisis-as-afghanistan-collapses.html>

⁶⁴ Steinmayr, A. (2017) "Did the Refugee Crisis Contribute to the Recent Rise of Far-Right Parties in Europe?", [in]: *Econstor.ifo*, DICE Report, ifo Institut – Leibniz-Institut für Wirtschaftsforschung an der Universität München, Vol. 15(4), p. 26. Available [online]: <https://www.econstor.eu/handle/10419/181257>. See also: <https://www.europenowjournal.org/2019/09/09/the-refugee-crisis-brexitee-and-the-reframing-of-immigration-in-britain/> and Beauchamp, Z. (2015) "'Like Animals': Why Hungary Is Herding Refugees into Miserable Detention Camps", [in]: *Vox*. Available [online]: <https://www.vox.com/2015/9/18/9349081/syrian-refugees-hungary-viktor-orban>

⁶⁵ Lazarou, E. and L. Tothova (2022) "Climate Change Considerations for EU Security and Defense Policy", [in]: *European Parliamentary Research Service*, p. 2. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI\(2022\)729467_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI(2022)729467_EN.pdf)



GLOBAL WARMING WILL LIKELY NEGATIVELY IMPACT THE GDP OF THE CZECH REPUBLIC AND EUROPE

how this would negatively impact the fight to prevent more global warming.

The far-right has largely abandoned its denial of climate change, given the strong evidence of its effects; however, it has now focused efforts on casting the various ways to fight climate change as something imposed by the 'liberal elite' who are either trying to take your rights or are out of touch with the reality of ordinary people⁶⁶. These groups do not seem to be putting forth any real solutions to dealing with this existential threat. As global warming continues, it will continue to destabilize the MENA region, leading to more refugees and increasing animosity towards these refugees, likely leading to more influence for the far-right, perhaps creating a downward death spiral that can't be escaped. One of the main potential dangers of a stronger far-right movement is that their political power may increase, allowing them to enact policies that further hamper the ability of EU

⁶⁶ Milman, O. (2021) "Climate Denial Is Waning on the Right. What's Replacing It Might Be Just as Scary", [in]: *The Guardian*. Available [online]: <https://www.theguardian.com/environment/2021/nov/21/climate-denial-far-right-immigration>

member countries to fight climate change, making the situation worse.

This kind of economic loss and disruption could further put a strain on the cohesion of the EU. Intra-EU trade makes up 80% of exports in the Czech Republic, and EU member states make up 73% of imports⁶⁷. The EU was designed to promote peace and economic prosperity through integration, and free trade is one of the founding principles of the EU⁶⁸.

Furthermore, the Czech Republic receives billions more euros than it pays to the EU⁶⁹. Although there is no way to concretely predict that the extreme effects of climate change would result in the breakup of the EU, recent crises have strained the cohesion of the EU, and thus, this outcome is not implausible. Crises like the 2008 economic recession and the recent migrant crises strained the relations between EU member states⁷⁰. States have their own interests, and when crises emerge, they are much less likely to want to work together and do something that they view as detrimental to them for the sake of a regional body.

An example of this can be found in the United Kingdom's Brexit decision, where the UK's citizens became convinced that leaving the EU was in their interests more so than remaining in it. The extreme impacts of global warming combined with the economic downturn resulting from climate change could expand calls for "Czexit" in a country that is among the most skeptical

⁶⁷ https://european-union.europa.eu/principles-countries-history/country-profiles/czechia_en

⁶⁸ https://european-union.europa.eu/priorities-and-actions/actions-topic/trade_en

⁶⁹ <https://www.cfr.org/backgrounder/how-does-european-union-work>

⁷⁰ Ibid.



THE REALITY IS THAT TRYING TO FIGHT GLOBAL WARMING BY NOT USING COAL IN A SCENARIO WITHOUT RUSSIAN GAS COULD POTENTIALLY MAKE THINGS WORSE BY PROPELLING INTO POWER POLITICIANS WHO ARE NOT INTERESTED IN FIGHTING CLIMATE CHANGE AT ALL

of the EU, of the member nations⁷¹. For example, during the first weekend of September, 70,000 people gathered in Prague to protest, among other things, the European

⁷¹ <https://www.euronews.com/2021/10/08/czexit-what-chance-of-a-referendum-on-the-czech-republic-quit-ting-the-eu>



WESTERN VALUES AND DEMOCRACY ARE A DIRECT THREAT TO PUTIN'S REGIME, AND HE KNOWS THIS

Union⁷². The current crises stemming from the war in Ukraine were at the core of this development⁷³.

Crises – whether stemming from the war or climate in the future – lead to dissatisfaction with the EU. Leaving the EU, having a weakened EU, or the dissolution of the EU would increase the cost of trade and further degrade economic growth in the Czech Republic. In addition, a weaker EU would make it more difficult to develop and approve comprehensive regional agreements focused on fighting global warming. The European Union standing together is a much stronger bloc than any one nation in it. A united EU has the ability to not only lead by example in fighting global warming, but also to put pressure on high emitter countries to change⁷⁴.

⁷² WION (2022) *Around 70,000 People Protest against Government in Prague over Rising Inflation*. Available [online]: <https://www.youtube.com/watch?v=VdN9cD-6nZcU>

⁷³ Ibid.

⁷⁴ Wolf, M. (2021) "Giving Green a Chance", [in]: *Deloitte Insights*. Available [online]: <https://www2.deloitte.com/us/en/insights/economy/eu-climate-change-carbon-tariff-global-trade.html>

Unfortunately, the threat of a weakened EU is present whether or not the Czech Republic chooses to revert to coal. Reverting to coal can potentially increase the risks of climate change and instability. On the other hand, not reverting to coal might fuel economic crises and breed political instability, providing an opportunity for the far-right to assert itself and neglect the issues of climate change especially since a recession would decrease investment in green energy.

Climate change is also a national security risk. Extreme weather events reduce the ability of militaries to be able to deploy and maintain military installations⁷⁵. A recent example of climate change disrupting operations occurred during a heat wave in the United Kingdom, where planes were unable take off because the runway was too hot and melted the tires of the aircraft⁷⁶. Although this was not at a military base, the same problem could occur at one, which would be a significant national security risk. In addition, climate change will further destabilize countries in the MENA and Sub-Saharan Africa regions. This could lead to more violent non-state actors as governments will be unable to provide for their populations⁷⁷, and these could become security threats to Europe and the Czech Republic.

⁷⁵ Lazarou, E. and L. Tothova (2022) "Climate Change Considerations for EU Security and Defense Policy", [in]: *European Parliamentary Research Service*, p. 2. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI\(2022\)729467_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI(2022)729467_EN.pdf)

⁷⁶ <https://www.cbsnews.com/news/extreme-heat-in-uk-disrupts-air-travel-melts-airport-runway/>

⁷⁷ Lazarou, E. and L. Tothova (2022) "Climate Change Considerations for EU Security and Defense Policy", [in]: *European Parliamentary Research Service*, p. 5. Available [online]: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI\(2022\)729467_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729467/EPRS_BRI(2022)729467_EN.pdf). See also: Matisek, J. (2019) "Where Climate Change and Violent Non-State Actors Collide: Conflict and Security Force Assistance in the Sahel", [in]: *Modern War Institute*. Available [online]: <https://mwi.usma.edu/climate-change-violent-non-state-actors-collide-conflict-security-force-assistance-sahel/>



THE THREAT THAT RUSSIA POSES IS NOT SOMETHING THAT CAN BE EASILY DISMISSED

Global warming will likely negatively impact the GDP of the Czech Republic and Europe. The Swiss Re Institute simulated the economic loss as a percentage of GDP that will occur at different global temperature increases. Even if the world meets the Paris target of below 2° Celsius global warming, Europe is expected to lose 2.8% of its GDP by 2050⁷⁸. If there is a 2° Celsius increase, then Europe could lose 7.7% of its GDP.

Since there is an over 50% chance that global temperatures will rise by 2 degrees Celsius, the economic ramifications are considerable⁷⁹. A loss of 7.7% of GDP is already higher than the 6% some countries might lose if Russian gas is completely cut off from Europe. A 2.6° Celsius increase would lead to an 8% drop in GDP in Europe, and a 3.2° Celsius increase would lead to

a 10.5% decrease in GDP in Europe⁸⁰. The Czech Republic could lose as much as 11% of its GDP by 2050 if the world heats to a worst-case scenario of 3.2° Celsius⁸¹. These economic impacts will compound on top of other instability likely fueled by global warming.

RISKS FOR CONTINUING TO MOVE AWAY FROM COAL

As previously stated, it has recently been estimated that if Russia were to cut off the flow of gas to Europe, then the Czech GDP could decrease by 6%⁸². This would certainly cause a severe recession, the magnitude of which would cause massive job loss – including in the crucial industries discussed previously. Additionally, Czechs would be unable to afford the increase in energy prices that would come at the same time as massive job loss. Already in the first weekend of September, there was a protest against high energy prices, inflation, support for Ukraine, the EU, and NATO in Prague that attracted 70,000 people⁸³. This development would create an unstable and poor economic environment which would, in turn, stifle growth⁸⁴. As a result of this economic downturn, the government and

⁷⁸ Guo, J., Kubli, D. and P. Saner (2021) "The Economics of Climate Change: No Action Not an Option", [in]: *Swiss Re Institute*, p. 2. Available [online]: <https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf>

⁷⁹ Jacobo, J. (2022) "There Is a 50% Chance of Temperatures Exceeding 2 Degrees Celsius Unless Climate Pledges Are Strictly Implemented: Study", [in]: *ABC News*. Available [online]: <https://abcnews.go.com/International/50-chance-temperatures-exceeding-degrees-celsius-climate-pledges-story?id=84033529#:~:text=LOG%20IN->

⁸⁰ Guo, J., Kubli, D. and P. Saner (2021) "The Economics of Climate Change: No Action Not an Option", [in]: *Swiss Re Institute*, p. 2. Available [online]: <https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf>

⁸¹ *Ibid.*, p. 11.

⁸² Elliot, L. (2022) "Russian Gas Shutoff Would Send Some EU Countries into Recession, IMF Warns", [in]: *The Guardian*. Available [online]: <https://www.theguardian.com/business/2022/jul/19/russia-gas-shutoff-eu-countries-europe-recession-imf>

⁸³ WION (2022) *Around 70,000 People Protest against Government in Prague over Rising Inflation*. Available [online]: <https://www.youtube.com/watch?v=VdN9cD-6nZcU>

⁸⁴ Claessens, S. and M.A. Kose (2009) "What is a Recession", [in]: *Finance & Development*. Available [online]: <https://www.imf.org/external/pubs/ft/fandd/basics/recess.htm>

companies will not have the funds to invest in innovative technology that needs to be developed for the European Union and the Czech Republic to reach their green goals⁸⁵.

Additionally, there will be less money to invest in existing renewable energy technology. The resulting recession from a sudden cut-off of Russian gas to Europe would severely impact the ability of the Czech Republic to reach its green goals because it would lack the funds needed to invest.

Furthermore, a deep recession could lead to the rise of the populist far-right that would further hamper the ability of the Czech Republic to meet its green goals. Far-right parties have been gaining ground in recent years in part due to income inequality⁸⁶. Far-right parties are much more likely to doubt global warming than other parties⁸⁷. Having a massive economic downturn that will breathe more life into the right is dangerous for many reasons, including (and especially) the ability to fight climate change. If the economic recession led to more far-right politicians in power, then they would most certainly make reaching the green goals more difficult.

If the ultimate goal is to fight global warming, then having the economy crash and electing politicians who are not motivated to fight it is a serious problem. The reality is

⁸⁵ Moreira, S. and J. Granja (2020) "Recessions Can Stifle Product Innovation for Years", [in]: *Kellogg Insight*. Available [online]: <https://insight.kellogg.northwestern.edu/article/recession-product-innovation>

⁸⁶ Jay, S. et.al. (2019) "Economic Inequality and the Rise of Far-Right Populism: A Social Psychological Analysis", [in]: *Journal of Community & Applied Social Psychology*, Vol. 29(5), p. 420. Available [online]: <https://doi.org/10.1002/casp.2409>

⁸⁷ Forchtner, B. (2019) "Climate Change and the Far Right", [in]: *Wiley Interdisciplinary Reviews: Climate Change*, Vol. 10(5), p. 2. Available [online]: <https://doi.org/10.1002/wcc.604>



UNFORTUNATELY,
THE REVISIONIST
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that trying to fight global warming by not using coal in a scenario without Russian gas could potentially make things worse by propelling into power politicians who are not interested in fighting climate change at all.

A weakening economy may also have the effect of making it more challenging to support Ukraine against the major geopolitical threat to Europe – Russia. Vladimir Putin even said in his speech at the June 2022 St. Petersburg International Economic Forum that, as Europeans face a cold winter and suffer the economic impacts of the sanctions their governments have imposed on Russia, populist parties will increase in popularity, and new elites that are more favorable to Russia will come to power⁸⁸. Countries such as the Czech Republic, which spent time under the boot of the USSR, fully understand the dangers

⁸⁸ <https://www.foreignaffairs.com/russian-federation/world-putin-wants-fiona-hill-angela-stent>



REVERTING BACK TO COAL HAS THE POTENTIAL TO SEVERELY HURT THE ABILITY OF THE CZECH REPUBLIC TO MEET ITS CLIMATE GOALS

of a revanchist and revisionist Russia. The latter is not only at war with Ukraine, but also with the West and the liberal, rules-based international order that has benefited the world since the end of WWII⁸⁹. This is important for decision makers to take into account because the whole reason the Czech Republic and the EU are having this problem is because of their continued support of Ukraine. If they did not support Ukraine, then this article would be unnecessary.

Western values and democracy are a direct threat to Putin's regime, and he knows this; therefore, he feels he must destroy them. This, combined with the fact that he believes that he must restore the territory of the USSR, means that Russia is a direct threat to the European Union and the Czech Republic⁹⁰. Russian neo-imperialism threatens to turn the world back in time to a place where great powers with spheres

of influence, as well as smaller states, were unable to make decisions for themselves. The liberal world order may have flaws, but it certainly gives nation states more decision-making opportunities than the world that Putin would like to return to.

The threat that Russia poses is not something that can be easily dismissed. Thankfully, though, for the rest of the Western world, brave Ukrainians are willing to fight to defend their homeland and, by extension, the West. However, a rapid decrease in GDP and a resulting recession will hinder the ability to support Ukraine economically and with military equipment in its war with Russia. The West has an unprecedented opportunity to bury Russia's ambitions in Ukraine – a country that has exceeded all expectations and continues to surprise⁹¹.

In addition, a recent study by Yale economists found that sanctions, combined with many companies leaving Russia, are crippling the Russian economy and will continue to do so⁹². Losing the Russian gas and not supplementing the energy deficit partly with coal runs the risk of the Czech Republic and its allies not being able to support Ukraine in its hour of need due to a significant economic crisis. Temporarily converting to coal could allow for the continued support of Ukraine – a primary strategic objective. A Russian defeat in Ukraine would not only be beneficial to Ukraine but also to the West, as it would result in a much weaker Russia that would

⁸⁹ <https://www.economist.com/leaders/2015/02/12/putins-war-on-the-west>

⁹⁰ Ibid.

⁹¹ Barnes, J.E. and E. Schmitt (2022) "Russia's Shortfalls Create an Opportunity for Ukraine, Western Officials Say", [in]: *The New York Times*, August 4. Available [online]: <https://www.nytimes.com/2022/08/04/us/politics/russia-weapons-ukraine.html>

⁹² Sonnenfeld, J. et al. (2022) "Business Retreats and Sanctions Are Crippling the Russian Economy", [in]: *SSRN Electronic Journal*, August, pp. 3-4. Available [online]: https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID4179598_code3324709.pdf?abstractid=4167193&mirid=1

be less capable of undermining the EU and its allies.

CONCLUSIONS: DAMNED IF YOU DO, DAMNED IF YOU DON'T

Unfortunately, the revisionist and revanchist foreign policy put forward by Russia has resulted in a horrific war in Ukraine, and there are no easy options regarding energy security and working to meet the necessary goals to fight global warming. Decision makers must weigh between potential economic catastrophe now or more problems further down the line due to global warming.

Democratic leaders must also weigh what option will give them the best opportunity to help Ukraine defeat Russia. Seriously weakening a major strategic rival for an extended period of time is not an opportunity to be passed up lightly. The world has entered perilous times, and the decisions made today will have significant long-term impacts.

Reverting back to coal has the potential to severely hurt the ability of the Czech Republic to meet its climate goals. While it is only one small country contributing to global warming, it is still contributing. Both the Czech Republic and the wider European Union not meeting their climate goals means further economic hardship and instability in the future. Global warming threatens the national security of the said state and the continuity of the EU in the long term. Crises have caused division in the past in the European Union, and global warming will cause a litany of problems.

Nevertheless, not reverting back to coal even in the short term has its own share of issues. It is not even winter yet, and energy prices are soaring. If Russia fully cuts off gas to Europe, it could severely impact both

the Czech and EU economies. This will, in turn, inflame domestic tensions, cause economic hardships, strain the support for the EU and Ukraine, and, most importantly, limit funds needed to invest in research and infrastructure to make a sustainable and green energy-centered country.

One thing is certain: decision makers in the Czech Republic have no easy choices ahead of them. Both options have negative consequences, and policymakers must weigh them both, while keeping in mind the fact that a sustainable future is the ultimate goal – regardless of whether coal takes a larger role in the energy mix in the short term.



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