Committee: Council of the European Union (EU)

Issue: Tackling the Energy Crisis in the EU as a result of the Ukrainian Conflict

Student Officer: Ilianna Mavroeidi

Position: President

PERSONAL INTRODUCTION

Dear delegates,

My name is Ilianna Mavroeidi, and I am a student in the 12th grade at Pierce-The American College of Greece. I will have the utmost honor of serving as the president of the Council of the European Union at the 5th DSTMUN conference, and specifically, as the expert chair on the topic of "Tackling the Energy Crisis in the EU as a result of the Ukrainian conflict." Firstly, I would like to congratulate you on your positions as delegates of the Council of the EU, since it is a demanding committee with challenging topics to which I am sure you will all respond with competence.

This will be my fifth time chairing and I am beyond grateful to have reached this place. MUN has offered me an abundance of experiences, skills, and memories including competencies I will need and take advantage of for the rest of my life, life lessons, knowledge of current affairs, and most importantly, the chance to foster long-lasting friendships with people I will always cherish.

With that being said, the topics of the Council of the EU in the 5th DSTMUN are particularly prominent and discuss current issues that require urgent action. Specifically, the issue of "Tackling the Energy Crisis in the EU as a result of the Ukrainian Conflict," has been a headline in international news for months now and is a burning matter which concerns us, citizens, and our countries, as a whole. Thus, it is extremely crucial to discuss it and strive to find ways to address it.

Finally, I would like to emphasize that the sole purpose of this study guide is to serve as a basis for your preparation and thus you not limit it to this document but conduct further research on your own. To do this, you are encouraged to utilize the bibliography, which you can find towards the end of the study guide. Should you have any inquiries do not hesitate to contact me at: Ilianna.mavroeidi@acg.edu.

I wish you a fruitful debate and I am truly looking forward to meeting you all in November!

Sincerely,

Ilianna Mavroeidi

TOPIC INTRODUCTION

On the morning of 24 February 2022, the Russian troops invaded Ukraine, on the grounds of a general "demilitarization and denazification" of the country. Initially presented as a "special military operation," Russian President Vladimir Putin authorized said invasion, and soon after, missiles and other special artillery struck major Ukrainian cities, including its capital, Kyiv, commencing the Ukrainian conflict, the largest European war since the end of World War II.

Nevertheless, the turbulent relationship between the two neighboring countries dates further back and has been affected by various international events in recent history. Ever since the collapse of the Union of Soviet Socialist Republics (U.S.S.R.), otherwise known as the Soviet Union, in 1991 and the declaration of sovereignty and independence by Ukraine -then the Ukrainian Soviet Socialist Republic-, and even before that, the tensions between Russia and Ukraine were evident. Those tensions climaxed when, in March 2014, Russia entered and annexed Crimea, a Ukrainian peninsula, an event that is considered a turning point in the Russo-Ukrainian war.

How did this, however, get to the point of a war that is risking the peace and stability of the wider European region? When, in January 2021, Ukrainian president Volodymyr Zelensky attempted to join the North Atlantic Treaty Organization (NATO), the organization reneged its promise to Russia that it would cease its expansion to Eastern Europe, resulting in the Russian government's immediate response, which later led to the aforementioned invasion.

This invasion has and will have a catalytic impact on all countries in the European Union (EU) and on all fields concerning them, especially the energy sector. Following the beginning of the Ukrainian war, countries have imposed, or are planning to impose sanctions on Russia, including banning all imports of Russian oils. At the same time, most Russian oil exports were transferred through the Ukrainian region, something currently impossible to occur due to the ongoing war on the grounds of the country. Since approximately 29% of all crude oil supplies (2020) and nearly 40% of natural gas supplies (2019),[1] if the EU were exported from Russia, it is evident that the energy market will be severely affected, still to a reversible extent.

In the aftermath, oil and gas prices have reached their highest levels, and countries globally, predominantly in Europe, are reconsidering their energy sources, to tackle the soaring prices and petroleum shortages. European nations are planning to increase their imports from abroad and find alternative supply sources, such as the United States (US), Saudi Arabia, and Qatar. Experts have observed a rise in

[1] "Shedding Light on Energy on the EU: From Where Do We Import Energy?" Shedding Light on Energy on the EU, ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html.

Russian oil exports to Europe since the conflict started which is expected to fall as more and more countries are reacting and taking measures, which hints that the war might have some positive outcomes in the energy sector. Nonetheless, the escalating energy crisis needs to be addressed urgently to save the planet from its already devastating condition when it comes to energy supplies.

DEFINITION OF KEY TERMS

Annexation

In international law, annexation is a formal, legal act through which a state declares its dominion over a territory that was previously beyond its purview.

Battery storage

"Battery storage, or battery energy storage systems (BESS), are devices that enable energy from renewables, like solar and wind, to be stored and then released when customers need power most."[2]

Demilitarization

Demilitarization is characterized as the dismantling or demobilization of state armed forces or a military along with the destruction of military equipment, weapons, explosives, and chemical and biological weapons.

Denazification

Denazification means to eliminate Nazism, its impacts, and its control over the public, or more specifically, it is the process of removing people pledged to Nazism from public positions and minimizing allegiance to such regimes.

Fossil fuels

Fossil fuels are a group of substances formed by the remains of living organisms and containing carbon and hydrogen atoms, which are found in the crust of the Earth and can be used as a source of energy. Common fossil fuels are coal, crude oil, and natural gas.

Renewable resources

A renewable resource is one that is replenished naturally and may be utilized repeatedly, while it never runs out. Renewable resources include solar, wind, hydropower, biomass, and geothermal energy.

[2] "What is Battery Storage?" Welcome to National Grid Group | National Grid Group, www.nationalgrid.com/stories/energy-explained/what-is-battery-storage.

BACKGROUND INFORMATION

Historical background of the Russo-Ukrainian war

The Russo-Ukrainian war is a conflict that officially began in 2014, after the Ukrainian Revolution of Dignity and the Crimean annexation, but its roots lie further back in the depths of international and European history. To become aware of the complexity and significance of the relationship between the countries it is crucial to briefly delve into the very beginning of their current situation.

In the early 20th century, during World War I, Ukraine attempted to claim independence from Russia successfully, and its sovereignty was recognized globally by the Treaty of Brest-Litovsk. However, this situation was temporary as Ukraine was soon overthrown by Russian forces, resulting in the formation of the Ukrainian Soviet Socialist Republic in 1921 and its initiation into the Union of Soviet Socialist Republics (USSR) the following year.

Approximately 50 years later, and after many annexations, crises, and invasions that devastated Ukraine and its citizens, the Soviet Union collapsed. In 1991, Russia, Ukraine, and Belarus, three of its founding members, signed an accord officially dissolving the USSR and as a result, Ukraine regained its independence. Ukraine later acquired numerous nuclear and other weapons which had previously belonged to the now-dissolved Soviet Union, and by conceding them to Russia in 1994 it negotiated a commitment from Moscow "to respect the independence and sovereignty and the existing borders of Ukraine."[3]

For many years following the collapse of the USSR, the two countries seemed to be at peace. That changed in 2014, in the aftermath of the Dignity Revolution in Ukraine, a series of fatal altercations between protesters and security forces that led to the overthrow of Ukrainian President Viktor Yanukovych and to Ukraine being one step closer to joining the EU-an action that was never completed. In 2014, Russian President Vladimir Putin ordered its troops to invade Ukraine, allegedly to defend ethnic Russians in the eastern Donbas region. He later took advantage of this invasion to occupy and annex the Crimean Peninsula and since then, the relationship between Ukraine and the Russian-backed separatist forces residing in that region are highly turbulent.

The current war in Ukraine

In continuation of the Crimean annexation, on the 21st of February 2022, Putin, maintaining his position as the President of the Russian Federation,

[3] Bigg, Matthew M. "A History of the Tensions Between Ukraine and Russia." The New York Times - Breaking News, US News, World News and Videos, 27 Mar. 2022, www.nytimes.com/2022/03/26/world/europe/ukraine-russia-tensions-timeline.html

unilaterally recognized the separated regions of the self-declared "People's Republics" of Donetsk and Luhansk in Donbas as independent. Three days later, on the 24th of February, as a reaction to Ukraine's requests to join NATO with the initiative of its President Volodymyr Zelensky and after having placed numerous troops around its borders, Vladimir Putin ordered a large-scale invasion of Ukraine, characterizing it as a "special military operation" on the grounds of "a general demilitarization and denazification" of the country. He soon added that another of his objectives was to "ensure Ukraine's neutral status", that is to end its ties with the west and to invert its desire to the western alliance NATO, something visible through the unsuccessful Russian troops' attempt to overrun the democratically elected government in Ukraine and to occupy the presidential compound.

Figure 1: Map depicting the advance of Russian forces in Ukraine.[4]

Despite the widespread negative reaction from countries globally, Russian forces continued advancing in Ukraine, culminating in a full-scale war, identified as Europe's largest conflict since the end of World War One. Russian forces have since then occupied many other parts of Ukraine, especially in the south and northeastern regions of the country. Ukrainian forces have managed to defend their land and hold back most of the attacks, although Russian troops have occupied a substantial portion of eastern Ukraine including Mariupol and the majority of the cities in the Donbas region. At the same time, many of its major cities, such as its capital, Kyiv, are continuously being struck by missiles and other such weapons and special artillery.

[4] The Visual Journalism Team. "Ukraine Maps: Ceasefire Allows People to Leave Cities." BBC News, 8 Mar. 2022, www.bbc.com/news/world-europe-60506682.

Both sides have experienced major losses and have sacrificed many innocent human lives, weapons, and technology to attack and defend Ukraine, respectively. Of course, as the topic suggests, the Ukrainian conflict has also had a major impact on the energy industry globally, especially in the European Union which is directly affected by Russia's energy affairs. The war has led to a large energy crisis besetting primarily the countries of the EU which rely on Russian fossil fuels for their energy needs. The energy crisis will be further analyzed in the following sections of the guide.

Energy crisis in the European Union

Russia is the main supplier of fossil fuels for the EU, and hence, the recent war has caused concerns among the EU member states. According to the International Energy Agency, Russia is the world's top exporter of oil to international markets, and its natural gas powers the European economy. Only last year, the EU imported more than 800 million barrels of crude oil from Russia (2.2 million barrels per day). In 2020, approximately two-thirds of the energy imported into the EU from Russia accounted for petroleum products, and those were followed by natural gas (27%) and solid fossil fuels (5%).

Of course, not all EU member states rely equally on Russian fossil fuels. Germany, specifically, is the country that has been most affected by the energy crisis seeing as it is the leading buyer of Russian oil in the EU. It has several pipelines connecting it to Russia to strengthen supply and due to the war, it is seeing major shortages of oil products. Only in November 2021, Germany imported 687,000 barrels per day (bpd) of crude oil and 149,000 bpd of refined products from Russia. Russia is followed by the Netherlands on the list and Poland is also severely affected for the same reasons.

Additionally, all those countries are on the northern route of the Druzhba pipeline, the world's longest pipeline and one of the biggest pipeline networks, interconnecting the eastern part of European Russia with countries all over Europe including Ukraine, Belarus, Poland, Hungary, Slovakia, the Czech Republic, Austria, and Germany. The pipeline supplies all the above countries with Russian oil, but it seems that countries in the southern routes of the pipeline are more dependent on its function. Those routes mainly run through Ukraine something which minimizes access to the products. In Slovakia, for example, in November 2021, 92% of crude imports were derived from Russia. Other countries that import energy through marine routes are heavily dependent on Russia, and those include inter alia, Finland (84% of oil from Russia, November 2021), and Lithuania (87% of oil from Russia, November 2021), although both mentioned countries are planning to stop buying oil from Russia.

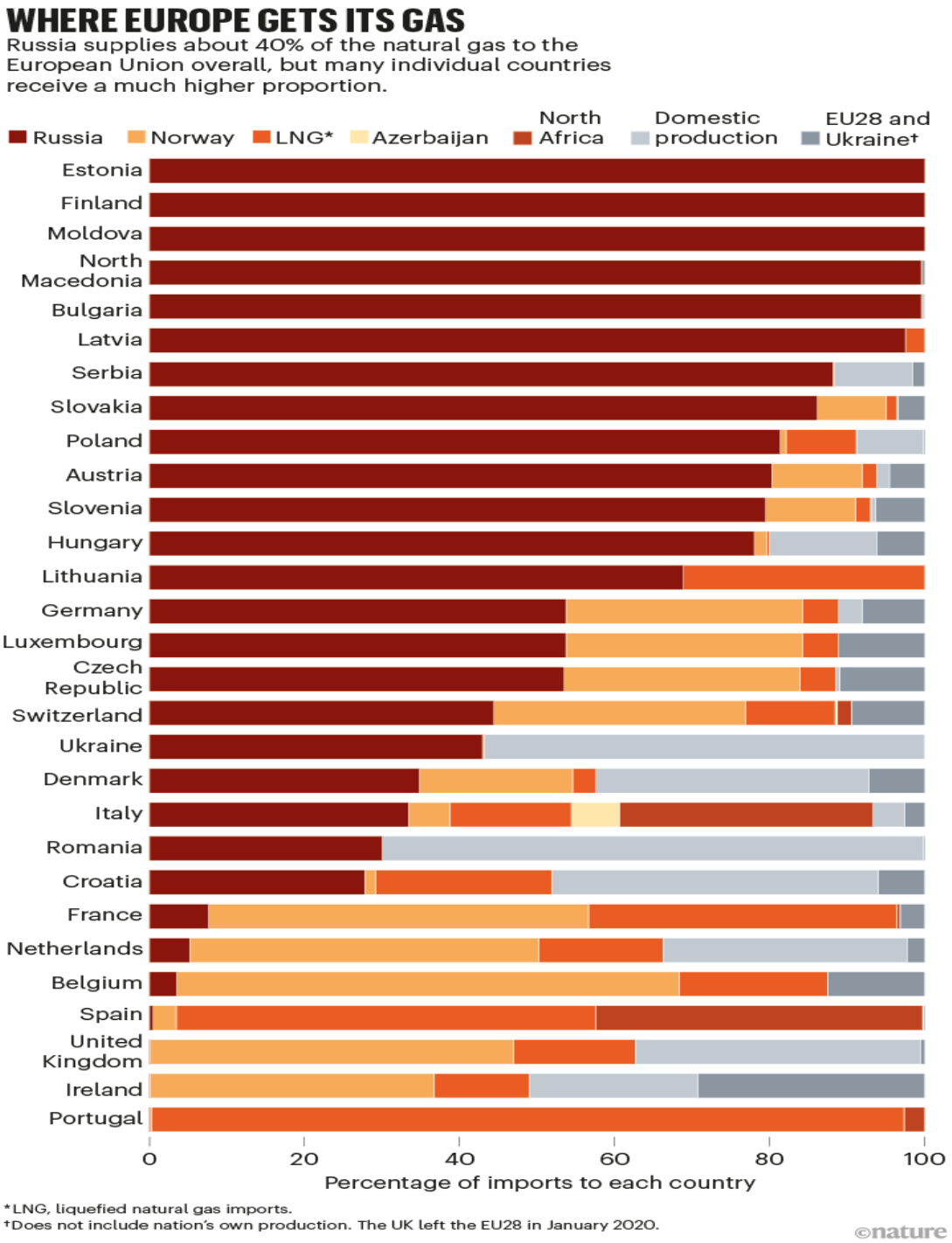

Figure 2: Graph depicting the dependence of the EU member states on Russian fossil fuels.[5]

Spain and Sweden, on the other hand, do not rely as much on Russian fossil fuels as the former imports mostly Liquified Natural Gas (LNG) from various other sources

[5] Tollefson, Jeff. "What the war in Ukraine means for energy, climate and food." Nature, 5 Apr. 2022, www.nature.com/articles/d41586-022-00969-9.

while the latter makes minimal usage of gas products. Evidently, countries neighboring Russia are most dependent on its products and are thus facing the severest consequences.

The European Union and its leaders have been trying to address the issue through various methods including boosting the EU's energy independence, diversifying energy sources, turning towards renewable energy, and bolstering interconnections between energy networks while it is predicted that many countries will have to obtain oil from their national reserves. At the same time, the European Commission plans to curb almost all reliance on Russian gas (approximately 101.5 billion cubic meters) by the end of the year, by replacing it with imports from other countries (60%) and energy derived from renewable sources (33%). The EU has also sanctioned Russia and is planning to ban crude oil and petroleum product imports, exacerbating temporarily the ongoing crisis.

Other energy suppliers

In the attempt to address the energy crisis and find alternative sources of energy, it is important to examine other potential candidates that could work as suppliers.

Saudi Arabia and other middle eastern countries could export a percentage of their oil and petroleum products to the EU, especially with the help of an inter-Caspian pipeline that would connect them with European countries. However, to do this Saudi Arabia would have to, firstly, agree to export oil to Europe, a hypothesis with grim prospects since the country, along with the United Arab Emirates (UAE), has already denied aiding the United Kingdom (UK) and the United States of America (USA) by providing them with oil products, when asked for help during the energy crisis.

Another possible candidate in the middle east is Qatar, one of the world's top natural gas exporters, which already supplies several countries with LNG, including the UK, Greece, and Bulgaria through a few newly opened pipelines. Qatar has shown solidarity towards the countries suffering from the energy crisis and could definitely serve as a major exporter to some of those.

The US could also serve as a supplier for the Eu, seeing as the US-EU cooperation is tighter than ever amid all the crises. There have been many talks on addressing the issue between the two and the US has already increased LNG exports to the EU. With the right planning and with meticulous examination to ensure that the US can, first of all, cover its own energy needs before supplying other countries, it could work as a major source of fossil fuels for the Union.

Norway and the Netherlands are also potential LNG suppliers, although not as prominent as the rest due to the fact that they have a limited amount of gas available for export.

Causes

The problem, surprisingly, does not lie in the large dependence of the EU on Russian fossil fuels per se but derives from the countries' responses to the conflict and the infrastructure that has become unavailable after the beginning of the war. In other words, the invasion of Ukraine is the principal cause of the current energy crisis, although it existed before the conflict.

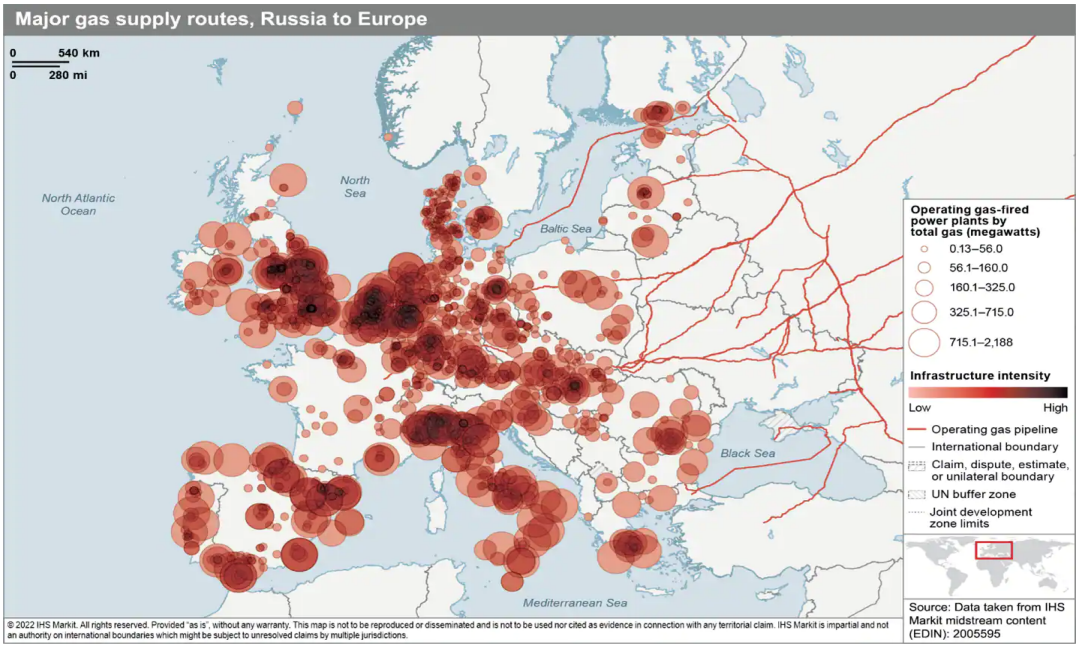

Figure 3: Map depicting the Russian gas supply pipelines running through Europe.[6]

First and foremost, the war has caused a lack of infrastructure and difficulty to access the available ones. The primary problem has mostly derived from the inability to access the Druzhba pipeline. This pipeline transports approximately 750 kb/d of crude oil from Russia to Europe. Roughly 250 kb/d of said oil transits Ukraine via the southern branch of the pipeline to supply Hungary, Slovakia, and the Czech Republic. Since the war hinders the function of the Druzhba pipeline, those countries are left bereft of oil and are facing serious shortages which also affect the rest of the EU. At the same time, countries, such as the USA and the UK, have enforced sanctions and placed embargoes on Russia and are not accepting their oil products, so exports have been minimized and the energy crisis is further exacerbated. Furthermore, Russia has suspended delivery to several EU member states, while many of them are planning to phase out their dependency on Russian fossil fuel,

[6] "Energy Infrastructure - Russia-Ukraine Crisis." IHS Markit, 25 Apr. 2022, ihsmarkit.com/research-analysis/energy-infrastructure-russia-ukraine-crisis.html.

both resulting in shortages and lack of energy sources, until other sources are discovered and exploited.

Additionally, after the pandemic, many factories and plants were shut down, due to the inability of countries and private corporations to financially support them. Germany, for example, shut down all three of its last nuclear power plants which could have definitely proved extremely useful amid the current energy crisis, as nuclear energy could replenish a percentage of the shortages. Not only that but also many projects were canceled during the war, especially ones connecting Russia with other EU countries, as an attempt to phase out Russian supply, Again, the lead example is the Nord Stream pipelines connecting Germany with Russian energy plants.

As previously mentioned, the situation is worsened as there are few other feasible suppliers that could cover the energy needs of all EU countries facing the energy crisis. Even though there are many candidates, none of them has the capacity to support all the countries in need in addition to their own personal needs and the countries they are already supporting. Alternatively, they might not agree to do so, like in the case of Saudi Arabia.

The only major cause that is not related to the war is the overconsumption of energy which has been a grave issue all around the globe for many years now. Along with that, fossil fuels are steadily diminishing, as non-renewable resources, and the world has been facing shortages in general. Thus, the war came to exacerbate the already severe energy crisis besetting the world, due to the overconsumption of fossil fuels and the insufficient exploitation of renewable resources.

Effects

Even though the energy crisis seems to be having devastating effects on various sectors and even though the upcoming winter looks grim energy-wise, the crisis might actually have a few beneficial outcomes in the long term, following, of course, various negative consequences.

Economy

Unfortunately, the economic effects are just negative and are probably the gravest out of all. Although there has not been a loss of oil, its low availability in the market has culminated in soaring prices of petroleum products and electricity that many households cannot afford. In many countries prices have reached their highest ever. In Germany, for example, household energy prices have increased by 22.5% since last year, and locally produced energy costs 68.0% more than in 2021.

Figure 4: Graph depicting the rice in energy prices the past few months.[7]

Naturally, this has only resulted in the rise of inflation rates in most countries globally, including the UK with inflation of 9.1%, the highest in 40 years. At the same time, the inability of households and governments to afford the constantly increasing energy prices has led to widespread financial downturns and crises, already existent due to the pandemic.

The energy crisis in combination with the pandemic will also be the cause of the slow economic recovery that is, hopefully, going to follow in the next few years, worsening the economic situation internationally.

Society

The first and primary impact of the energy crisis on society is, of course, the recurring energy shortages and the low availability of all kinds of energy sources in the EU market. This impact has caused most of the other social, economic, and financial issues deriving from the energy crisis, and it is, evidently, the hardest part of it.

Thus, due to this energy shortage, households, businesses, organizations, and governments all have to cut back on energy waste and reduce consumption to save energy and money and survive during the next months. Being the society that they are, characterized by overconsumption, it will be extremely difficult to get used to this situation and to be able to minimize energy usage.

[7] "One Moment, please..." One Moment, please., 24 May 2022, https://freepolicybriefs.org/2022/05/24/energy-climate-crisis-europe/.

Due to the economic impacts of the energy crisis, citizens are now burdened with heavier bills for energy and electricity, that they often cannot afford. Thus, socioeconomic inequalities are intensified, and any attempts to restore equality and equity in the society and market are impeded.

However, the energy crisis does also have a major advantage for humans and society. Due to the crisis and in turn, the shortages of sources, plants, factories, and personnel, humans face reduced and less intense health problems by the processes and chemicals that are released when energy is being produced, treated, and transported.

Environment

Surprisingly, when it comes to the environment, the energy crisis has had almost exclusively positive effects. The energy sector is generally really harmful to the environment since it is the principal course of many environmental issues including air pollution, climate change, water pollution, thermal pollution, and waste problems.

At the same time, fossil fuels, the practices used to treat them, and their combustion -which releases harmful chemicals into the atmosphere- are detrimental to humans and the planet. Therefore, the energy and fossil fuel shortage and generally, their reduced availability in the market are actually positive for the environment since fewer products are burned, produced, and transported for energy purposes, and thus, there is less atmospheric and such pollution.

Moreover, the market is now in need to find alternative energy sources, an invaluable opportunity to transition to renewables and clean energy, helping in combating climate change and all other human-made environmental challenges.

Energy crisis and COVID-19

For the past few years countries globally have been fighting to eradicate another of the earth's greatest scourges, a pandemic, and more specifically, the COVID-19 pandemic. As with all sectors, this pandemic has caused many setbacks in the energy industry and the obstacles are now, amid the larger energy crisis that derived from the Ukrainian conflict, more visible than ever. Although the impacts of the disease on the energy trade are more evident in Less Economically Developed Countries (LEDCs) that were already facing energy issues and shortages, countries in the EU have been majorly affected as well.

Reduced transportation during the pandemic resulted in a significant drop in oil prices which encouraged drivers and businesses to purchase oil products and walk away from renewable energy, hitherto a costly industry. At the same time, COVID-19 has disrupted supply chains and there are now fewer transportation methods and personnel. Therefore, it is now harder for the market to transition back to clean energy to restore the energy sector.

COVID-19 has also hindered any attempts for universal energy access since all governments and corporations have prioritized and dedicated most of their budget to the health industry, leaving the energy one behind. Since the beginning of the pandemic, progress towards the achievement of Sustainable Development Goal (SDG) 7 to "Ensure access to affordable, reliable, sustainable and modern energy for all" has slowed down considerably, making the current energy crisis even more unbearable.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

Ukraine

Ukraine is an eastern European country whose current president is Volodymyr Zelensky. Although not an EU member state, it has a key role in the topic since it is one of the two parties in the war which brought about the energy crisis in the EU. The significance Ukraine has in the crisis is the fact that many of the routes used by Russia for exports pass through Ukraine. Even though the amount of gas sent from Russia through Ukraine has decreased in the past years, it still holds a vital role since due to the ongoing war access to those routes is limited. At the same time, Ukraine, in a plan to cut all energy ties from Russia, disconnected its energy grid from Russia and connected it with the European one.

Russia

Russia is a transcontinental country (eastern Europe and northern Asia), currently governed by President Vladimir Putin. Russia is the country that initiated the war and thus, caused widespread international reactions which led to sanctions and bans from various countries and member-states wanting to minimize their reliance on Russian crude oil and natural gas supplies. Due to its geolocation and size, Russia has been, for many years now, Europe's top gas supplier and the world's third-largest oil producer. It is also the world's largest exporter of oil to global markets and the second-largest crude oil exporter behind Saudi Arabia. Evidently, most EU countries are dependent on Russia for oil supplies, considering that approximately 29% of all crude oil supplies (2020) and nearly 40% of natural gas

supplies (2019)[8] of the EU were exported from Russia. Owing to sanctions and reduced supply from Russia there are now fewer available energy sources and as a result, fossil fuel prices have soared over the last few months and have reached their highest in decades. Russia has also been affected by this as one of its main sources of revenue is oil and natural gas exports (in 2021 they made up 45% of Russia's federal budget).

The United States of America (USA) and the United Kingdom (UK)

Although the USA and the UK are non-EU countries, and therefore will not be present during committee work, they both have a pivotal role in the energy crisis, so their actions are worth mentioning. The UK, an island nation in northwestern Europe made up of England, Scotland, Wales, and Northern Ireland has experienced the effects of the crisis firsthand, even though it is not dependent on Russian fossil fuels. The UK has mostly faced the financial aspect of the issue. More specifically, 31 out of 70 operating domestic suppliers of natural gas in the UK have gone out of business since August 2021, due to the elevated prices of their products in Europe. As a result, consumers, panicked, have begun purchasing excessive amounts of gasoline and diesel since September 2021, and the supply of road fuel has been seriously disrupted. On the other hand, the USA, a country of 50 states in North America, has faced many problems pertaining to fossil fuel, and mostly crude oil, supplies. The country was forced to use substantial amounts of oil from the Strategic Petroleum Reserve (SPR) during the last months. In the aftermath of the war and the ban of all Russian oil imports to the US, the Biden administration saw the largest release from the SPR in the reserve's history. The administration has also been looking for alternative solutions and sources of fossil fuel, but most candidates, such as Saudi Arabia and the United Arab Emirates, have objected to their requests. Both countries have imposed sanctions on Russia and its oil exports while the US has also banned all Russian oil imports. The UK has focused on gradually phasing out Russian oil imports and has not taken such drastic measures.

Spain

Spain, although not directly affected by the war-derived energy crisis, was hit severely by the crisis caused by the pandemic. Gas and electricity prices were and still are, soaring and many households are struggling to keep up with the bills, especially considering that their main source of energy is petroleum, currently, in shortage. The Spanish government has been relatively successful in handling it and in aiding citizens financially and socially, by offering subsidies, incentives, and other

[8] "Shedding Light on Energy on the EU: From Where Do We Import Energy?" Shedding Light on Energy on the EU, ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html.

means of aid. More specifically, they have gathered 16 billion euros[9] to address the crisis and are planning to raise many more to support households, companies, professional drivers, and major industries while trying to reduce prices through budgeting and financial aid.

Germany

Germany is a western European country and the top EU buyer of Russian oil. Hence, it is highly reliant on Russian fossil fuels and has been greatly affected by the Ukrainian war and the recent energy crisis. German authorities are taking various measures to ensure that there will be no significant oil shortages including, inter alia, the creation of backup plants, energy storage areas, and coal and gas reserves, the decrease of natural gas use for power generation, the increase of imports of liquified natural gas, the encouragement of citizens to cut back on energy use to minimize impacts, and the transition to renewable energy sources, all of which could be applied holistically in the EU. Another significant action they have conducted is to put the Nord Stream 2 pipeline project on hold. The "Nord Stream 2 is a 1,200km pipeline under the Baltic Sea, which will take gas from the Russian coast near St Petersburg to Lubmin in Germany. It cost €10bn (£8.4bn) and was completed last September."[10] It runs along another similar pipeline, Nord Stream, which was finalized in 2011, and together, in full operation, they would deliver 110 billion cubic meters of gas to Europe annually-over a quarter of the amount of gas European Union member states utilize every year. This will have a considerable effect on the energy sector as a whole and will force countries to radically change their strategies.

North Atlantic Treaty Organization (NATO)

The North Atlantic Treaty Organization (NATO) is a military alliance founded in 1949 by the North Atlantic Treaty, also known as the Washington Treaty, with the goal to function as a counterweight against Soviet armies stationed in central and eastern Europe after World War II. It now serves as a body aiming to achieve cooperation and compromise between its members worldwide. The relation NATO has with the specific topic is that Ukraine initially requested to join NATO, which had promised Russia to stop expanding toward eastern Europe. NATO's plans to incorporate Ukraine into the organization caused Russia's reaction and eventually led to the war, the main cause of the energy crisis. Other European countries

[9] Reece, Nina. "Other Countries Are Helping Families with Energy Costs: Why Can't We?" TUC: Trades Union Congress, 22 Apr. 2022, www.tuc.org.uk/blogs/other-countries-are-helping-families-energy-costs-why-cant-we.
[10] "Nord Stream 2: How Does the Pipeline Fit into Ukraine-Russia Crisis?" BBC News, 27 Jan. 2022, www.bbc.com/news/world-europe-60131520.

neighboring Russia, including Finland and Sweden, have also hitherto requested to join the alliance, causing another major reaction from Russia.

International Energy Agency (IEA)

The International Energy Agency is an international organization established in 1974 to ensure the security and equitable distribution of oil supplies during the 1973-74 oil crisis. Of course, its activities have not been suspended since then and it still works to promote and achieve its goal of energy security and equality. The IEA is tightly correlated to the ongoing energy crisis due to its nature and its overall purpose of ensuring energy stability. Furthermore, it has published many reports and articles highlighting the importance of Russian oil supplies in the global and European energy market, the impact of the Russo-Ukrainian war on energy supply shortages as well as information on global dependence on Russian fossil fuels giving specific examples and statistics to raise awareness to the public in addition to proposing solutions to tackle the issue. It has also provided the EU with assistance in achieving independence from Russian oil while it has issued a ten-step plan depicting measures that need to be taken to realize the above.

BLOCS EXPECTED

Bloc one

This alliance should consist of EU member-states that are highly dependent on Russian fossil fuel exports and especially natural gas. This includes all countries bordering Russia, as well as countries close to it, the Balkan countries, and countries such as Germany, Poland, and Austria.

Bloc two

The second alliance should include countries that do not depend significantly on energy sources provided by Russia, namely north-western and western European member-states, and some countries in central Europe such as Belgium, the Netherlands, and Romania.

TIMELINE OF EVENTS

Date	Description of event
3 March 1918	The Treaty of Brest-Litovsk is signed, recognizing Ukraine's independence and sovereignty.

1921	The Ukrainian Soviet Socialist Republic is founded.
1922	The Ukrainian Soviet Socialist Republic is submersed into the USSR.
4 April 1949	NATO is established.
November 1974	The International Energy Agency is established.
26 December 1991	The Soviet Union collapses.
1994	Russia committed "to respect the independence and sovereignty and the existing borders of Ukraine" after the latter gave up its nuclear USSR weapons.
December 1994	The Energy Charter Treaty is first introduced.
April 1998	The Energy Charter Treaty comes into force.
18-23 February 2014	The Dignity Revolution takes place in Ukraine.
20 February 2014	Russia annexes the Crimean Peninsula.
21 February 2022	Russian President Putin unilaterally recognizes the self-declared "People's Republics" of Donetsk and Luhansk as independent.
24 February 2022	Russian troops invade Ukraine under President Putin's orders.
10-11 March 2022	The Versailles declaration is adopted by the EU member states.

RELEVANT RESOLUTIONS, TREATIES, AND EVENTS

Since the issue is quite recent, there have been no United Nations resolutions, treaties, or other documents, nor any events that are related to the topic of "Tackling the Energy Crisis in the EU as a result of the Ukrainian Conflict" nor that were initiated to tackle the ongoing energy crisis.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

There are hardly any attempts that can be considered and evaluated, since the issue is relatively recent, and its effects have not yet been assessed for countries and organizations to take action-react-find the appropriate measures. However, there has been an attempt to address the issue that is worth mentioning.

The Versailles declaration[11]

The Versailles declaration is a declaration that was signed on 10-11 of March 2022, two weeks after the invasion of Ukraine by Russian troops, during an informal meeting of the Heads of State or governments of European Union member states, in the Versailles Palace, in France. The Declaration comprises paragraphs condemning Russian aggression against Ukraine, and searching for measures to strengthen defense capacities, minimize energy dependence, and build a more solid and resilient economy. Such measures include but are not limited to decreasing EU dependence on fossil fuels, diversifying fuels, sources, and supplies, broadening the hydrogen market in Europe, ensuring the security of supply, working on energy efficacy, investing in infrastructure, and increasing reliance on renewable energy sources. In general, the declaration contains feasible solutions that have not yet been entirely evaluated since the document is recent and the effects of its proposals have not emerged yet.

POSSIBLE SOLUTIONS

The ongoing energy crisis in the European Union is, fortunately, a challenge that can be easily reversed while offering a few positive outcomes. There is an abundance of measures and actions that countries and organizations, not only in the EU but also globally, can take to ameliorate the issue. Keeping in mind the phrase “Necessity is the mother of invention,” European Union member states will surely devise feasible yet highly effective solutions to address the crisis. However, all viable solutions, including the following, require cooperation among member states, methodical planning, and meticulous research to ensure that the matter does not exacerbate.

Alternative sources of energy

Taking into consideration that the largest issue in the case of the energy crisis is the lack of energy sources, member-states could consider investing in renewable, alternative, and generally clean sources of energy including wind, solar, nuclear, hydropower, and biofuel. This would not only offer countries an everlasting source of energy to exploit but would also have many positive impacts on the planet, which would, in turn, provide humans with a more viable environment.

At the same time, alternative sources of energy could be found in other countries, rich in fossil fuels, or preferably renewable sources. Importing energy from countries such as Qatar, Saudi Arabia, and the United States of America, which have an abundance of such resources, could bring a halt to the energy crisis. Of course,

[11] "The Versailles Declaration, 10 and 11 March 2022." Consilium, 11 Mar. 2022, www.consilium.europa.eu/en/press/press-releases/2022/03/11/the-versailles-declaration-10-11-03-2022/?utm_source=dsms-auto&utm_medium=email&utm_campaign=The%20Versailles%20declaration%2C%2010%20and%2011%20March%202022.

such a measure would require cooperation and discussions among the aforementioned states and the importing countries to ensure that no country's sovereignty is impugned and that no rights are violated. The exporting countries would have to agree and establish a minimum and maximum limit of resources harnessed, imported, and utilized in other countries and take other measures, as mentioned in the following sub-section.

International cooperation and legislation

To achieve the above measures as efficiently and peacefully as possible, applying international diplomacy and achieving cooperation between states and organizations, such as NATO, is essential. This would serve as a means to find alternative clean energy sources, harvest them appropriately, and distribute them equitably in the countries in need, as well as ensure that no events similar to the ongoing war and energy crisis occur again in the future.

Thus, inspired by documents and relevant attempts such as the Energy Charter Treaty (signed in December 1994 in Lisbon and coming into force in April 1998), countries have to create legislation and sign multilateral treaties to ensure the above and avoid complications between them that could escalate in another -avoidable- crisis.

National-level solutions

National-level solutions are of vital importance and include measures that a government or local authorities can impose in their country as well as steps that citizens can take to ameliorate the situation.

A strategic measure would be to enhance energy-battery storage to save larger amounts of energy, primarily renewable which could be harnessed in times of need. Other alternative measures such as utilizing lithium-ion batteries used in electric cars and pumped storage hydropower as a means of energy storage are also deemed necessary.

An especially crucial step that needs to be taken is replacing most -if not all- gas derived from Russia with domestic production. By maintaining power plants that were destined for closure and by providing funds for the construction of better infrastructure interconnecting countries in the EU and their plants with energy suppliers, all countries could start phasing out all Russian oil imports, minimize dependency on Russian fossil fuels, and fight the energy crisis.

Lastly, on a national level, governments should encourage all citizens and companies to decrease their overall energy consumption through means such as but not limited to, utilizing energy-efficient products, conducting energy simulations and

energy audits, and using lighting controls to avoid excessive and unnecessary energy usage.

Addressing the war

To conclude, the most important solution of all is addressing the root of the energy crisis, the Russo-Ukrainian war that besets the countries of Europe and the planet, as a whole. Fighting to end the Russo-Ukrainian war, through recognizing the sovereignty of both states involved, ensuring the security and safety of citizens, raising awareness, offering support, addressing widespread government propaganda, proposing subsidies and sanctions, and other pertinent solutions would bring about peace and prosperity globally, including in the European Union and would put an end to the energy crisis.

BIBLIOGRAPHY

General

"The Versailles Declaration, 10 and 11 March 2022." Consilium, 11 Mar. 2022, www.consilium.europa.eu/en/press/press-releases/2022/03/11/the-versailles-declaration-10-11-03-2022/?utm_source=dsms-auto&utm_medium=email&utm_campaign=The%20Versailles%20declaration%2C%2010%20and%2011%20March%202022.

Grabbe, Heather, and Iskra Kirova. "A New Versailles Declaration for Ukraine." ECFR, 9 Mar. 2022, ecfr.eu/article/a-new-Versailles-declaration-for-Ukraine/.

"Shedding Light on Energy on the EU: From Where Do We Import Energy?" Shedding Light on Energy on the EU, ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html.

"Ukraine War: Tracking the Impacts on German Energy and Climate Policy." Clean Energy Wire, 22 Apr. 2022, www.cleanenergywire.org/news/ukraine-war-tracking-impacts-German-energy-and-climate-policy.

Landale, James. "Ukraine: What Sanctions Could Be Imposed on Russia?" BBC News, 27 Jan. 2022, www.bbc.com/news/world-Europe-60125659.

NATO. "NATO's Response to Russia's Invasion of Ukraine." NATO, 9 Mar. 2022, www.nato.int/cps/en/natohq/topics_192648.htm.

"NATO | Founders, Members, & History." Encyclopedia Britannica, www.britannica.com/topic/North-Atlantic-Treaty-Organization.

"History." IEA, www.iea.org/about/history.

"Russia's War on Ukraine – Topics." IEA, Ukraine.

"Nord Stream 2: How Does the Pipeline Fit into Ukraine-Russia Crisis?" BBC News, 27 Jan. 2022, www.bbc.com/news/world-Europe-60131520.

"Annexation | Definition, Examples, & Facts." Encyclopedia Britannica, www.britannica.com/topic/annexation.

"Definition of DENAZIFY." A dictionary by Merriam-Webster: America's Most-trusted Online Dictionary, www.merriam-webster.com/dictionary/denazify.

"Fossil Fuel." Encyclopedia Britannica, www.britannica.com/science/fossil-fuel.

"Just a Moment..." Just a Moment., www.sciencedirect.com/topics/social-sciences/demilitarization.

"Renewable Resource Definition." Investopedia, www.investopedia.com/terms/r/renewable_resource.asp.

"Davos 2022: The World's First Energy Crisis and How to Fix It." World Economic Forum, 23 May 2022, www.weforum.org/agenda/2022/05/first-global-energy-crisis-how-to-fix-Davos-2022/.

"Energy Charter Treaty." Energy Charter, 18 Feb. 2019, www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/.

"How to End the War in Ukraine." United States Institute of Peace, Ukraine.

"Outsprinting the Energy Crisis." McKinsey & Company, 21 Apr. 2022, www.mckinsey.com/business-functions/operations/our-insights/outsprinting-the-energy-crisis.

"Russia's War on Ukraine: Implications for EU Energy Supply | Think Tank | European Parliament." 3 Jan. 2022, www.europarl.europa.eu/thinktank/en/document/EPRS_ATA(2022)729281.

"Russia-Ukraine and Europe's Energy Strategy: A Snapshot of a Fast-moving Crisis." Energy Post, 22 Mar. 2022, energypost.eu/Russia-Ukraine-and-europes-energy-strategy-a-snapshot-of-a-fast-moving-crisis/.

Terzi, Alessio. "The Energy Crisis Won't Sabotage Climate Goals." Foreign Policy, 19 May 2022, foreignpolicy.com/2022/05/19/energy-crisis-climate-russia-war-ukraine-coal-oil-gas-green-alternatives/.

Rinkesh. "Causes, Effects and Solutions to Global Energy Crisis." Conserve Energy Future, 5 Oct. 2014, www.conserve-energy-future.com/causes-and-solutions-to-the-global-energy-crisis.php.

"What is Battery Storage?" Welcome to National Grid Group | National Grid Group, www.nationalgrid.com/stories/energy-explained/what-is-battery-storage.

The New York Times. "A Timeline of the Tensions Between Russia and Ukraine." The New York Times - Breaking News, US News, World News and Videos, 24 Feb. 2022, www.nytimes.com/2022/02/18/world/europe/russia-ukraine-timeline.html.

Reuters. "Timeline: The Events Leading Up to Russia's Invasion of Ukraine." Reuters, 1 Mar. 2022, www.reuters.com/world/europe/events-leading-up-russias-invasion-ukraine-2022-02-28/.

Alekseyevich Yerofeyev, Ivan. "Ukraine." Encyclopedia Britannica, www.britannica.com/place/Ukraine.

Bigg, Matthew M. "A History of the Tensions Between Ukraine and Russia." The New York Times - Breaking News, US News, World News and Videos, 27 Mar. 2022, www.nytimes.com/2022/03/26/world/europe/ukraine-russia-tensions-timeline.html .

Mankoff, Jeffrey. "Russia’s War in Ukraine: Identity, History, and Conflict." Center for Strategic and International Studies |, www.csis.org/analysis/russias-war-ukraine-identity-history-and-conflict.

Reals, Tucker, and Alex Sundby. "Russia's War in Ukraine: How It Came to This." CBS News - Breaking News, 24/7 Live Streaming News & Top Stories, 23 Mar. 2022, www.cbsnews.com/news/ukraine-news-russia-war-how-we-got-here/.

Peter, Laurence. "Is Russia Going to War with Ukraine and Other Questions." BBC News, 13 Apr. 2021, www.bbc.com/news/world-europe-56720589.

"Russia-Ukraine War: List of Key Events, Day 112." Breaking News, World News and Video from Al Jazeera, 15 June 2022, www.aljazeera.com/news/2022/6/15/russia-ukraine-war-list-of-key-events-day-112.

Sangal, Aditi, et al. "Live Updates: Russia's War in Ukraine." CNN, 15 June 2022, edition.cnn.com/europe/live-news/russia-ukraine-war-news-06-15-22/index.html.

"Two Americans Go Missing While Fighting in Ukraine." The New York Times - Breaking News, US News, World News and Videos, 23 June 2022, www.nytimes.com/live/2022/06/15/world/ukraine-russia-news.

The Visual Journalism Team. "Ukraine Maps: Ceasefire Allows People to Leave Cities." BBC News, 8 Mar. 2022, www.bbc.com/news/world-europe-60506682.

Elkamel, Ali. "COVID-19 Crisis Implications on the Energy Sector and on the Environment." MDPI - Publisher of Open Access Journals, www.mdpi.com/journal/energies/special_issues/COVID_19_energy_environment.

PricewaterhouseCoopers. "Energy Industry and COVID-19 (coronavirus): Strategising for the 'new Normal'." PwC, www.pwc.com/gx/en/issues/crisis-solutions/covid-19/energy-utilities-resources-coronavirus.html.

World Health Organization. "Report: COVID-19 Slows Progress Towards Universal Energy Access." WHO | World Health Organization, 1 June 2022, www.who.int/news/item/01-06-2022-report--covid-19-slows-progress-towards-universal-energy-access.

Atlantic council. "After the War in Ukraine: Where Europe's Energy Crisis Could Be Headed Next." Atlantic Council, 29 Mar. 2022, www.atlanticcouncil.org/news/transcripts/after-the-war-in-ukraine-where-europes-energy-crisis-could-be-headed-next/.

Dezem, Vanessa, et al. "What Would War in Ukraine Mean for Europe's Energy Crisis?" Bloomberg - Are You a Robot?, 23 Jan. 2022, www.bloomberg.com/news/articles/2022-01-23/what-would-war-in-ukraine-mean-for-europe-s-energy-crisis.

European Union. "EU Response to Russia's Invasion of Ukraine." Consilium, www.consilium.europa.eu/en/policies/eu-response-ukraine-invasion/.

Gordon, Oliver. "What the Ukraine Conflict Means for Europe's Energy Crisis." Energy Monitor, 4 Mar. 2022, www.energymonitor.ai/policy/a-ukraine-could-inflame-europes-energy-crisis.

Grajewski, Marcin. "The Ukraine war and energy supply." Google, 6 Apr. 2022, www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiiyvvYrrz4AhUkS_EDHdLlDgIQFnoECAcQAQ&url=https%3A%2F%2Fwww.europarl.europa.eu%2FRegData%2Fetudes%2FBRIE%2F2022%2F729360%2FEPRS_BRI(2022)729360_EN.pdf&usg=AOvVaw2G-vArrk8v3Y_jNBWnqK_X.

International Energy Agency. "Oil Market and Russian Supply – Russian Supplies to Global Energy Markets – Analysis." IEA, www.iea.org/reports/russian-supplies-to-global-energy-markets/oil-market-and-russian-supply-2.

Tollefson, Jeff. "What the war in Ukraine means for energy, climate and food." Nature, 5 Apr. 2022, www.nature.com/articles/d41586-022-00969-9.

United Nations. "The UN and the War in Ukraine: Key Information." United Nations Western Europe, 15 Apr. 2022, unric.org/en/the-un-and-the-war-in-ukraine-key-information/.

"Energy Infrastructure - Russia-Ukraine Crisis." IHS Markit, 25 Apr. 2022, ihsmarkit.com/research-analysis/energy-infrastructure-russia-ukraine-crisis.html.

Reuters. "Factbox: How Much Oil Does the European Union Import from Russia?" Reuters, 6 Apr. 2022, www.reuters.com/world/europe/how-much-oil-does-european-union-import-russia-2022-04-06/.

Alvik, Sverre. "The Ukraine War Will Not Derail Europe's Energy Transition." DNV, www.dnv.com/feature/the-ukraine-war-will-not-derail-europes-energy-transition.html.

"Analysis: Impact of the Ukraine crisis on Europe's energy markets." Enlit, 24 Feb. 2022, www.enlit.world/regions/europe-uk/analysis-impact-of-the-ukraine-crisis-on-europes-energy-markets/

Reece, Nina. "Other Countries Are Helping Families with Energy Costs: Why Can't We?" TUC: Trades Union Congress, 22 Apr. 2022, www.tuc.org.uk/blogs/other-countries-are-helping-families-energy-costs-why-cant-we.

Multimedia Resources

Vox. "Putin's war on Ukraine, explained." YouTube, Vox, 2 Mar. 2022, www.youtube.com/watch?v=MVu8QbxafJE.

"Energy Infrastructure - Russia-Ukraine Crisis." IHS Markit, 25 Apr. 2022, ihsmarkit.com/research-analysis/energy-infrastructure-russia-ukraine-crisis.html.

"International." U.S. Energy Information Administration (EIA), www.eia.gov/international/analysis/country/RUS.

Tollefson, Jeff. "What the war in Ukraine means for energy, climate and food." Nature, 5 Apr. 2022, www.nature.com/articles/d41586-022-00969-9.

"One Moment, please..." One Moment, please., 24 May 2022, https://freepolicybriefs.org/2022/05/24/energy-climate-crisis-europe/.

The Visual Journalism Team. "Ukraine Maps: Ceasefire Allows People to Leave Cities." BBC News, 8 Mar. 2022, www.bbc.com/news/world-europe-60506682.