

## **ENERGY CRISIS AND THE FUTURE OF THE WORLD:**

## IS THERE AN "ENERGY COLD WAR?"

WP No. 227

August 2023

This study is prepared by the Egyptian Center for Economic Studies (ECES) as part of its follow-up of the energy situation in the world. It is authored by Mohamed Hosny, Economist at ECES.

©2023 ECES. All Rights reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, mechanical, electronic, photocopying, recording or otherwise without the prior written permission of ECES.

## **Abstract**

The global energy landscape has gone through various changes by events such as the Russia-Ukraine war, the COVID-19 pandemic, and internal disputes within OPEC+. Alongside these disruptions, the entry of new players in the energy sector has redefined players in the energy markets. This paper highlights those escalating tensions and shifting trade partners. It describes the situation as the "energy cold war" going hand-in-hand with the actual war in Ukraine. By looking at the interactions between major economic blocs, the paper attempts to explain how energy markets have transformed into arenas of strategic national interests among major global economies. It is organized into four sections: the first section outlines the energy situation over the past decade; sections two and three detail shifts in energy trade and sources and analyse the broader socio-economic repercussions of the ongoing crises. The final section analyses the present infrastructure of energy production and transportation in the world to attempt to predict what is going to happen from a technical perspective.

### ملخص

شهدت ساحة الطاقة العالمية تغيرات عدة ناتجة عن أحداث مختلفة مثل الحرب الروسية الأوكرانية، وجائحة كوفيد-19، والنزاعات داخل تحالف أوبك+، كما أدى دخول لاعبين جدد في قطاع الطاقة إلى إعادة تحديد اللاعبين في أسواق الطاقة. في هذا الإطار، تقوم هذه الورقة بإلقاء الضوء على التوترات المتصاعدة وتغير الشركاء التجاريين بوصفها "الحرب الباردة في قطاع الطاقة "؛ حيث تقوم من خلال دراسة التفاعلات المتبادلة بين التكتلات الاقتصادية الكبرى بتفسير كيف تحولت أسواق الطاقة إلى ساحات للمصالح الاستراتيجية الوطنية بين الاقتصادات العالمية الكبرى. وتنقسم الدراسة إلى أربعة أقسام؛ حيث يستعرض الجزء الأول وضع الطاقة خلال العِقد الماضي؛ بينما يناقش الجزء الثاني بالتفصيل التحولات في تجارة الطاقة ومصادرها؛ ويتناول الجزء الثالث بالتحليل تبعات الأزمة الحالية الاجتماعية-الاقتصادية واسعة النطاق؛ وأخيرا، يحلل الجزء الرابع البنية التحتية لإنتاج ونقل الطاقة بهدف محاولة التنبؤ بإمكانية استمرار الوضع الحالي الناتج عن الحرب بين روسيا وأوكرانيا.

**Keywords:** Energy, Oil, Petroleum, Gas, LNG, Russia-Ukraine War, Energy Trade, Energy Markets

**الكلمات الرئيسية**: الطاقة، النفط، البترول، الغاز، الغاز الطبيعي المسال، الحرب الروسية-الأوكرانية، تجارة الطاقة، أسواق الطاقة.

## 1. Introduction

In recent years, the energy markets have experienced a remarkable level of volatility, a trend that has been exacerbated by the onset of the Russia-Ukraine war. However, even prior to this conflict, numerous significant events had already set the stage for an unpredictable energy landscape. For instance, the outbreak of the COVID-19 pandemic sent shockwaves throughout the global economy, leading to a sharp decline in energy demand and subsequent disruptions in the markets.

Furthermore, the emergence of new players in the energy sector has added an additional layer of complexity. These new entrants, often equipped with innovative technologies and alternative energy sources, have challenged the traditional dominance of established energy providers. As a result, long-standing market dynamics have been altered, intensifying competition and further fueling market volatility.

Another contributing factor to the instability in energy markets has been the internal rifts between the OPEC+ members. The cooperation between major oil-producing nations has been crucial in maintaining stability and controlling oil prices. However, disagreements and conflicting interests among these nations have at times led to breakdowns in cooperation, resulting in price fluctuations and supply uncertainties.

These collective events have exerted significant pressure on the prices and production of energy products, sending shockwaves across the global economy. Consequently, it has become imperative to analyze the recent developments in various energy markets and their repercussions on the global energy market. By delving into the interplay between economic blocs, this paper seeks to show how the evolving energy landscape has gradually transformed almost into a new kind of war between major economic powers, one that we choose to call the "energy cold war".

There are many questions that need to be answered regarding this "energy cold war". How does the future of this "war" look? How long is it going to continue for? The answers to these questions depend on a number of factors analyzed in detail in this paper in an attempt to foresee the future of the energy market and the relations among its major players.

The paper is divided into four sections. It will provide a background of the energy situation the past decade. It will then highlight the changes in energy trade partners and energy sources, followed by examining the effect of the crisis on the global population. The final section will analyze the present infrastructure of energy production and transportation in the world to attempt to predict what is going to happen from a technical perspective.

Through an in-depth examination of these developments, we aim to unravel the intricate connections between energy markets, geopolitical rivalries, and their far-reaching consequences on the global economy. By understanding the underlying factors and interdependencies at play, policymakers and stakeholders can gain valuable insights into the risks and opportunities posed by the current state of energy markets, thereby enabling them to make informed decisions and navigate the challenges ahead.

# 2. Timeline of the Energy Crisis

Even prior to the Russia-Ukraine war, energy markets have experienced major events for the past ten years that caused significant changes to the energy markets.

Since 2011 the mainstream use of fracking technology in the United States introduced new players in the oil markets. Fracking, a process of extracting shale oil from shale rock terrain, is considered to be environmentally unfriendly and faces opposition. It is also costly and only economically viable when oil prices are high.

- The COVID-19 pandemic that halted the world economy in 2020 and 2021
   was a significant factor that led to a sudden collapse in oil demand.
- The US federal reserve hiking interest rates to the highest levels since the 2008 financial crisis kept oil demand lower.
- Tensions between Russia and Ukraine since 2014 put pressure on oil and gas prices to remain high, especially in Europe.

Figure 1 shows the timeline and events of the overlapping events of the energy crisis and their effect on oil prices.

Figure 1. Brent crude oil prices



Source: World Bank commodity prices.

A. In 2016 OPEC+ alliance agreed on production levels to sustain oil prices above \$60/bbl. threshold (now shown)

- B. Between 2016 and 2020 US shale oil production from fracking became more significant, doubling from 4 million bbl./day to 8 million bbl./day¹. Fracking is a relatively expensive and capital-intensive method of extracting oil (not shown).
- C. In response to increased oil output due to fracking, Saudi Arabia increased its own production, flooding the market with cheaper oil, making shale oil unprofitable and economically unviable due to the lower market price. This marks the end of the OPEC+ agreement since 2016 to limit their production quotas.
- D. The increase by Saudi Arabia was opposed by Russia, due to the higher break-even price of extraction Russian oil. Russian oil producers were forced to increase their output to compensate for lower profits per barrel. This led to global oil production increasing from 79 million bbl/day to 83 million bbl/day
- E. March 2020: COVID-19 outbreak caused global shutdowns were imposed on various industries, leading to a huge drop in demand of oil. Brent crude oil prices fell by 50% from \$63/bbl. to \$32/bbl. while prices of WTI oil fell below zero. The sharp drop in oil prices was due to both the increase in global output and the sudden drop in demand due to COVID-19.
- F. By April 2020 OPEC+ producers especially Saudi Arabia and Russia agreed to return to production caps in order for oil prices to recover. Oil prices recovered to \$40/bbl. by May 2020.
- G. In August 2020 China instituted a ban on importing coal from Australia, leading to increased demand for oil as a substitute energy source. Oil prices

5

<sup>&</sup>lt;sup>1</sup> US Energy Information Administration. 2023. Petroleum and Other Liquids Data, ww.eia.gov/petroleum/data.php#crude. Accessed 6 June 2023.

- experienced a modest recovery, reaching \$45/bbl., but production levels remained subdued due to COVID-19 pandemic
- H. By June 2021 a drought in the Americas adversely impacted hydro-power generation (especially USA and Brazil), driving up hydrocarbon prices as an energy substitute
- I. By late 2021 there was a gradual recovery from COVID-19 pandemic led to a recovery in energy prices and demand as economies began to open up after vaccination campaigns.
- J. The Russia-Ukraine war broke out in February 2022 leading to a huge spike in oil prices to \$112/bbl.
- K. During the summer of 2022 the heatwaves from the previous year continued putting further pressure on energy prices.
- L. In November 2022 there were explosions on Nord Stream pipelines 1 & 2 leading to a halt in Russia natural gas exports to the EU.

All these events leading to the build-up of the Russia-Ukraine war and the subsequent events led to significant changes in energy flows and trade partners.

# 3. Change in the Energy Trade Partners

Although Russian crude oil production levels fell sharply at the start of the Russia-Ukraine war, they recovered to their pre-war levels within a few months at 10.3 million bbl/day as shown in Figure 2. However, despite the quick recovery, there were significant changes in global energy trade partners.

Oil Production (million bbl/day)

Jan-21
Apr-21
Awy-21
Jul-21
Jul-22
Awy-22
Awy-22
Jun-22
Awy-22
Jun-22
Awy-22
Jun-22
Awy-22
Jun-22
Jul-22
Awy-22
Jun-22
Jul-22
Awy-22
Jun-22
Jul-22
Jul-22
Awy-22
Jul-22
Jul-22
Jul-22
Sep-22
Oct-22
Nov-22
Feb-23

Figure 2. Crude oil production by Russia

Source: JODI-Oil database.

European countries gradually increased their oil imports from West Africa and the Middle East, subsequently depleting the supply and leaving limited options for South Asian countries such as India, Bangladesh, and Pakistan that had traditionally depended on these regions for imports. South Korea followed the trend of European countries. In response, these South Asian countries shifted their focus to sourcing more oil from Russia. This transformation in trade partners caused a twofold surge in Russia's oil trade with South Asia, China and Turkey.

The change is reflected in Figure 3 where we can see that European countries, South Korea and the US have either eliminated or reduced their imports of oil from Russia, and are being replaced by India and China increasing their Russian oil imports. India is a relatively new trade partner for Russia which saw the decrease of Russian oil exports to Europe as an opportunity. Japan remains the sole exception as the only G-7 country to increase imports of Russian oil due to its dependency.

35 30 Value of Oil USD Billion 25 20 15 10 5 Jul-2021 Jan-2022 Sep-2021 Jun-2022 Sep-2022 Apr-2022 Jul-2022 Oct-2022 lan-2023 Aug-2021 Nov-2021 Dec-2021 -eb-2022 Mar-2022 Aay-2022 Aug-2022 Jov-2022 **Jec-2022** Oct-2021 ■EU ■US ■UK ■South Korea ■Japan ■Turkey ■China ■India

Figure 3. Value of Russian fossil fuel exports by destination

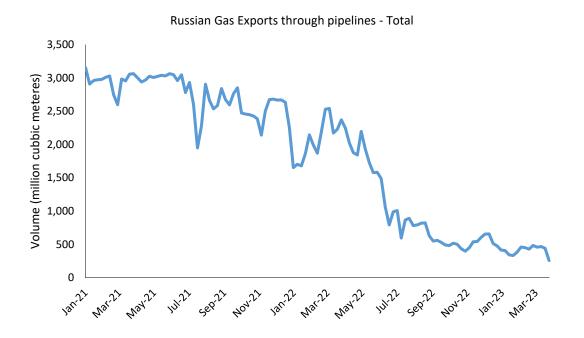
Source: Brugel Research.

Unlike oil exports which remained stable, Russia experienced a sudden drop in gas exports due to the constraints of natural gas pipeline infrastructure, making it difficult to find new partners. Exports through the Yamal pipeline were halted at the outbreak of the war while exports through the Nord Stream pipelines were decreasing until it was damaged by an explosion in September 2022 halted all flows. Hungary remains the only EU country to import Russian gas through the Ukraine transit pipeline, and Turkey continues to import Russian gas through the Turkstream pipeline. These changes are shown in Error! Reference source not found. with the Nord Stream and Yamal pipeline completely shut down. Overall exports of Russian pipelines kept falling as shown in Figure 4. In response to this Russia has exported gas through liquefied natural gas (LNG) tankers which are costlier than pipelines. Although there is no data on LNG exports it is estimated to have increased by 8% in 2022 to make up for the drop in pipeline volumes <sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> Reuters. 2023. Russia Boosts LNG Exports to Europe by 20% in 2022, www.reuters.com/markets/commodities/russia-boosts-lng-exports-europe-by-20-2022-refinitiv-2023-01-31/.

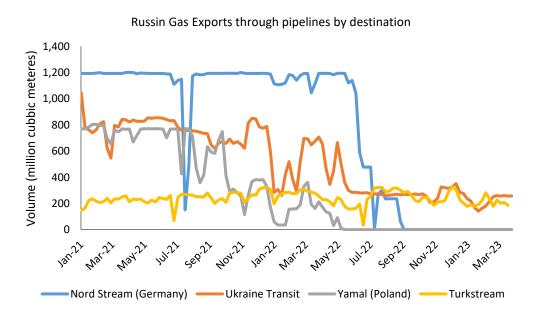
These events in the natural gas market led to Europe seeking natural gas imports from the United States through LNG containers at inflated prices. This crisis led to quadrupling the prices in the United States.

Figure 4. Total exports of natural gas by Russia



Source: JODI Gas database.

Figure 5. Total exports of natural gas through LNG pipelines by destination



Source: Brugel Research.

Overall, the transition to alternative energy sources will require a significant amount of investment that will inevitably take time. The existing world capacity for liquefaction and regasification is not sufficient to fill the gap and cannot be relied on, making it necessary to develop alternative methods of energy production. For example, Germany, the largest economy in the EU, cannot rely on LNG due to a lack of regasification and storage facilities to import the gas. Additionally, Europe will not be able to efficiently import natural gas from the USA until 2026, when the necessary infrastructure for the export of LNG is built.

Europe substituted Russian natural gas at higher cost due to higher transportation costs incurred by using LNG containers as an alternative to pipelines, and the removal of Russian natural gas supplies from the market. This led to a fourfold increase in natural gas prices between Europe and the United States. Figure 6 shows how Europe replaced nearly all Russian natural gas with LNG shipments mostly from the US and Europe. The higher costs of natural gas, however, will have ramifications on consumers, leading to higher energy bills and inflation.

**Europe Source of Natural Gas** 100% 90% 16 13 80% 70% 18 14 60% 25 50% 21 40% 31 30% 20% 20 21 10% 18 0% 2019 2021 2022 ■ Norway ■ Russia ■ LNG ■ Domestic production ■ Other

Figure 6. Sources of natural gas for the EU plus UK for 2019, 2021 and 2022

Source: Oxford Institute for Energy Studies via BBC.

## 4. The Depth of the Crisis on Consumers

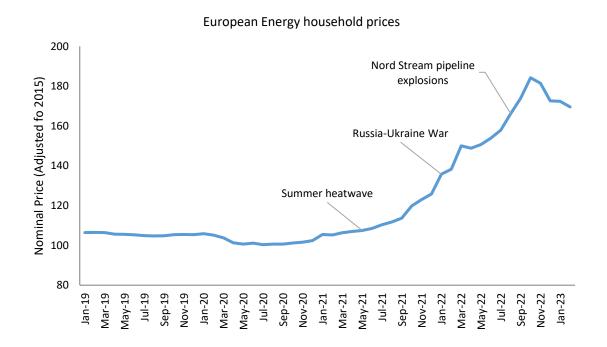
The events mentioned earlier and the change in trade partners are leading to higher prices and an inflation crisis faced by consumers worldwide.

## 4.1. Increase in Energy Prices and Inflation

## 4.1.1. Consumers in developed countries

The increase in energy prices in Europe predates the Russia-Ukraine conflict. As shown in Figure 7 consumers experienced a hike of 19% in energy prices during 2021, which was attributed to two primary factors. Firstly, the economic recovery from the COVID-19 pandemic saw a sharp surge in energy demand as industrial production rebounded. Secondly, the summer heat waves resulted in disruptions in hydroelectric power generation and led to a rise in energy demand for cooling.

Figure 7. Household energy consumption of the EU + UK



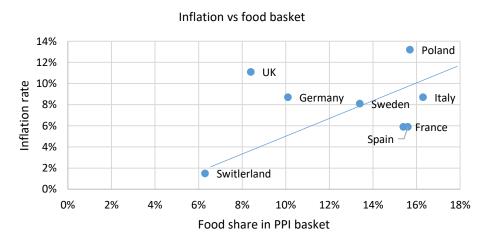
Source: Eurostat – Energy Consumption in Households.

During 2022, the EU faced an increase in gas prices as a result due to gas deliveries to some of the EU member states affected by the war. This, in turn, caused electricity prices to increase by 44% during the year, one of the largest

annual increases. Additionally, the summer heatwaves of 2022 continued with the costs further increasing. The Nord Stream pipelines in November halted all natural gas flows from Russia to Germany, further increasing household energy prices in Europe.

Inflation is affecting consumers not only through high energy costs, but also through a general rise in the prices of everyday goods. The European Union (EU) experienced a surge in inflation in 2022, with a yearly rate of 9.2% (Eurostat 2023), the highest in over thirty years. Data in Figure 8 reveals that countries with a higher percentage of income spent on food items are more prone to inflation. Despite being self-sustaining countries that produce surplus food, inflation is still driven by food prices, largely due to the high cost of energy required to transport essential food items to consumers. Poland has been particularly susceptible to inflation due to its higher proportion of income spent on food, whereas Switzerland has been relatively sheltered due to its lower proportion of income spent on food, France and Spain are a slight anomaly, they have managed to shield themselves better from inflation, despite their higher percentage of income spent on food. This can be attributed to these countries' greater energy independence, with both countries importing natural gas from North Africa (Algeria) and France having alternative energy sources such as nuclear power.

Figure 8. Annual inflation for 2022 vs proportion of food in food basket



Sources: World Bank and Eurostat.

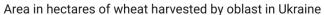
#### 4.1.2.Global South

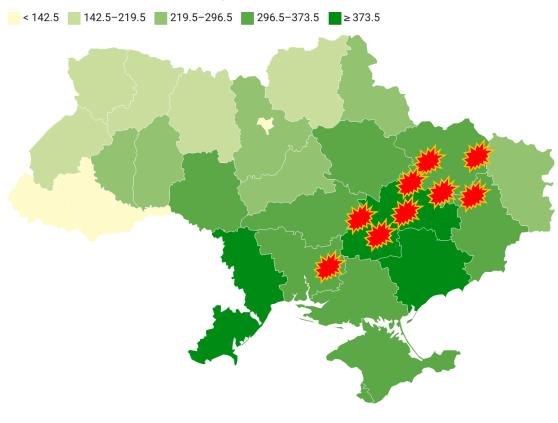
Consumers in developing countries are faced with even harsher economic conditions due to the war, which include food inflation, high energy prices and even economic and political instability. Food inflation is being driven by supply disruption in wheat and soybean production in Ukraine and sanctions placed on Russian exports. Higher energy prices are being driven by all the factors mentioned in the previous section. Due to the high poverty rate in these countries even slight increases in consumer prices might trigger social unrest.

Unlike European countries, many developing countries are net importers of food particularly wheat. The top wheat importers which include Egypt, Algeria, Indonesia, Nigeria, Morocco and the Philippines are dependent on imports from Ukraine. Figure 9 reveals that the areas were the conflict is highest are also regions where wheat is harvested. Higher prices are expected to put stress on the fiscal budgets of these countries and to increase consumer prices. Although many countries in South America and North Africa stand to benefit from higher oil prices and increased demand from natural gas respectively, they will still face greater challenges. Social transfer bills are expected to increase, and North African countries as heavy wheat importers are faced with a higher import bill.

Figure 9. Geographic area of wheat harvest in Ukraine and areas of conflict

## **Wheat Harvest Areas of Ukraine**

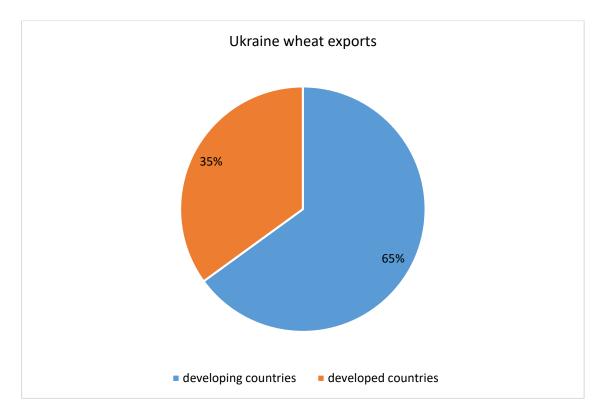




Created with Datawrapper

Source: United States Department of Agriculture.

Figure 10. Proportion of wheat exports from Ukraine in developing and developed countries



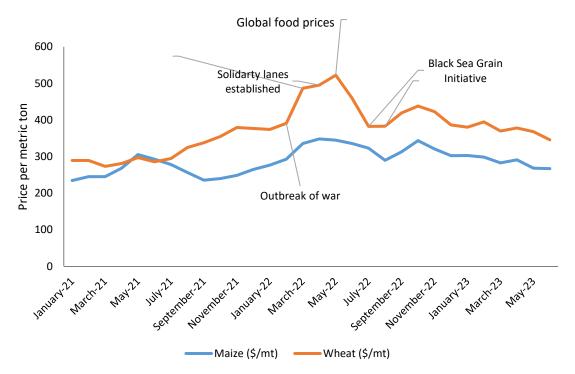
Source: Black Sea Grain Initiative Joint Steering Committee via Council of the European Union.

Figure 11 shows how global food prices have been increasing even before the war and this increase was exasperated by the outbreak of the war witch prices reaching \$522 a bushel. This is due to the fact that the majority of Ukraine's agriculture takes place in the east, where most of the fighting is taking place. This has led to a 32% drop in grain exports in 2022. In addition, a Russian naval blockade of Ukraine made it impossible for Ukraine to sell wheat in international markets through shipping.

In response to the blockade of wheat shipments to the world several initiatives were done to help prevent a global food crisis. The EU helped Ukraine export grain through a land border with Poland a month after the war, which was referred to as a "solidarity lane". Turkey helped broker the Black Sea Grain initiative between Russia and Ukraine, easing the naval blockade of Ukraine by facilitating the exports of grain. As shown in Figure 11, prices did not fall down to

below pre-war level due to geopolitical tension despite the initiatives by the EU and Turkey. Shortly after prices cooled down but there is still an immediate risk. he solidarity lanes thorough a land border cannot carry sufficient volumes to meet global demand. The Black Sea Grain initiatives slowed down due to logistical coordination between Russia, Turkey and Ukraine, and eventually collapsed due lack of coordination between parties.

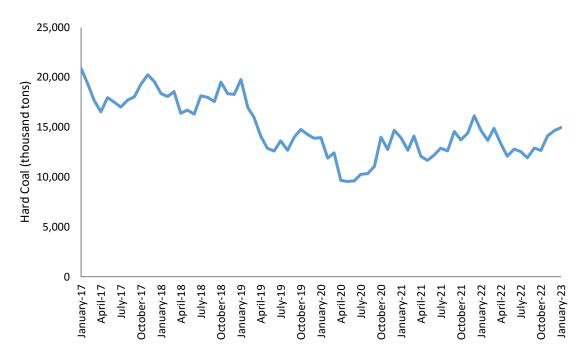
Figure 11. Prices of essential food commodities, Maize and Wheat over time



Source: Eurostat via World Bank.

## 4.2. Stepping Back on Climate Promises

Figure 12. Transformation of hard coal in the EU



Source: Eurostat - Coal Production and Consumption Statistics.

Since the start of the 21st century there has been a transition to clean energy as part of a strategy to mitigate the effects of climate change. One such strategy was to reduce the dependence on coal as an energy source, and replacing it with other fossil fuels or even renewable energy sources. Figure 12 shows the changes in the use of hard coal by the EU over time. Even before the pandemic, coal usage in the EU was falling rapidly from 20 million to 12.6 million tons during 2019. Coal consumption increased slightly to 16 million tons by the end of 2021 due to the COVID-19 recovery, however this was much lower than the pre-pandemic era signaling a phase out of the hard fuel. As the energy cold war intensified in 2022, coal consumption increased from 12 million to 15 million tons by the start of 2023. It is likely that coal consumption will continue to increase and the phase-out by the EU will be postponed, calling into question the climate initiative proposed by the G-7.

Prior to the energy cold war, the profitability of coal was limited. According to a 2019 Carbon Tracker study, 79% of EU coal generators ran at a loss and were likely to suffer €6.57 billion in losses³. Many governments announced a complete coal phase-out even before EU institutions agreed to reduce overall emissions by 55% by 2030. Countries such as Belgium, Sweden, and Portugal totally phased out coal and partially transitioned to renewable energy, while Germany, UK, Czech Republic and Hungary have pledged to do so between 2024-2033.

However, the severe drought in 2021 across Europe led to a setback in hydropower generation and increased household energy demand. Consequently, there was a growing demand for coal due to its affordability and availability. This was followed by war in Ukraine, and Russia decreasing gas supply either due to boycotts by European countries or Russia withholding of energy supplies. This led to several EU member states to further turn to coal for their energy needs. Countries such as Germany, France, Austria, and the Netherlands have reversed their climate pledges and ramped up coal production or put their coal plants on standby. Many of these actions by European countries were seen as stepping back on the climate promise shown in Box 1.

Actions by many European countries raised protest by African countries, pointing to the unfairness of European countries breaking their climate promises, while African countries were being pressured to shift away from fossil fuels. African countries pointed out the refusal of European countries to export coal to Africa and their refusal to invest in natural gas infrastructure held back African countries from developing. The European Investment bank, the main international development partner of the EU has continued its ban on investing in natural gas projects in Africa.

-

<sup>&</sup>lt;sup>3</sup> Carbon Tracker Initiative: <a href="https://carbontracker.org/reports/apocoalypse-now/">https://carbontracker.org/reports/apocoalypse-now/</a>.

#### Box 1. Climate Promise of 2013

#### The Climate Promise

At the UN Climate Conference COP19 in Copenhagen developed countries pledged a Climate Policy Initiative, a US\$ 100 billion per year by 2020 to help developing countries with mitigation actions against climate change. According

### 4.3. Immediate Reaction

The G-7 implemented price caps on Russian seaborne petroleum exports, leading to ongoing negotiations. The price cap is set at \$60, and any oil sold above this threshold will not be eligible for payment services and insurance. The reason behind setting the cap at \$60 is that if the price goes below this threshold, Russia would not find it economically viable to continue oil production, and will likely halt production. Considering the Russian tax system and production costs amounting to \$55, Russia needs to maintain a price level that ensures profitability. Furthermore, it cannot be less than \$50 due to the dependence of several EU countries, such as Greece, on shipping services tied to this oil trade.

### 5. How Does the Future Look?

The immediate effects of Russia-Ukraine war led to a global energy crisis that forced countries to find alternative sources of energy and new trade partners. These new arrangements however are constrained in the long run, due to the many technical factors that affects energy markets in those countries.

### 5.1. Technical Factors

### *5.1.1. Pipelines (existing infrastructure)*

Germany's energy security is a concern as the country heavily relies on three gas pipelines to receive Russian gas, including the Yamal pipeline through Bulgaria and another via Ukraine with the limited availability of alternative gas supply posing a challenge. Despite having access to gas pipelines from North Africa and Azerbaijan, the current infrastructure only links Italy to these pipelines, creating a barrier to importing gas from these regions. Recently Italy, Germany and Austria signed a letter of support to build a pipeline connecting the three, countries giving them access to North African gas. The pipeline is expected to be completed by 2027 and is set to supply 40% of EU natural gas demand by 2030<sup>4</sup>. Many European countries have opted to imported natural gas through LNG shipping containers from the United States or Russia despite it being more costly and logistically difficult.

## 5.1.2. Nuclear energy

The transition to net zero carbon emissions requires an increase in nuclear energy capacity, as there are currently 440 reactors operating globally with an additional 60 reactors under construction. However, there are concerns about the safety of nuclear energy and whether it is worth pursuing to reach zero-carbon emissions. The World Bank, the world's largest multilateral green energy financer, refuses to finance or co-finance nuclear projects, fearing that countries might direct this finance to Russia for their technology. Nonetheless, Japan and France, which had planned to shut down some of their nuclear reactors, reversed their course after the energy crisis caused by the Russia-Ukraine war. While some countries such as Austria and Australia remain opposed to nuclear power, Poland, Romania, Kenya, and China are building new small-scale and even portable nuclear power units. Germany, which had planned to shut down all its reactors by the end of 2022, halted the closure of its final two reactors to avoid energy shortages resulting from the war.

-

<sup>&</sup>lt;sup>4</sup> www.offshore-technology.com/news/germany-italy-support-gas-pipeline/.

## *5.1.3.*Renewable energy

The war served as a wake-up call for Europe, highlighting the importance to transition from fossil fuels to renewable energy to ensure diversification. Consequently, Europe implemented measures to expedite the financing and development of its renewable energy infrastructure, driven by previous achievements to hasten that transition. However, the question remains if these efforts will be fast enough to implement, and whether they will generate sufficient energy to replace fossil fuels.

#### 5.1.4.Desalination

Seawater desalination is considered energy-intensive and expensive, and it has a significant environmental impact (WEF 2022). Despite major advancements the technology, seawater desalination is the most energy intensive method of extracting freshwater. Countries like Saudi Arabia and UAE rely heavily on seawater desalination while Egypt views seawater desalination as a future potential undertaking. Energy-poor countries do not just risk their economic growth, but their future livelihood if their energy security needs are not met. The energy intensive nature of seawater desalination means other alternative energy sources are not feasible.

# 5.2. Advocacy and Looking Forward

The technical factors above show the limitations of the continuation of the energy arrangements due to the high cost and difficulty of finding alternative partners. Changing trade partners increases the cost of transporting fuels, putting many energy intensive industries and jobs at risk. Building nuclear energy takes time from inception to completion and faces strong political opposition. Renewable energy has not yet caught up to fossil fuels in terms of energy capacity and does not suit heavy industrial needs that are a large component of the economy in the global south. The energy intensive nature of water desalination makes access to energy a key aspect of survival, not just a resource for economic growth. The

whole world loses from this present energy arrangement, which is costly in addition to the costs of the war itself. The difficulty of the energy situation might force the war itself to end given how necessary energy is for the survival of the world, particularly Europe.

With the next UN Climate Change Conference, COP28 to be held in Dubai in 2024, it is expected to see less compliance with the net zero target because of many countries reverting to relying on fossil fuels. Many of the participants in the conference are focused more on securing their energy needs and security over transitioning to green energy.

This comes at a time when climate justice, particularly for the global south, remains an urgent issue that demands continuous support through advocacy efforts rather than being brushed aside. Many developing countries are grappling with the dual challenge of climate change impact and economic development. Economic challenges include challenges of higher energy and commodity prices while the challenge of climate change means they are under pressure to implement adaption and mitigation projects. Even regions that may appear to benefit, such as South America and the Gulf due to higher oil revenue, will encounter their own set of challenges, which include food inflation and higher social spending.

The current status quo, perpetuated by the after mentioned complex technical factors, is not only costly but also requires significant time to implement substantial changes. Amidst these challenges, there is uncertainty surrounding the direction and effectiveness of advocacy in shaping the future.

It is, therefore, evident that the entire world stands to lose if energy and climate concerns are not addressed promptly. Therefore, the most viable solution to overcome this crisis is collective negotiation—a joint effort to find a way forward. Only by engaging in meaningful negotiations, can the world have a sustainable future that prioritizes climate justice and energy security for all.

## References

- Eurostat. 2023. Coal production and consumption statistics . (n.d.). https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Coal production and consumption statistics.
- ----. 2023. Harmonised Index of Consumer Prices (HICP) inflation rate. https://ec.europa.eu/eurostat/databrowser/view/tec00118/default/table?lang =en
- Carbon Tracker. 2019. Apocoalypse Now. London: Carbon Tracker.
- Council of the European Union. 2023. Ukranian grain exports explained. https://www.consilium.europa.eu/en/infographics/ukrainian-grain-exports-explained/
- Offshore Technology. 2023. Germany and Italy Support Gas Pipeline Project. www.offshore-technology.com/news/germany-italy-support-gas-pipeline/.
- Reuters Staff. 2023. Russia Boosts LNG Exports to Europe by 20% in 2022. www.reuters.com/markets/commodities/russia-boosts-Ing-exports-europe-by-20-2022-refinitiv-2023-01-31/
- U.S. Energy Information Administration. 2023. Petroleum & Other Liquids Data. www.eia.gov/petroleum/data.php#crude
- World Economic Forum (WEF). 2022. Can Desalination Be a Sustainable Solution to the Water Crisis? www.weforum.org/agenda/2022/06/technology-and-entrepreneurship-can-quench-our-parched-world.