

## **The Effects of Energy Transition Projects on Global Security**

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### **Abstract**

*At the time the energy transition projects achieve stability in international relations and security for some countries, which may bring about a variety of conflicts. Some of these conflicts may be represented by waging a war, especially for those countries affected due to their declining status in the global system. This is the result of several factors that together represent an obstacle to its ambitions. For instance, it appears that the USA is dissatisfied with the direction that the energy sector is going in the global system after (2020) in one way or another. European Union countries were also affected by the shortage in the energy sector and Russian gas supplies after the Russian-Ukrainian war. At the same time, Russia and China adopt energy policies and new projects that contribute to supporting their economies, as we mentioned previously. The United States, on the other hand, remains primarily dependent on gas Shale, which undergoes several phases in order to liquefy and transport it to Europe via sea carriers to compensate for the gas shortage in Europe. This prompted the United States to take action to confront Russian and Chinese efforts to dominate global energy markets. The United States stood against Russia in its war with Ukraine by compensating for the gas shortage in Europe, and it competed with China in the South China Sea. The United States sought to conclude a number of agreements and understandings with the countries in the Caspian Sea. Accordingly, in this section, we will explain US gas exports, the energy crisis in Europe after the Russian-Ukrainian war, in addition to the consequences of this war on global security.*

**Keywords:** *Energy transition projects, global security.*

### **Introduction**

At the time the energy transition projects achieve stability in international relations and security for some countries, which may bring about a variety of conflicts. Some of these conflicts may be represented by waging a war, especially for those countries affected due to their declining status in the global system. This is the result of several factors that together represent an obstacle to its ambitions. For instance, it appears that the USA is dissatisfied with the direction that the energy sector is going in the global system after (2020) in one way or another. European Union countries were also affected by the shortage in the energy sector and Russian gas supplies after the Russian-Ukrainian war. At the same time, Russia and China adopt energy policies and new projects that contribute to supporting their economies, as we mentioned previously. The United States, on the other hand, remains primarily dependent on gas Shale, which undergoes several phases in order to liquefy and transport it to Europe via sea carriers to compensate for the gas shortage in Europe. This prompted the United States to take action to confront Russian and Chinese efforts to dominate global energy markets. The United States stood

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against Russia in its war with Ukraine by compensating for the gas shortage in Europe, and it competed with China in the South China Sea. The United States sought to conclude a number of agreements and understandings with the countries in the Caspian Sea. Accordingly, in this section, we will explain US gas exports, the energy crisis in Europe after the Russian-Ukrainian war, in addition to the consequences of this war on global security.

#### First: The United States and gas exports

The US began exporting liquefied natural gas to Europe in 2016, which has the fifth largest confirmed reserves of natural gas at approximately (12.6 trillion cubic meters), representing (6.7%) of the world's total natural gas reserves. It is the largest producer of natural gas in the world (Elliott, 2022), and it is the third largest exporter of liquefied natural gas in the world, as it exported (96.3 billion cubic meters) in (2022), (23 billion cubic meters) to Europe, which was the highest percentage of gas exported by US to Europe in history. (European Commission, 2022). In 2021, the US exported (22.2 billion cubic meters) of liquefied gas to Europe in comparison to (18.7 billion cubic meters) in 2020 and (14.2 billion cubic meters) in (2019). The number of ships shipping liquefied gas from America to Europe has increased significantly in recent years. In (2021), (246) cargo ships transported liquefied gas from America to Europe, while only (201 ships) in (2020) and (154 ships) in (2019) were transported by the US to Europe. (IPIT).

It should be maintained that there are no pipelines linking America to Europe, in addition to the difficulty of laying pipelines due to geographical distance, especially the Atlantic Ocean separates the USA from Europe by a distance of (6,679 kilometers) (The Atlantic Ocean, Information Knowledge Network 2023). Therefore, the liquefied natural gas is not shipped via pipelines but converted into liquid and transported by ships to Europe across the Atlantic Ocean (Jamal, 2022). As for managing international relations, the USA is the key player in this field. Therefore, energy security is one of the priorities of the American government in the 21st century. In order to achieve such security, it is necessary to adopt a comprehensive strategy at various levels (Al-Saedi, 2007).

The USA depends on expanding and diversifying the energy sources it exports in order to maintain energy security. The US government has taken a number of steps over the past five years to enhance and diversify energy supplies and transportation methods, despite the fact that the Middle East dominates global energy markets. However, developing new supplies in a number of other regions in the world is an important task for American policy, especially in the Caspian Sea region, the African continent, and the South China Sea (Mohamed & Ahmed, 2020).

#### Second: The energy crisis in Europe

The issue of energy security plays a pivotal role in policies worldwide, as it has become like many determinants that constitute the content of comprehensive national security. It is also considered a major catalyst for many of the geopolitical conflicts that the world has witnessed over the past centuries and decades, starting with the reliance on coal as a primary source of generating energy, passing through the emergence of oil and natural gas in the global energy scene, and ending with the trend of governments to enhance their renewable energy generation capabilities (Egyptian Center for Thought and Strategic Studies 2022) .

Recently, global energy markets have witnessed noticeable disturbances on both the supply and demand sides, coinciding with limited supplies and the disruption of some supply pipelines, which resulted in sharp rises in the prices of oil and natural gas. The European continent is suffering, in particular, from the global energy crisis, as it is not only affected by the economic aspect but also by the geopolitical aspect. The energy crisis worsened after the Russian-Ukrainian war in 2022 and with the spread of fears regarding the possibility of interruptions in oil and natural gas supplies, based on Russia's

importance in the global and European energy markets in particular (Egyptian Center for Thought and Strategic Studies 2022).

In light of these events, European countries try to find alternatives to Russian gas to enhance their energy security and limit Russia's ability to threaten the use of gas as a weapon to achieve its political and strategic goals. In this regard, several potential alternatives have emerged for the Old Continent to make up for this shortage. Europe will likely have two main options: to obtain more natural gas from other supplying countries via pipelines or to import more liquefied natural gas via tankers. As for the first option, which is to compensate for the shortage of natural gas by importing it from other supplying countries through the pipeline network, European gas-producing countries such as Norway, the Netherlands, or Britain will not be able to fully compensate for the gas coming from Russia. They are either doing their maximum production (Norway and the Netherlands) or they are already suffering from lack of gas and high prices that have already led to the bankruptcy of a number of small gas suppliers, as in the case of Britain. However, Europe may benefit from gas imports via pipelines coming from Algeria and Azerbaijan, especially with these two countries having a surplus (Qandil, 2020). As for the second option, it deals with importing liquefied natural gas. Although many European Union countries have invested billions of dollars in expanding the infrastructure that allows them to import gas by ships and transport the gas more easily across the continent, obtaining sufficient quantities to fully replace Russian gas imports would be too costly for the Europeans at best and may also be impractical (Qandil, 2020).

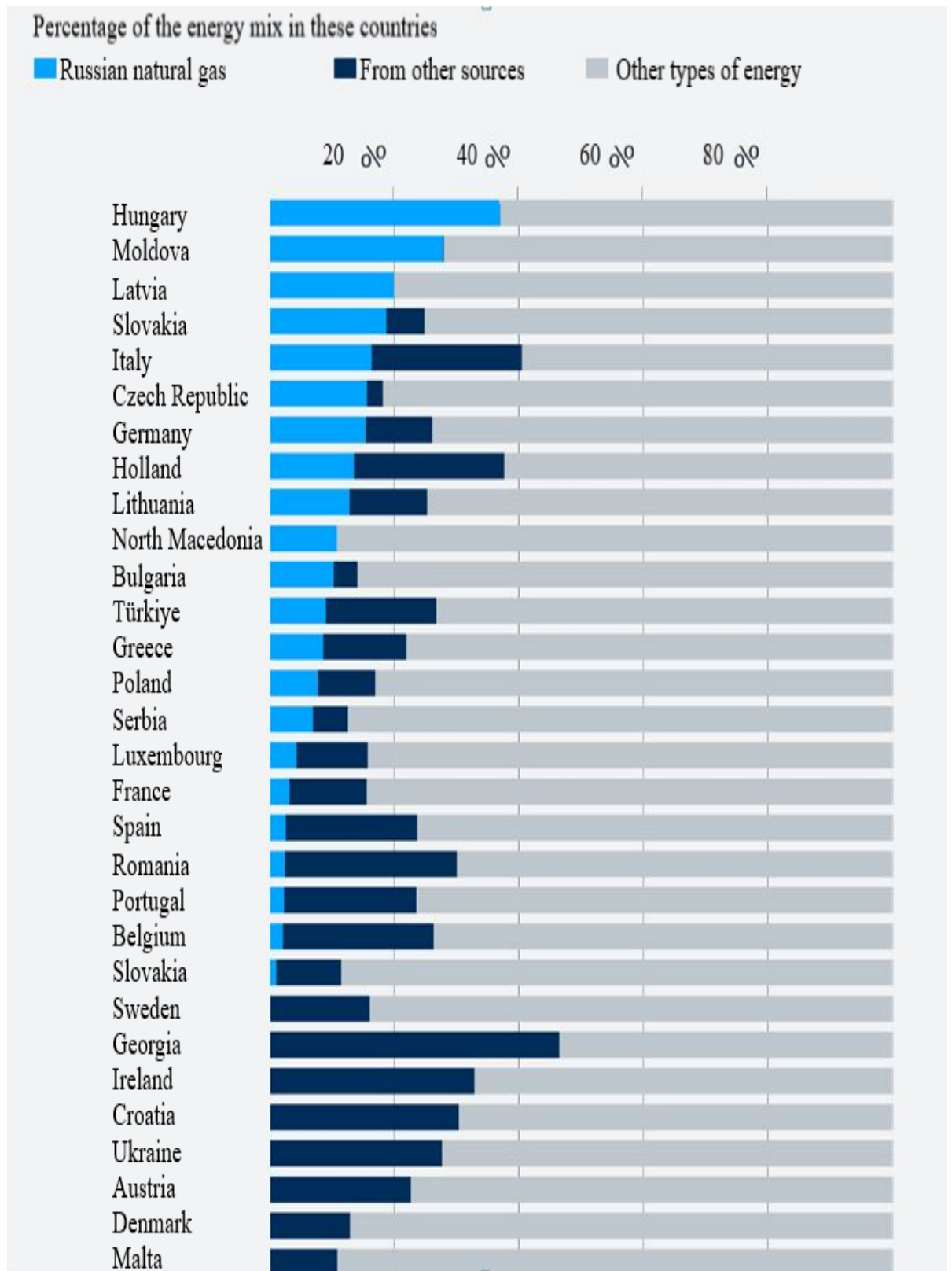


Chart No. (1) the size of European dependence on Russian gas for the year 2020.

Source: The statistics for 2020 issued by the European Union Statistical Office “Eurostat”, including European countries in which the share of natural gas in the total available energy is less than 10 %.

In the context of searching for quick alternatives to contain the energy crisis, some European countries have turned to a number of indicative consumption policies that support citizens in the face of rising prices. The Czech Republic, which was 98% dependent on Russian gas, set a limit regarding electricity and gas prices to protect citizens. Latvia has completely stopped using Russian gas since December 2022, relying on quick alternative tools and adopting protectionist policies. Hungary, which was 80% dependent on Russian gas, reduced the use of natural gas in public institutions by 25%, but it acted differently from the European Union when its minister of foreign affairs paid a visit to Russia and requested to supply his country with 700 million cubic meters of gas (Abd-Ashafi, 2022).

In France, it announced a plan to rationalize electricity consumption, which included turning off the lights of the Eiffel Tower, which is the most famous tourist attraction. In Germany, which is the largest economy in Europe and the largest importer of Russian gas, it was announced to extend the operation of nuclear reactors to support electricity supplies, in addition to issuing a decision to reduce electricity consumption in Berlin by 10%. The German Ministry of Economy also announced that it has seized control of three Russian-owned oil refineries in the country to ensure energy security before the decision to ban the supply of oil from Russia comes into effect next year. German Chancellor Schulz also made foreign tours to a number of energy-producing countries, such as Canada, Saudi Arabia, the Emirates, and Qatar, to conduct negotiations and sign agreements that would enhance imports to Germany (Abd-Ashafi, 2022).

The European Union has decided to adopt a set of protective measures, including discussing a proposal to impose a temporary tax on energy companies at a rate of 33% of their additional profits during the current stage, with the aim of supporting European citizens and searching for alternative sources of energy (Abd-Ashafi, 2022).

Third: The consequences of the Russian-Ukrainian war on global security

The Russian-Ukraine war has caused humanitarian crises, migration, and refugee displacement, as well as further negative risks to the global economy. The direct effects reduced energy flows, and the indirect effects led to rising food, fuel, and fertilizer prices have increased the risks of food insecurity and increased poverty rates in many low-income countries (Hani, 2022). Russia and Ukraine have an important impact on the global economy through their role as major suppliers in a number of commodity markets, as they together represent about (30%) of global exports of wheat, (20%) of corn, mineral fertilizers, and natural gas, and (11%) ) for oil. In addition, supply chains around the world depend on metal exports from Russia and Ukraine. The prices of many of these goods have risen sharply since the beginning of the war. According to the International Monetary Fund report, the entire global economy will feel of the effects of the Russian-Ukrainian war, with slow growth and an increase in the speed of inflation (Hani, 2022).

Since Russia and Ukraine are among the largest countries producing primary commodities, supply chain interruptions have led to a sharp rise in global prices, especially the prices of oil and natural gas. Food costs witnessed a jump in light of the historical level reached by the price of wheat. The cessation of wheat exports from Russia and Ukraine will lead to serious shortages in many emerging market economies and developing countries, where there will be a severe risk not only in the form of an economic crisis, but even in the form of humanitarian disasters with a sharp increase in poverty and hunger. The disturbances occurring in manufacturing fertilizers would endanger these long-lasting disruptions by putting agricultural supplies for the coming years under pressure (Hani, 2022). The global economy faces a number of challenges in light of the Russian war on Ukraine, as forecasts indicate a slowdown in global growth from (6% in 2021) to (3.2% in 2022) and then (2.7% in 2023). This is attributed to the noticeable economic slowdown in the largest economies, as the gross domestic product of the US contracted in the first half of the year (2022). The Euro zone had a sharp

contraction in the second half of the year (2022). Inflation has risen sharply in many countries as they have suffered from rising energy, food, and commodity prices, labor shortages, and disruptions in energy supplies.

This would add more complexity to the policy-making environment in these countries (Hani, 2022). In the absence of real estimates of the impact of the sanctions imposed on Russia, all countries in the world will be exposed to economic risks, including the United States and European countries. These risks will put the global economic system in a state of instability in several basic areas, such as grains and wheat, oil and natural gas, companies and investments, bonds, and commissions. See Figure No. (21).

The most important economic effects of the Russian-Ukrainian war can be noticed in the following points (Nae'la, 2023):

- 1- A crisis in the supply of energy sources: Increasing sanctions on Russia will lead to a shortage of oil and gas, as well as an increase in energy prices. It may not be possible to control the rise in the long term (higher food prices, increased interest rates, increased loan costs, the accumulation of debt, the spread of poverty and hunger, etc.).
- 2- Financial inflation: The energy crisis affects all sectors, especially Russia and Ukraine, which are countries that produce and export basic commodities such as wheat, corn, and minerals. If the prices continue to rise, it will portend high inflation, especially with countries purchasing and storing defense materials.
- 3- Contraction in the growth of the global economy: This contraction arises as a result of the lack of energy supplies and the reduction in the volume of international investments resulting from chaos in the economy. In addition, land and maritime commercial supply chains are disrupted, causing weak economic growth.

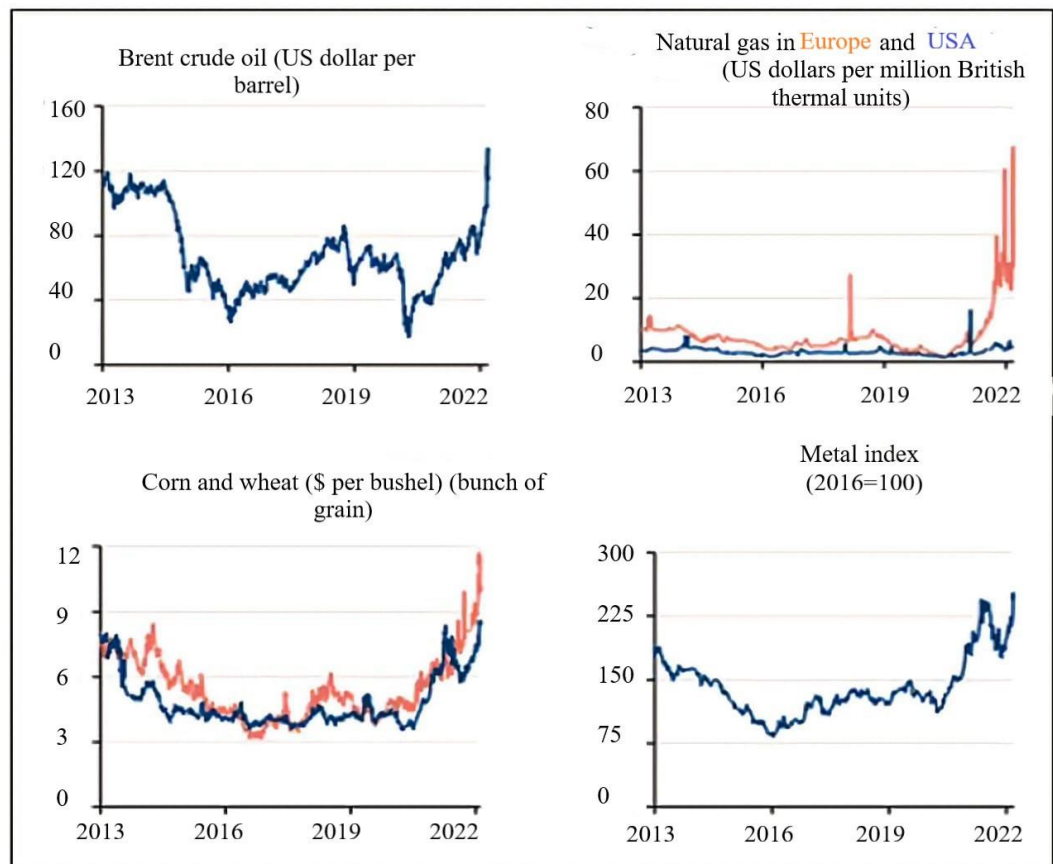


Figure No. (2) An illustrative chart showing the rates of rise in energy, grain, and metal prices after the Russian-Ukrainian war

Source: Al-Abed Naila, The Repercussions of the Russian-Ukrainian War on International Relations, Muhammad Al-Siddiq Bin Yahya Jijel University, Al-Ma'ir Magazine, Volume 27, Issue 1, 2023, p. 506.

4- Division in the financial system: In the event that the internal banks of Russia are isolated from the global financial payments system, the world could be divided into two halves through developing an alternative system by Russia, especially Russia has economic partners who have a distinctive place in the economic system. China and Russia plan to create an alternative to the global SWIFT system. SWIFT is a global financial system that allows the smooth and rapid movement of money across borders. SWIFT stands for Society for Worldwide Interbank Financial Telecommunication. This system was established in 1973, and the headquarters of this association is located in Belgium. This system connects 11,000 banks and institutions in more than 200 countries.

It is concluded that the Russian-Ukrainian war had clear effects that were reflected on global security, especially with regard to the energy and minerals sector. These effects have international dimensions that have affected the standard of living of the European individual, the nature of alliances, and new patterns of international relations corresponding to the nature of the risks that may threaten the internal security of countries. Non-energy-producing countries have been vastly affected due to the fact that they highly depend on energy imported from abroad. These countries have relations with other ones that may become tense, stable, or even wage a war. Here, the effectiveness of energy-producing countries like Russia is demonstrated in such circumstances by finding alternatives and turning challenges into opportunities in order to create an alternative market to market their gas products, such as the new Asian market represented by China and India.

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