IRSTI 06.01.05 https://doi.org/10.26577/FJSS.2023.v9.i2.04

END OF FOSSIL DEPENDENCY – "REPOWEREU" PLAN

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Received: October 16, 2023
1st Revision: November 7, 2023
Accepted: November 24, 2023

Abstract. The European Commission presented the "REPowerEU" plan, the response to the Russian invasion of Ukraine, and the disruption of the global energy market. There are two important reasons for transforming Europe's energy system. The first is to end the European Union's (EU) dependency on Russian fossil fuels, which are used as an economic and political weapon and cost European taxpayers billions of euros a year, while the second is to tackle the climate crisis. The majority of Europeans believe that the EU should reduce its dependence on Russian gas and oil as soon as possible to support Ukraine. In this context, the "RePowerEU" plan can respond to this goal by saving energy, diversifying energy sources, and accelerating renewable energy to replace fossil fuels in homes, industry, and electricity generation. The aim of the study is to investigate the RePowerEU plan for reducing the EU's dependence on Russian fossil fuels and supporting green energy and revealing its pros and cons. The background of the study was analyzed within the framework of the theory of interdependence. According to the results of the study, the pros and cons of the plan were determined and it was tried to predict to what extent the EU's dependence on Russian fossil fuels would decrease. The study is expected to contribute to the literature in the context of using and analyzing Western and Russian sources together.

Key words: European Union, energy, dependency, RePowerEU, Russia.

Introduction

According to the data, 38.2% of the EU's natural gas need in 2021 came from Russia, 21.9% from Norway, 18.4% as liquefied natural gas (LNG) and 9.4% from Algeria. 9.1% came from the production of EU countries, 2.2% came from Azerbaijan and 0.8% came from Libya. LNG, which constitutes 20% of total gas imports, includes in the total supply of 80 billion cubic meters of LNG in 2021, belongs to the USA 20%, Qatar 20%, Russia 18%, Nigeria 17%, Algeria 14%, Norway 2%, the remaining 9% from other suppliers (Aa.com.tr, 2022).

While the data reveal that the main natural gas supplier of the EU is Russia, the gas coming from this country is mostly sent via the Yamal-Europe pipeline passing through Belarus and Poland, the Nord Stream pipeline passing through the Baltic Sea and via pipelines such as Soyuz and TurkStream through Ukraine. Europe imported approximately 40% of natural gas, or 175 billion cubic meters, from Russia in 2021. Russian natural gas transported through Ukraine decreased by 70%. Accordingly, the supply, which was 140 billion cubic meters in 1998, decreased to 42 billion cubic meters in 2021. Natural gas from Ukraine mostly reaches Slovakia and from there to Austria and Italy (Euronews.com, 2022).

As can be seen, while the EU imports nearly 40% of natural gas from Russia, the same dependence situation also applies to other fossil fuels. The EU supplies approximately 30% of its oil and 54% of its coal from Russia. While this dependence on Russian energy strengthens Russia's hand in political negotiations, it weakens the EU's position. As a result, the EU put forward the RePowerEU plan with the aim of reducing Russian energy dependence and then completely getting rid of this dependence.

Literature review

The reflections of globalization on international relations have revealed the concept of interdependence as a result of the developments in the social, economic, political and cultural fields in the late 20th century. It is possible to say that in our age, the economic dimension of the theory of interdependence between the great powers in international

relations has taken precedence over the security and military dimension. While dependency refers to a unilateral interaction in which the foreign policies of one state can be determined by another state, interdependence is a concept that comes to the fore in relations between different countries and expresses mutual interaction. The source of these interactions may be monetary, financial, social or security issues or problems. However, Robert Keohane and Joseph Nye argue that the cost element must be involved in order for these interactions to be considered within the framework of interdependence. The feature that makes interdependence distinctly different from other interactions is that the interaction has a negative reflection on the parties. Otherwise, there is no mention of interdependence. Both parties are affected by a negative development between actors who have a mutual dependency relationship (Tuicakademi.org, 2014). For example, there is a relationship of mutual dependence between the EU and Russia within the framework of energy issues. While the EU is dependent on Russia in terms of energy, Russia is dependent on the financial resources it will provide to its economy through the energy it markets. However, this relationship is much more important for one of the parties than the other, that is, since the EU needs Russia more than Russia needs the EU, this means that Russia has more bargaining power against the EU. The EU is more dependent on Russian energy and will have difficulty finding an alternative in a short time, it is certain that the EU will be more affected by this situation. Russia either finds other routes to transfer its energy resources, or has the chance to store it in its country without finding a new route.

While fossil fuels, classified as natural gas, coal and oil, which have a very important value today, are non-renewable or underground energy sources, such as solar energy, hydraulic energy (water power), geothermal energy, wind energy, biomass and waste energy are accepted as renewable energy sources. While fossil and nuclear fuels are known to be harmful to the environment, renewable energy is an environmentally friendly energy source and is supported by the world (Stark, 2019).

"RePowerEU" Plan: Purpose and Content

On May 18, 2022, the European Union Commission presented the "REPowerEU" plan as its response to the challenges caused by Russia's invasion of Ukraine and the disruption of the global energy market. There is a double urgency to end Europe's dependence on Russian fossil fuels, which are used as an economic and political weapon and cost European taxpayers around €100 billion a year, and to redesign the Union's energy system to tackle the climate crisis. According to the plan, Europe can more quickly eliminate its dependence on Russian fossil fuels by acting as a Union. 85% of Europeans believe that the EU should immediately reduce its dependence on Russian gas and oil to support Ukraine. In this context, measures in the REPowerEU Plan can respond to this aim through energy saving, diversification of energy sources and acceleration of renewable energy to replace fossil fuels in homes, industry and electricity generation (Comission.europa.eu, 2022).

With the green transformation, Europe plans to strengthen economic growth, security and climate action. The Recovery and Resilience Facility (RRF) is at the heart of the REPowerEU Plan, which supports coordinated planning and financing of cross-border and national infrastructure as well as energy projects and reforms. The three key elements of the RePower EU Plan are saving energy, diversifying supplies and accelerating the introduction of renewable energy sources (Comission.europa.eu, 2022).

By increasing renewable energy, the EU is aimed to reduce greenhouse gas emissions by 55% by 2030. Saving energy is considered the fastest and cheapest way to address the current energy crisis and reduce energy use. The Commission proposes to develop long-term energy efficiency measures, including increasing the binding Energy Efficiency Target from 9% to 13%, as part of the "Compliance with 55" package of European Green Deal legislation. The Commission has therefore also published an "EU Energy Savings Notice" detailing short-term behavioral changes that could reduce gas and oil demand by 5% and encourage Member States to launch specific communication campaigns targeting households and industry. Member States are also encouraged to use fiscal measures to promote energy savings, such as reducing VAT rates on energy-efficient heating systems, building insulation, appliances and products. The Commission will also provide guidance on prioritization criteria for customers, setting out contingency measures in the event of severe supply disruptions and facilitating a coordinated EU demand reduction plan (Comission.europa.eu, 2022). It was thought that the RePowerEU package, in addition to providing solutions to security, cost of living, climate crisis and health crises, also cut off the financial source of the ongoing war in Ukraine. The package has been defined by some as the most effective way to ensure peace and energy security.

The EU continues to deliver record LNG imports and higher pipeline gas deliveries, working with international partners to diversify supplies. The newly created EU Energy Platform, supported by regional task forces, will enable voluntary joint purchases of gas, LNG and hydrogen by pooling demand, optimizing infrastructure use and coordinating access to suppliers. As a next step, the Commission will consider developing a "joint purchasing mechanism" that will negotiate and contract gas purchases on behalf of participating Member States. The Commission will also consider legal measures requiring diversification of gas supplies by Member States over time. The platform will also enable joint purchasing of renewable hydrogen (Comission.europa.eu, 2022).

The EU External Energy Strategy will facilitate energy diversification and establish long-term partnerships with suppliers, including cooperation on hydrogen or other green technologies. The massive scale-up and acceleration of renewable energy in electricity generation, industry, buildings and transport will accelerate energy independence and the green transition, and will also impact prices over time. The Commission proposes to increase the main target for renewable energy from 40% to 45% in 2030 as part of its 55-fit package (Comission.europa.eu, 2022).

Energy saving, one of the important elements of the plan, has already started to be implemented in Europe. For example, in France, decisions were made to reduce natural gas prices to October 2021 levels, limit the electricity price increase to 4% and operate the central heating at 19 degrees. In England, public assistance recipients were paid £650, pensioners were given an additional contribution of €300, and the total energy bills of households were fixed at £2,500 annually. In Germany, citizens are provided with bill support, unlimited tickets are applied in public transportation, and it has been decided that public buildings will be heated at 19 degrees. In Bulgaria, taxes on electricity and natural gas have been abolished and the increase in electricity prices has been limited to 3.4%. In Spain, it was decided to limit heating to 19 degrees and reduce VAT on natural gas from 21% to 5%. In Belgium, VAT on electricity and natural gas will be reduced to 6% and public buildings will not be illuminated between 19.00-06.00. In Hungary, public natural gas use has been reduced by 25%, and tree felling regulations for fuel wood have been relaxed (Seker, 2022).

In the context of increasing energy diversity, which is an important element of the plan, the EU needs to increase its purchases from other suppliers or find new energy suppliers. In this context, Norway and North Africa come to the fore in the EU's energy infrastructure. At the same time, Algeria has the opportunity to increase gas flows to Europe with LNG and natural gas pipelines to Spain and Italy. However, it is expected that Algeria can increase the amount of gas by several billion cubic meters per year due to the current infrastructure deficiency. The Trans Adriatic Pipeline, which was built to transport the natural gas extracted from Azerbaijan's Shah Deniz 2 field to Europe, and the Caspian basin countries such as Kazakhstan and Turkmenistan are of great importance in the context of increasing capacity.

According to the Russian press, the RePowerEU plan has many shortcomings and does not have a clear content. Opinions are shared that they would spend €300 billion on the project, most of which would apparently go to the development of expensive "green energy" (Finance.rambler.ru 2023). Moreover, since energy efficiency measures have been taken in the EU for a long time and this article was also included in the "green deal", but now the European Commission is concerned with the targets of increasing energy savings from 9% to 13% of the mandatory target in the long term; It has been reported that the plan is not bad, but carrying out such studies (collectively) in the EU will take a lot of time and be costly. In addition, the plan focuses on renewable energy sources and the European Commission proposes to increase the share of renewable energy production in the total EU energy balance to 45% by 2030, such an initiative would only increase the price of electricity within the EU, and not just the cost of installing new solar panels and wind turbines. In the article also mentioned about renewable energy sources that are not stable and that coal or gas-fired power plants would be used as a safety net in adverse weather conditions. Additionally, it has been mentioned that the increase in prices of rare earth metals used to produce solar generators and windmills is not optimistic.

Electric motors and wind turbines require neodymium oxide, whose price increased by 21% in 2021 compared to 2020. It was also emphasized that for drivers that can theoretically provide uninterrupted production of renewable energy resources, there is a need for lithium, whose price has increased by an average of 50% in the world market since the beginning of 2022, and cobalt, whose price has increased for seven years (its price has increased by 260% since 2015). All this will obviously make re-

newable energy even more expensive. It is possible to increase renewable energy production, but not only will this displace hydrocarbons, but the costs for households and industry will also increase significantly.

The European Commission has announced that it would support the development of "green" hydrogen by the industry and transport sector, and to do this it is proposed to replace hydrocarbon fuels (coal, gasoline, fuel oil, diesel, oil) with hydrogen and biomethane. It is noted that industrial enterprises will be able to save up to 35 billion cubic meters of gas by 2030. However, it is a reminder that before using hydrogen, it is necessary to transform the infrastructure for it, both in businesses and transportation, and should remember that this will be costly.

It is also very important why exactly the hydrogen will be produced. It is very expensive to do this with the help of electrolysis ("green" hydrogen), and if it comes from natural gas ("blue" hydrogen), problems arise with the level of environmental pollution. It is also stated that such a system is not suitable for many EU countries. For example, Hungary, which resists sanctions, does not need a new mechanism or a supranational organization for energy purchases, since it has mutually profitable contracts at the bilateral level and the new system cannot replace existing contracts in any way.

Methodology

The aim of the study is to investigate the EU's REPowerEU plan in reducing dependence on Russian fossil fuels and supporting green energy and to reveal its pros and cons. The main topic of the study is that by activating the RepowerEU plan, the EU will gradually abandon Russian energy dependence in the context of developing green energy by reducing the use of fossil fuels. The infrastructure of the study was analyzed within the framework of Interdependence theory. The research method of the study adopted positivist and nominative approaches with the use of secondary information, desk research and case studies. According to the results of the study, the pros and cons of the plan in question were determined and it was tried to predict to what extent the EU's dependence on Russian fossil fuels would decrease.

Results & Discussions

With the Russia-Ukraine crisis, the EU's freedom from Russian energy dependence has come to the fore. The fact that the RePowerEU plan developed in this regard has been put forward and started to be implemented shows the determination of EU member states on this issue. In the first quarter of 2022, Russia was the largest supplier of the EU with a share of 38.8%, followed by Norway with 38.1%, but in the first quarter of 2023, Russia's share decreased by 21.4 points, while the share of Norway (+8.0 points), Algeria (+7.4 points) and the United Kingdom (+4.0 points) increased. That is, in 2022, 24.4% of the EU's natural gas imports came from Norway, 15.3% from Russia, 9.8% from the USA and 8.3% from Algeria. Thus, while Russia was the largest supplier of the EU in the pre-war period, it ranked second after Norway after all the sanctions and measures such as RepowerEU implemented after the war (Ec.europa.eu, 2023). However, while the EU's natural gas import rate from Russia via pipelines has decreased, LNG purchases have increased. For example, while the share of EU countries in Russia's LNG exports was 39% in the January-July period of 2021, this rate increased to 49% in 2022 and 52% in 2023 (Seker, 2023).

Russia's invasion of Ukraine has led to significant changes in the share of the main partners due to various sanctions that directly and indirectly affect the import of energy products. Regarding petroleum oils, the EU ban on seaborne imports of Russian crude oil came into force on 5 December 2022, followed by the embargo on refined petroleum products as of 5 February 2023. While Russia was the largest supplier of petroleum oil with a share of 15.9% in the second quarter of 2022, Russia's share decreased by 13.2 points to only 2.7% in the second quarter of 2023. The largest increases were seen in the stocks of Norway (+3.8 points), Kazakhstan (+3.4 points), Saudi Arabia and the USA (both +2.5 points) (Ec. europa.eu, 2023a).

Conclusion

In summary, the RepowerEU plan is a program put forward by the EU Commission in May 2022 as a result of the EU-Russian energy crisis, which aims to get rid of Russian energy dependence by 2027 by saving energy, developing renewable energy and diversifying alternative energy suppliers. According to the criterion of providing energy savings, it is seen that Europe immediately started various applications, and it can be predicted that this will be the most successful element among the three proposed elements in question. European countries have shown how serious they are about saving energy by

taking decisions such as heating the central heating at 19 degrees and not lighting public buildings between 19.00 and 06.00.

In terms of diversifying energy suppliers, it has been determined that the EU currently has the possibility of increasing its energy import capacity with Norway, the Middle East and the Caspian basin countries, apart from Russia. In this context, while there is a visible decrease in the transfers made through pipelines in the EU's energy purchase from Russia, on the contrary, LNG purchase has increased.

When it comes to renewable energy, green energy is the energy of the future, as well as an energy source that requires high costs and produces little energy. In this context, in order for renewable energy to fully replace non-renewable energy, both a long time and infrastructure are needed to develop new technologies and ensure continuity.

In this case, we may be able to hear about events such as the EU's electricity import, the recommissioning of coal power plants that are harmful to the environment and incompatible with climate targets, the extension of the duration of nuclear reactors planned to be closed, and the commissioning of closed power plants. The RePowerEU plan will come into full effect by reducing the EU's domestic demand, imposing restrictions on natural gas and electricity, especially in high energy-consuming industries, bringing green energy to the desired level and increasing alternative energy suppliers. In this context, it can be predicted that the EU will get rid of Russian energy dependence, if not completely, but to a large extent, considering the above factors, not by 2027, but by 2032, and perhaps by reaching higher priced energy than it currently receives.

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