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Newest challenges of the European Union's energy policy - legal aspects

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Abstract. In the face of the most recent geopolitical events in Europe that have been carrying the burden of the COVID-19 pandemic and the war in Ukraine, there have been significant changes on the European Union's energy market. The aim of this article is to analyse and assess the practice of managing energy in the European Union from the perspective of EU energy in the context of these crises. It will present legislative changes at the Union level in the energy policy sector that are driven by these events and that force a change in attitudes towards energy management. It will use methods typical to law studies, that is the analysis of the law in force, the analysis of the development of relevant laws in history and legal comparison. Research results and conclusions point out that urgent binding legislative changes on the EU forum are necessary to adjust the energy policy to the existing reality and to face the most recent trials. Further legislative steps will be necessary to become independent from Russian raw materials and, primarily, to adapt the provisions of the European Green Deal and to provide further guidance to eliminate administrative barriers and to protect consumers on the energy market. The final part of the article identifies measures the EU must take in the short-, mid- and long-term perspective.

Keywords: energy law, European Union law, energy policy

JEL Classification: K32, K33

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INTRODUCTION

The purpose of this article is to analyse and assess the practice of managing energy in the European Union from the perspective of meeting the challenges of EU energy security triggered by two international crisis situations in the recent years: the coronavirus pandemic and the war in Ukraine. It will show legislative modifications at the Union level in the energy policy sector that are driven by these changes and that force a change in attitudes towards energy management. I will investigate the character of interactions between the European Commission as the most important entity responsible for running the European energy policy and Member States who must serve to implement the responsibilities vested in them by the EC. The following research theses were adopted for this purpose:

- first of all, the construction of EU's autonomous energy system requires urgent binding legislative measures at the EU and national level thanks to which it will be possible to take independent decisions concerning the energy sector and use resources of Member States, which is a key tool to face up to the most recent challenges of EU's energy policy and to mitigate the crises related to the COVID-19 pandemic and the war in Ukraine,
- secondly, the development of an EU energy policy strengthens EU's internal and external security and is a product of political processes that run in the EU and a response to global challenges that the EU needs to meet,
- third of all, it is not possible to create EU's energy security without cooperation with third countries because the EU's resources are not self-reliant and the internal market remains inherently interconnected with these countries,
- fourthly, becoming independent of Russian raw materials is a precondition for an autonomous development of EU's external market and for the operation of economies of its Member States; it will also foster European integration and bring benefits to Member States, not only in the economic dimension, but also in the political and social realm.

The following research questions were asked at the beginning: What is the basis for the functioning of the EU energy policy and its priorities? What strategies, instruments and programmes have been introduced to it recently? What entities are involved in its implementation? What normative steps have been taken at the EU level to effectively carry out the responsibility to ensure EU's energy security?

The statistics evidence how valid this issue is and that it needs to be addressed. In the last three years (at the turn of the third decade of the 21st century) the terms and prices of access to energy have been changing disproportionally quickly compared to previous decades. In the first half of 2020 we recorded a drop in the demand for energy (a yearly drop by slightly more than 4 percent compared to 2019) associated with the COVID-19 pandemic, which had an effect on declining electricity prices observed in 2020. On the other hand, energy prices in the 3rd quarter recorded a contrary trend: the prices went up by 20% (from April 2020) and we saw a historic peak in electricity tariffs in 2021 (Office for Energy Regulation, 2021). The demand almost returned to levels before the pandemic, which was driven by a strong revival of economic and social activity in this period. Therefore, prices of energy sources and CO2 grew significantly. Retail electricity fares also follow this trend and went up markedly last year. The energy price in 2019 was EUR 40/Mwh, whereas in 2021 it was already EUR 120/Mwh (EC, 2021a, p. 24-28). Russia's aggression against Ukraine that commenced in February 2022 caused an additional increase in fuel prices and concerns about the security of energy supply in the EU. The situation was worsened by Russia's decision to suspend gas delivery to certain EU Member States and also the EC's decisions to impose sanctions against Russia that affected the energy market. So far Russia has been the largest supplier of energy sources to the EU and it has been dominating in the EU import of solid fossil fuels (40.9% of share in its import), gas (37.7%) and crude oil (23.1%). The United States, Norway and Saudi Arabia are also significant suppliers to the EU (Polish Development Fund Group, 2021). These issues will be explored in further parts of this article.

MATERIALS AND METHODS

This discussion will be theoretical in nature and will employ methods typical to legal studies, classified as social studies. The primary method used in the research will be the method of analysis of the laws in force: a linguistic and logical analysis of acts of international law (in particular EU primary and secondary legislation) effective in the field of EU energy policy. I will analyse and interpret relevant legal provisions, which will allow me to refer to views expressed in scholarly literature. An examination of the law in force will allow me to derive *de lege lata* (assessment of the current legal status) and *de lege ferenda* conclusions (proposals for legislative amendments). Secondly, I will use the method of legal comparison as a supportive tool: I will identify similarities and differences in regulations concerning the subject matter discussed. I will also take a historical approach in my investigations to present the origins of the functioning of energy policy in the EU and its evolution to modern times. To analyse the most recent challenges of EU's energy policy in the legal aspect I will employ the statistical method which will act as a review, whereby this discussion does not feature elements of empirical research. The purpose of introducing statistics is to demonstrate a broader non-legal context and to signal economic factors that appear in the course of the research. This will allow me to enhance the pragmatic significance of this examination.

BASIS OF OPERATION OF THE UNION'S ENERGY POLICY

The beginnings of the EU energy policy date back to the 1950s when first strictly economic communities began to emerge: the European Coal and Steel Community, the European Atomic Energy Community or the European Economic Community. Thanks to the progressing European integration throughout a few decades, the 1992 Maastricht Treaty stipulated the creation of a single internal market as the prime goal of the operation of organizations and its art.129b reads that the Community shall contribute to the establishment and development of trans-European networks in the areas of transport, telecommunications and energy infrastructures. Other treaties, that is the 1997 Treaty of Amsterdam and the 2000 Treaty of Niece did not lay down further regulations to build a common energy policy.

The first sectoral EU strategic document dedicated to the internal energy market was the 2000 Green Paper: Towards a European strategy for the security of energy Supply. It adopted as its strategic objective an uninterrupted physical availability of energy products on the market, at a price which is affordable for all consumers, while respecting environmental concerns and looking towards sustainable development.

Currently the basis for the functioning of the EU energy policy is Title XXI of the Treaty on the Functioning of the European Union (TFEU) - Energy. Under this title, with regard for the need to preserve and improve the environment, the EU aims to ensure the functioning of the energy market, to ensure security of energy supply in the Union, to promote energy efficiency and energy saving, to develop new and renewable forms of energy and also to promote the interconnection of energy networks. The main decision-making authority in this regard is the European Parliament and the Council, but Member States retain the right to determine the conditions for exploiting its energy resources, their choice between different energy sources and the general structure of their energy supply (art.194) (see Szafrański, 2011, p. 535-545; Nowak, 2009).

The European Green Deal adopted in December 2019 was a milestone in energy management in the Union. It is a programme intended to transform the EU into a modern, resource-efficient and competitive economy, which will achieve no net emissions of greenhouse gases by 2050, in which the economic growth is separate from resource use and in which no person and no place is left behind. The key principle of the EGD is a transition to clean energy to reduce greenhouse gas emissions by ensuring a secure and affordable EU energy supply, developing a fully integrated, interconnected and digitalised EU energy market, prioritising energy efficiency, improving the energy performance of our buildings and developing a power sector based largely on renewable sources. To do so, it is important to carry out environmentally friendly economic reforms (Miłek et. al, 2022). A package of legislative

proposals was adopted for this purpose intended to align the EU's climate, energy, transport and taxation policies with the target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels, mainly through decarbonisation.

THE COVID-19 PANDEMIC AND ITS IMPACT ON EU ENERGY POLICY

The EU has been putting efforts to face up to many challenges related to energy, including for example challenges associated with increased dependence on import, insufficient diversification, high and unstable energy prices, growing global demand for energy, a threat to the security of production and transit countries, a growing threat of climate change, decarbonisation, slow progress in energy efficiency, challenges related to the growing use of renewable energy sources (RES), the need for a greater transparency of energy markets and their further integration and interconnections (European Parliament, 2021). Energy sector problems have been recently magnified firstly by Brexit, secondly by the COVID-19 pandemic and thirdly due to the war in Ukraine.

First all, the United Kingdom had already left the EU when the EGD was published (December 2019). This finally happened on 31 January 2020 and the transition process lasted until January 2021. Brexit violently shook the rules of the common energy market, somehow ruining unity of regulations between the EU and the UK. This process was developing exactly during the outbreak of the COVID-19 pandemic: not only did the Member States have to take in the new situation emerged as a result of the pandemic caused by external factors (coronavirus had already been spreading in China when the EGD was published), but Brexit-related legislative procedures needed urgent attention within the EU.

The COVID-19 pandemic significantly influenced energy systems in 2020. For example, demand for electricity dropped markedly in the EU in 2020, at an annual drop by 4.1% compared to 2019 (this drop is compared to a 5%-decline in 2009 which was the aftermath of the 2008 financial crisis (Krarti & Aldubyan, 2021). Nevertheless, the EGD recorded success during the COVID-19 pandemic: as early as in 2020 renewable energy sources generated more electricity than fossil fuels (ACER, 2020, p. 10-11). Compared with 2019 greenhouse gas emissions in the EU-27 declined in 2020 by close to 10%, which is an unprecedented drop in emissions caused by the COVID-19 pandemic, which lead to a total 31% emission reduction compared to 1990 (EC, 2021b). The report on the condition of the Energy Union of 2021 (EC, 2021c) identified the following impacts of the COVID-19 pandemic on the EU energy market:

1) fossil fuel subsidies fell, which should be retained and maintained in the post-pandemic period to further the decarbonisation process,

2) progressing works on competitiveness of clean energy technologies are noted; even though the EU is conducting highly advanced research in this area there is a need for further investment and innovation in their implementation,

3) the UE has achieved its GHG emissions for 2020 and has met relevant international obligations: in 2020 domestic greenhouse gas emissions in the EU-27 fell by 31% compared with the 1990 level and reached its lowest point in the last 30 years. In this way the EU has greatly exceeded its objective specified in the United Nations Framework Convention on Climate Change, which involves reduction by 2020 of GHG emissions by 20% compared with 1990. Since 1990 the total EU GDP grew by 50%, while the intensity of greenhouse gas emissions in the economy specified as an emissions-GDP ratio grew by 5 %, dropped to 271g CO2-eq/EUR2015 in 2020, that it less than a half compared to the 1990 level. This shows that decarbonisation and economic growth may go hand in hand with the EGD (EC, 2021d),

4) the Emissions Trading Scheme (EU ETS), along with the newest legal instruments referring to renewable energy i and energy efficiency, contributed to the achievement of EU's main goal, that is reduction of greenhouse gas emissions: EU Member States emissions resulting from the production of electricity and industrial installations covered by the system dropped by almost 29%, contributing to a general drop by approximately 43% since the

system was launched in 2005. Even though the marked fall in emissions, by 11.4% in 2020, may be undoubtedly attributed to the effects of the COVID-19 pandemic, this was another step in an almost uninterrupted trend of a drop in emissions year by year in the 2013-2020 period. In 2020 and in 2021, despite a difficult economic situation for the industry and aviation caused by the pandemic, the price signal concerning CO2 emissions remained stable in 2020 and grew significantly in 2021 as a result of high gas prices and market predictions of implications of increased climate ambitions for 2030 (EC, 2021e). Operators responsible for more than 90% of emissions from fixed installations and aviation alike largely did meet their legal obligations,

5) when it comes to progress made in terms of reduction of greenhouse intensity in relation to fuels used in road transport and quality and composition of fuels supplied to the EU it was observed that the average GHG intensity of the fuels and energy supplied in the 28 reporting Member States in 2019 was 90 gCO2eq/MJ, which is 4.3% lower than the 2010 baseline of 94.1 gCO2eq/MJ. This corresponds to a saving of 54 Mt carbon dioxide equivalent (CO2eq) during the year 2019. Fuel supplies were largely dominated by fossil fuels (94.4%), followed by biofuels (5.6%) and a very minor share of electricity (0.01%). The fossil fuel supply in 2019 remained dominated by diesel (56.1%; 7,665 PJ), followed by petrol (23.8%; 3,258 PJ) and gas oil (12.6%; 1,729 PJ). Liquefied petroleum gas and natural gas had a combined share of 1.8% (250 PJ). Fuel quality limits are generally largely observed in the EU (EC, 2022a). We may conclude that the existing system of monitoring fuel quality guarantees that fuels sold in the EU are of high quality and comply with the requirements of the fuel quality directive.

Improvement of the functioning of the EU energy market was possible mainly thanks to a transposition of the electricity directive onto the national law by the end of 2020. This created new possibilities for enterprises and consumers in terms of participation in energy markets, for example by adjusting their demand to reduce industrial limitations in the grid and balance the demand and supply. There is still great differentiation in time and space in the evolution of the energy systems of EU Member States towards sustainable development. Further legislative steps will be necessary to adapt EGD goas and to introduce further EC guidance for Member States to eliminate administrative barriers and to safeguard consumer protection on the energy market.

The war in Ukraine which commended at the end of February 2022 was the third essential destabilizing factor that quickly drove changes in the EU's energy policy. Due to the exceptionally high scale of these changes a separate part of this article is dedicated to it.

A CRIME AGAINST THE ENVIRONMENT IN THE STATUTE OF THE INTERNATIONAL CRIMINAL COURT

The establishment of the International Criminal Court clearly demonstrated the determination of its supporters to end impunity for perpetrators and guarantee justice for victims of certain types of crimes around the world (Moffet, 2014, p. 43). In practice, the Tribunal operates in a relatively narrow area of criminal offenses, which does not seem to recognize the impact that the crimes listed in the Rome Statute defining its substantive jurisdiction may have on the natural environment, and consequently also on individuals dependent on this environment (Killean, 2021, p. 324). It is impossible not to notice, however, that over 80% of the armed conflicts that took place after World War II took place in areas with special natural values, being places of rare habitats, extremely valuable species of plants and animals (Hanson, 2009).

As can be seen, the problem of crimes against the environment is still a legislative challenge, at least when it comes to the norms of international law. Attempts to directly introduce the ecocide crime into the content of the Rome Statute have so far been unsuccessful. This does not mean, however, that the International Criminal Court and its institutions do not react to the problem of environmental crimes at all. Some authors even claim that the enforcement of criminal liability for environmental crimes within the current jurisdiction of the Court is possible and appropriate, and there is no legal justification for which this could not be the case (Freeland, 2005, p. 133). Even

the Tribunal itself seems to be able to actually support such attempts to interpret the content of the ICJ Statute in a pro-environmental manner. In 2013, the Office of the Prosecutor published Policy Paper on Preliminary Examinations. In this document, environmental damage was explicitly mentioned as a factor subject to investigation by the Prosecutor's Office as part of the preliminary examination preceding the formal investigation.

Analysis of the content of the statute, and in particular the fact that in art. 8 (2) (b) (iv) that deals with war crimes includes in the definition of a war crime "other serious violations of the laws and customs of international law applicable to armed conflicts of an international nature", including "intentional conduct of an attack with the awareness that an attack this will result in the accidental loss of life or injury to civilians, or damage to civil facilities, or extensive, long-term and serious damage to the environment, which would be clearly excessive in relation to a specific, direct and total military benefit expected.

The doctrine also examined other crimes within the jurisdiction of the Court as a potential source of accountability in the framework of ecocide crimes, even though they did not directly refer to the environment (Killean, 2021, p. 330). And so, in the case of crimes against humanity, the relationship between the right to life and its environmental conditions can be reflected, especially in the doctrine of human rights (Crook & Short, 2014, p. 313). We can talk about at least three categories of crimes: genocide, crimes against humanity, and crimes of aggression. First, the crime of genocide committed by deliberately creating for a group living conditions calculated to cause its total or partial physical destruction (art. 6 point c). Importantly, this line of reasoning seems to be strongly supported by the position of the ICC Prosecutor, who clearly emphasized the existence of the above link in the Darfur case[1]. Secondly, a crime against humanity committed through deportation or forcible displacement of people, which may be the result of a widespread or systematic and deliberate attack against the civilian population aimed at the environmental conditions of life of individuals and communities (Article 7 (d)). Third, persecution by deliberate and severe, contrary to international law, depriving any group or community of fundamental rights because of their identity (Art.7 (h)). And finally, fourthly, the relationship between a crime against humanity and an environmental crime may arise in the case of identifying other inhuman acts of a similar nature deliberately causing great suffering or serious damage to the body or mental or physical health (Article 7 (k)). In relation to the crime of aggression, the destruction of the environment as a result of armed attacks can be considered as "use of armed force by a state against the sovereignty, territorial integrity or political independence of another state". In this case, persons in positions to effectively control or direct the political or military action of a state are subject to criminal liability (Politi, 2012, p. 285).

THE WAR IN UKRAINE AND ITS IMPACT ON EU ENERGY POLICY

The EU energy security was shaken at its base as a result of the outbreak of the war in Ukraine on 24 February 2022. The EU condemned Russia's unprovoked and unjustified aggression against Ukraine. Due to the fact that Russia still remains the largest exporter of energy sources to Europe it uses energy management as a tool of political pressure. So far the Commission has introduced 9 sanction packages,[2] that are intended to weaken Russia's economic base, also to cause clear economic and political costs for the Russian political elite responsible for the invasion. The economic sanctions also affected policy areas such as:

a) finances: excluding 10 Russian banks from the SWIFT system, restriction of Russia's access to EU's capital and financial markets, ban on transactions with Russia's Central Bank, prohibition of supplying Euro notes to Russia and prohibition to deposits to crypto-wallets;

[1] ICC Pre-Trial Chamber, Situation in Darfur, The Sudan, 'Public Redacted Version of Prosecution's Application under Article 58 Filed on 14 July 2008', Case No. ICC-02/05-157, 12 September 2008, para. 200.

[2] See press releases from the Council of the European Union of 23.02.2022, 25.02.2022, 28.02.2022, 2.03.2022, 15.03.2022, 8.04.2022, 3.06.2022, 21.07.2022, 6.10.2022, 16.12.2022 available at: EC & CEU (2022a).

b) transport: closing EU sky to all Russian planes, closing EU harbours to Russian boats, entry ban for Russian road carriers, ban on exporting to Russia goods and technologies of the aviation, maritime and space sector;

c) energy: ban on importing coal from Russia (Russia's estimated losses: EUR 4 billion a year), ban on import of oil from Russia, ban on exports to Russia of goods and technologies in the oil refining sector, ban on new investments in the Russian energy sector (with limited exceptions concerning nuclear power for civilian purposes and transport of certain energy products back to the EU);

d) raw materials and other goods: ban on exports to Russia of luxury goods, ban on imports from Russia of iron, steel, wood, cement, seafood and liquor, ban on imports from Russia of gold, including jewellery, ban on importing from Russia of crude oil and refined oil products (with strictly defined exceptions);

e) defense: ban on export to Russia of civilian goods and technology used for military purposes (e.g. fuels for jet engines); media: suspension of broadcasting in the EU of Russian state-owned propaganda outlets; diplomatic measure: Suspension of visa facilitation provisions for Russian diplomats, Russian officials and business people (EC & CEU, 2022b).

Similar measures were also adopted for Belarus, who supports Russia's activity in Ukraine (EC & CEU, 2022c, 2022d). Russian invasion has seriously shaken the energy market (Zakieri et. al, 2022), not only European: fuel, energy and fertilizer prices grew abruptly. This causes a threat to security of power supply to the EU because Russia, as the main exporter of fossil fuels to the EU, especially gas, in response to these sanctions, introduced newer and newer embargoes on their raw materials, thus closing their import to the European countries. For this reason, the EU was forced to search for substitute sources of materials. This is why the current concept of the EU's energy policy, which consisted of decarbonisation of economy and supplying it predominantly with Russian gas, had to be redefined.

For this reason, in May 2022, the European Commission introduced the REPowerEU plan (EC, 2022e), which is a response to the difficulties and disruptions on the global energy market caused by Russia's invasion of Ukraine. It aims to reduce dependence on Russian fossil fuels long before 2030, and also to diversify energy supplies and to accelerate clean energy transition in the EU. For this reason, amendments in the RRF Regulation are proposed[3] that result in the inclusion of individual chapters dedicated to REPowerEU to existing recovery and resilience facility plans of Member States. This will supplement a number of essential reforms and investments which are already stipulated in recovery plans. The proposed legislative changes [4] also include increasing energy efficiency and renewable energy goals to 13% and 45%, respectively.

Since the start of the war in Ukraine, the share of the Russian gas in the import of this material to the European Union was approx. 38%. Gas is also imported from Norway (16%), Algeria (8%) and Qatar (5%). Russian oil accounts for approximately 27% of imports of this fuel to the EU and other sources include Iraq (9%), Nigeria, Saudi Arabia (8% each), Kazakhstan and Norway (7% each) (EC, 2022f). Russia uses this dependence as a weapon during the conflict. This is why in July 2022 a new legislative tool was proposed on the EU forum, based on Article 122 TFEU[5] and on the European Gas Demand Reduction Plan. The new regulation[6] stipulates an obligation for all Member States to reduce gas demand by 15% from 1 August to 31 March 2023. It also allows the Commission, after consulting with Member States, to announce "the EU alert level" concerning supply security, which obliges all

[3] Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility, 12.02.2021, OJ L 57, 18.2.2021, p. 17–75.
[4] Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, 18.05.2022, COM/2022/222 final.
[5] In particular Article 122(1) TFEU: Without prejudice to any other procedures provided for in the Treaties, the Council, on a proposal from the Commission, may decide, in a spirit of solidarity between Member States, upon the measures appropriate to the economic situation, in particular if severe difficulties arise in the supply of certain products, notably in the area of energy.
[6] Proposal for a Council Regulation on coordinated demand reduction measures for gas, 20.07.2022, COM/2022/361 final.

Member States to reduce their gas demand (EC, 2022f). By the end of 2022 the EU will have ceased importing close to 90% of oil from Russia. A temporary exception will apply to crude oil delivered by pipeline.

CONCLUSIONS

This discussion allowed me to achieve the study's goal, to confirm base principles and to find answers to the research questions asked. Moving on to the conclusions, the EU has recently adopted numerous strategies, instruments and programmes to strengthen and secure its energy policy. Below I present conclusions that, given the subject of this article, will best help reveal the consequences of EU action in this regard.

I. In **the short-term perspective** includes actions that require utmost attention:

It is necessary that further legislative changes be introduced to rebuild the EU economy in relation to the crisis associated with the COVID-19 pandemic that caused a world-wide increase in energy prices. The existing legal framework allows efforts to reduce direct impact on the situation of consumers and enterprises. The EU should strive to accelerate clean energy transition and boost the possibility to store gas. Member States, in turn, should aim to provide support, also financial support, for example by lowering tax rates, to consumers affected by energy poverty and also enterprises or industry branches, according to EU's principles of state aid (EC, 2021g).

The crisis caused by the Russian armed invasion on Ukraine severely distorted the global energy system, caused difficulties resulting from high energy prices and increased concerns relating to energy security, revealing EU's excessive dependence on imports of gas, crude oil and coal from Russia. The sanctions introduced by the EU are supposed to limit the possibility of financing the war by Russia, because high amounts paid by Europe for Russian fossil fuels - close to EUR 100 billion a year - are helping Russia continue the war. According to a report by the World Bank, the Russian economy will be shrinking from 2022 onwards as a result of sanctions: Russian GDP is expected to drop by 11 % (largest observable drop since the collapse of the USSR), a decline in Russian trade in goods and products: drop in import by 35.2% and in export by 30.9%, sharp growth of inflation by 22%, a drop of the Russian MOEX index (the major index of the Moscow Exchange): since February 2022 it has dropped by approx. 1,200 points and is not hovering at 2,200 points (EC & CEU, 2022e).

Since 16 March 2022 the energy grids of Ukraine and Moldova have been successfully synchronized with the European Network of Transmission System Operators ENTSO-E. This will help both countries to maintain a stable electric system (EC, 2022g). It was a milestone in striking mutual relations between these countries and the EU. The consequence of this was the start of trading in electricity between Ukraine and the EU, which was done on 30 June 2022. This will allow Ukraine to get incomes that serve to support its energy system. At the same time the EU will gain access to additional affordable energy. Striking an even closer cooperation and introduction by these countries of reforms is not especially important after 23 June 2022 when they obtain the status of an EU candidate country.

In order to secure energy supplies to the EU, it has so far introduced the following tools: the REPowerEU plan, that aims to cease EU's dependence on Russian fossil fuels; diversification of sources of gas supply thanks to a higher LNG import and the use of gas lines of other suppliers; the EU energy purchase platform that will allow aggregation of energy demand at the regional level and facilitate future gas purchases and green hydrogen; provisions that impose an obligation to fill up gas storage in 80% by 1 November 2022[7]; construction of a clean interconnected energy system focused on RES energy; regulations on the national Preventive Action Plans and Emergency Plans. Further legislative changes will need to be introduced and the most recent ones include i.a. proposals of introduction of the maximum price for Russian gas or an excess profits tax.

[7] Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2017/1938 of the European Parliament and of the Council concerning measures to safeguard the security of gas supply and Regulation (EC) n°715/2009 of the European Parliament and of the Council on conditions for access to natural gas transmission networks, 23.03.2022, COM/2022/135 final. See also: EC & CEU, 2022e.

A priority now is for all EU countries to achieve RES self-reliance, which will only be possible by securing alternative sources of supply of raw materials (mainly gas) from outside the EU, with an emphasis on RES. We will see progressing electrification of the economy in the near future, especially in transport, heating, district heating or industry - and thus a departure from gas use. While some countries may achieve it pretty quickly, e.g. Poland might do so within a year (thanks to LNG supplies and the finishing of the Baltic Pipe) (Aruga et. al, 2021), most of them, for example Germany, Hungary, the Netherlands or Italy, will need a few more years to do so (Frączyk, 2022).

II. In **the mid-term perspective** (next few years - till 2030):

The Regulation on the governance of the energy union and climate action (EU)2018/1999[8] introduced the national energy and climate plans 2021-2030 (EC, 2019). Member States presented therein their proposals of meeting EGD goals which also include those associated with energy efficiency, renewable energy sources, GHG reduction, inter-systemic connections or scientific research and innovation in the field of energy. The course of legal changes in Member States and reforms towards EGD is not balanced (Cheba et. al, 2022). Since 2020 each country must submit relevant progress reports every two years. It is recommended that this progress be monitored in order to implement EGD assumptions in the EU as a whole. The situation requires coordination in the activity of government structures for public investment, progress of private investment, and consultations with citizens, entrepreneurs and regional authorities.

One of the most important steps to achieve climate neutrality under EGD is to lower greenhouse gas emissions by 2030 by at least 55%. In order to adjust the existing law to these goals, the EU is working on amending regulations on climate, energy and transport under the "Fit for 55" programme (EC, 2021f). It is a collection of legislative acts and amendments that are to help the EU reduce its net greenhouse gas emissions and achieve climate neutrality. There still is a debate on the scope of changes introduced in the EU. Legislative actions will cover changes in the emissions trading scheme, in regulations on binding yearly reductions of greenhouse gas emissions by Member States from 2021 to 2030 that contribute to actions for climate in order to meet the requirements resulting from the Paris Agreement,[9] changes in the following directives: on renewable energy sources,[10] on energy efficiency[11] and on taxing energy,[12] changes in CO2 emission performance standards for passenger cars and light commercial vehicles[13] and an introduction of a new mechanism for establishing a carbon border adjustment mechanism.[14] Implementation of the "Fit for 55" package would reduce Energy efficiency total gas use by 30% (which corresponds to 100 billion m^3) to 2030 and would also allow the EU to save EUR 80 billion in gas import expenses, EUR 12 billion in crude oil import costs and EUR 1.7 billion in outlays for annual coal import to 2030 (EC, 2022h).

Executing the national energy and climate plans 2021-2030 and the implementation of the Fit for 55 package will allow the building of a somehow new EU's energy system based on EGD assumptions and verified by REPowerUE.

III. In **the long-term perspective** (dozen/few dozen years - after 2030):

[8] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (Text with EEA relevance.). OJ L 328, 21.12.2018, p. 1–77.

[9] Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, Brussels, 14.7.2021, COM(2021) 555 final.

[10] Proposal for a Directive of the European Parliament and if the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, Brussels, 14.7.2021, COM/2021/557 final.

[11] Proposal for a Directive of the European Parliament and of the Council on energy efficiency (recast)), Brussels 14.07.2021, COM/2021/558 final.

[12] Proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity (recast) Brussels 14.07.2021, COM/2021/563 final.

[13] Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition, Brussels, 14.07.2021, COM/2021/556 final.

[14] Proposal for a Regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, Brussels 14.07.2021, COM/2021/564 final.

In the face of the most recent threats to EU's energy policy, we are already dealing with verification of long-term assumptions of this policy, based on achieving full climate neutrality by 2050 under the EGD. The achievement of such far-reaching energy transformation will not be possible without introducing binding and effective legislative changes on the EU forum that will allow investment in RES and better use of various resources, including raw materials. In the long-term perspective, the EU will have to face an exit from an energy crisis triggered by the pandemic and the rebuilding of Ukraine as a result of the armed conflict with Russia. Governments must introduce such legal measures which will fully cover the EU's demand for energy (they must continue with diversification of supplies and ensure alternatives for crude oil and natural gas), impede the current great fluctuations in energy prices and also eliminate the risk of interruptions in fuel supplies. It will be crucial that European energy regulation authorities monitor the benefits and drawbacks of the existing electricity market design and propose recommendations to the Commission where relevant. It would be desirable to explore the potential benefits of voluntary joint procurement by Member States of gas stocks, set up new cross-border regional gas risk groups to analyse risks and advise Member States on the design of their national preventive and emergency action plans and boost the role of consumers in the energy market by empowering them to choose and change suppliers, generate their own electricity, and join energy communities (EC, 2021g).

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