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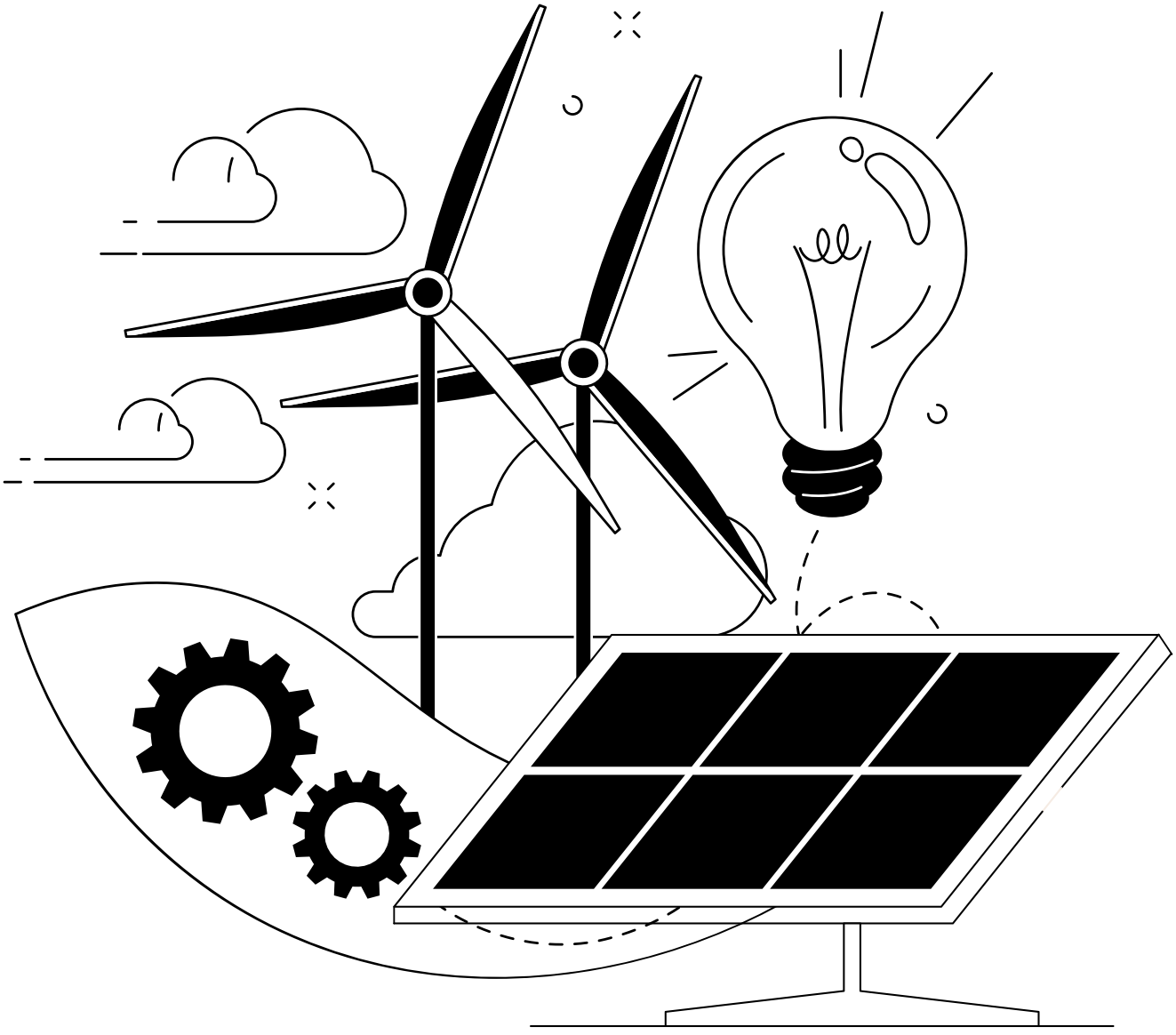
Analytical report

“REPowerEU: Opportunities And Challenges For Ukraine”



Rivne 2024

This document provides an overview of the RepowerEU initiative, which is a quick solution for the development of renewable energy. Rapid implementation of RES projects without proper environmental impact assessment can lead to negative environmental consequences. Therefore, it is important to ensure a thorough environmental assessment to minimize risks.

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The contents of the analysis are the sole responsibility of the NGO Ecoclub and do not necessarily reflect the views of the European Union and the CEE Bankwatch network.

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GLOSSARY AND LIST OF ABBREVIATIONS

Biogas is a gas derived from biomass and used as fuel.

Biomethane is a biogas whose physical and chemical characteristics meet the requirements of regulatory legal acts for natural gas for supply to the gas transportation or gas distribution system or for use as a motor fuel.

Alternative energy sources are renewable energy sources (RES), which include solar, wind, geothermal, hydrothermal, aerothermal, wave and tidal energy, hydropower, biomass energy, gas from organic waste, gas from sewage treatment plants, biogas, as well as secondary energy resources, namely blast furnace and coke oven gases, methane gas from coal field degassing, and conversion of waste energy potential of technological processes.

Industrial heat is mainly thermal energy used, in particular, for the preparation or processing of materials used in the manufacturing of industrial goods.

INTRODUCTION

Energy and electricity generating infrastructure is the foundation for the existence and development of modern society, and without it, humanity has no future.

On February 20, 2014, the Russian Federation launched an armed aggression against Ukraine.[1] On February 24, 2022, contrary to international law and all laws of morality, the terrorist state of the Russian Federation launched its brutal full-scale offensive on the entire territory of Ukraine, challenging the sustainable European peaceful existence. Over the years, the aggressor state has repeatedly launched missile attacks on Ukraine's energy infrastructure, causing its complete or partial destruction.

In March 2022, as a response to the armed aggression of the Russian Federation against Ukraine, the European Union (EU), as one of Ukraine's main international partners, adopted sanctions against Russia's energy sector in order to reduce financial flows to the aggressor country and reduce leverage over itself. This led to significant disruptions in the energy market and exposed significant EU problems in the energy sector that had been postponed for many years.

Some EU member states announced their intention to stop importing fossil fuels from the aggressor state during the first months of Russia's full-scale armed aggression, but no EU member state was able to cope with this problem on its own. As a result, on May 18, 2022, the European Commission presented a detailed REPowerEU plan.[2]

The REPowerEU initiative was created as a response to the challenges posed by the Russian Federation's invasion of Ukraine in order to optimize the energy infrastructure and regulatory framework of EU Member States, accelerate their transition to renewable energy sources while reducing dependence on fossil fuels, change the mindset of citizens and promote change to achieve climate goals and reduce greenhouse gas emissions.

The purpose of this policy brief is to assess the European Union's approaches to addressing the problems in the energy sector caused by Russia's armed aggression against Ukraine, to identify the positive and negative consequences of such approaches and the potential consequences of such decisions for Ukraine.

The document contains a short analysis of the content and key aspects of the RepowerEU plan, a review of this plan by other environmental organizations, and a discussion of potential consequences of implementing this plan into Ukrainian legislation.

The relevance of the given policy paper lies in the fact that Ukraine is currently on the path of integration into the European Union. The decisions made in the EU directly affect the vector of the development of Ukrainian society. Given the significant destruction of the Ukrainian energy system, this opens up the possibility of its restoration/rebuilding in line with the EU energy development trends centered around low-carbon approach, diversification, and energy efficiency.

[1] Resolution of the Verkhovna Rada of Ukraine On the Statement of the Verkhovna Rada of Ukraine «On Repelling the Armed Aggression of the Russian Federation and Overcoming its Consequences» [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/337-19#Text

[2] REPowerEU: A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition [Online resource] – Retrieved from: https://ec.europa.eu/commission/presscorner/detail/uk/ip_22_3131

THE REPowerEU Intiative

1.1. Prerequisites for the establishment and description of the initiative

Following the full-scale invasion of Ukraine by the terrorist country of the Russian Federation and the atrocities committed by Russian troops against civilians and Ukrainian cities and their energy infrastructure, the European Union has imposed sanctions regarding the purchase of carbon-based fuels (coal, oil and natural gas) from the aggressor country. The imposition of sanctions has exposed significant problems the EU member states have in the energy sector, and the solution of which had been postponed for many years.

The major issues are the following:

1. *dependence of the EU member states on fossil fuels from Russia, and the reliance of industry and households on energy derived from these energy sources;*
2. *low rate of diversification of energy sources;*
3. *low growth rates of the share of energy obtained from renewable energy sources;*
4. *low rate of decrease in the price of a unit of energy produced from renewable sources;*
5. *slow growth rate of the share of renewable energy in the total energy generating network;*
6. *slow growth in energy efficiency of households and enterprises.*

To address the listed challenges, the European Commission presented the REPowerEU plan in May 2022. Due to the different levels of dependence on fossil fuels among the EU member states, the REPowerEU plan includes a variety of approaches to achieve the ambitious goals of reducing greenhouse gas emissions by 55% by 2030 and climate neutrality by 2050 for EU Member States in accordance with The European Green Deal (The European Green Deal[3]).

REPowerEU is a plan aimed at fast reduction of dependence of the EU countries on fossil fuels of the Russian Federation by implementing the following measures

- *energy conservation;*
- *diversification of energy supplies;*
- *replacement of fossil fuels by accelerating Europe's transition to clean energy.*

The implementation of such a plan requires effective coordination between European regulatory and infrastructure measures, as well as national investments/reforms and joint energy diplomacy.

Energy conservation involves saving energy resources as a quick and cheap way to start solving the energy problem. The forced reduction of energy consumption will accelerate the development of energy efficient and clean energy technologies from renewable sources and investments in their development. The given measure targets private households, industry, and infrastructure facilities.

[3] The European Green Deal [Online resource] – Retrieved from: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

The plan is based on a two-pronged approach: strengthening structural changes through medium- and long-term energy efficiency measures and achieving immediate energy savings through behavioral change. Medium- and long-term energy efficiency measures include additional savings and energy efficiency improvements in buildings.

These measures are covered by Directive (EU) 2024/1275 of the European Parliament and of the Council as of 24 April 2024 on the energy performance of buildings, amendments to Directive (EU) 2020/1828 and Regulation (EU) 2023/1542, repealing Directive 2009/125/EU[4], and amendments introduced by Regulation (EU) 2024/1781 of the European Parliament and of the Council as of 13 June 2024 establishing a framework for setting eco design requirements for environmentally friendly products[5]. In addition, to encourage energy saving and energy efficiency through the transition to highly efficient heating and insulation systems in buildings, the transition to heat pumps and the purchase of more efficient appliances and other implementation measures (e.g., installation of solar photovoltaic cells on roofs), the VAT rate for such energy saving measures is recommended to be reduced, leading to the changes in the pricing of the unit of energy.[6]

In particular, the European Commission, in cooperation with the International Energy Agency, has launched a nine-point plan called "Playing my part"[7] to reduce energy use in the EU. Based on information received from stakeholders, the International Energy Agency estimates that these types of short-term energy-saving measures can achieve a 5% reduction in gas demand (approximately 13 billion cubic meters) and oil demand (approximately 16 million tons of oil equivalent).[6]

The rapid implementation and ambitious revision of the National Energy and Climate Plans (NECPs[8]) are key to achieving the goals. NECPs play a crucial role in increasing investor confidence and investment predictability. They provide a good framework for planning and encouraging the reduction of fossil fuel use.[6]

[4] Directive (EU) 2024/1275 of the European Parliament and of the Council of 24 April 2024 on the energy performance of buildings [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401275&pk_keyword=Energy&pk_content=Directive

[5] Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401275&pk_keyword=Energy&pk_content=Directive

[6] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS REPowerEU Plan [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN&qid=1653033742483

[7] IEA 50. Playing my part [Online resource] – Retrieved from: https://www.iea.org/reports/playing-my-part

[8] National energy and climate plans [Online resource] – Retrieved from: https://commission.europa.eu/energy-climate-change-environment/implementation-eu-countries/energy-and-climat-egovernance-and-reporting/national-energy-and-climate-plans_en

Diversification of energy supplies is one of the key steps necessary to reduce the EU's dependence on energy supplies from the aggressor country. It can be achieved by aggregating and structuring joint demand based on long-term contracts with reliable partners, which will be carried out using electronic tools that will ensure optimized and transparent use (booking) of the infrastructure for transportation and storage of fossil fuels in compliance with antitrust laws.

In addition to diversification of energy supplies from non-EU suppliers, the member states are expected to continue domestic natural gas extraction, where possible. Moreover, one of the elements of supply diversification is the development of a voluntary operational "joint procurement mechanism" to negotiate and conclude contracts regarding the aggregate demand for gas and competitive supply to the market on behalf of the participating member states.

The plan emphasizes that the emergency synchronization of Ukraine's and Moldova's power grids with the European grid demonstrates the desire to ensure interconnection of Ukraine and Moldova with the EU energy grid. This will allow member states to buy excess electricity from Ukraine, thus compensating for part of the reduction in gas import[6]. Apart from diversifying oil, natural gas, and coal supplies, nuclear fuel is also subject to diversification. This will involve the EU working with international partners to secure alternative sources of uranium and increasing the conversion, enrichment and fuel production capacity in Europe or in the EU's international partners.

In line with the REPowerEU plan, Directive (EU) 2023/2413[9] amended the Renewable Energy Directive (2018/2001/EU)[10], specifying that the share of renewable energy sources in the energy consumption of each individual EU Member State will be at least 42.5%, aiming for 45% of the European total by 2030, compared to 40% as previously stated. This will lead to an increase in total renewable energy production capacity to 1236 GW by 2030, compared to 1067 GW by 2030 envisaged in Fit for 55 for 2030[11]. It is also proposed to install new solar photovoltaic systems with a total capacity of more than 320 GW by 2025, which is twice the current level, and 600 GW by 2030[6].

The rapid development and expansion of renewable energy sources will accelerate the gradual transition away from fossil fuels. Over time, this will also lower electricity prices and reduce fossil fuel imports. In addition to solar photovoltaic systems, wind power generation systems are an important element of such energy generation. The EU is one of the leaders when it comes to wind power generation and has a large territory (including the maritime economic zone) that is potentially promising for the development of wind power infrastructure. It is planned to generate 300 GW of electricity from wind power plants located in the maritime economic zone and 40 GW of ocean energy in the entire EU maritime basin by 2050[9].

[9] DIRECTIVE (EU) 2023/2413 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652 [Online resource] – Retrieved from: https://eur-lex.europa.eu/eli/dir/2023/2413/oj

[10] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [Online resource] – Retrieved from: https://www.iea.org/reports/playing-my-part

[11] Fit for 55 [Online resource] – Retrieved from: https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55/

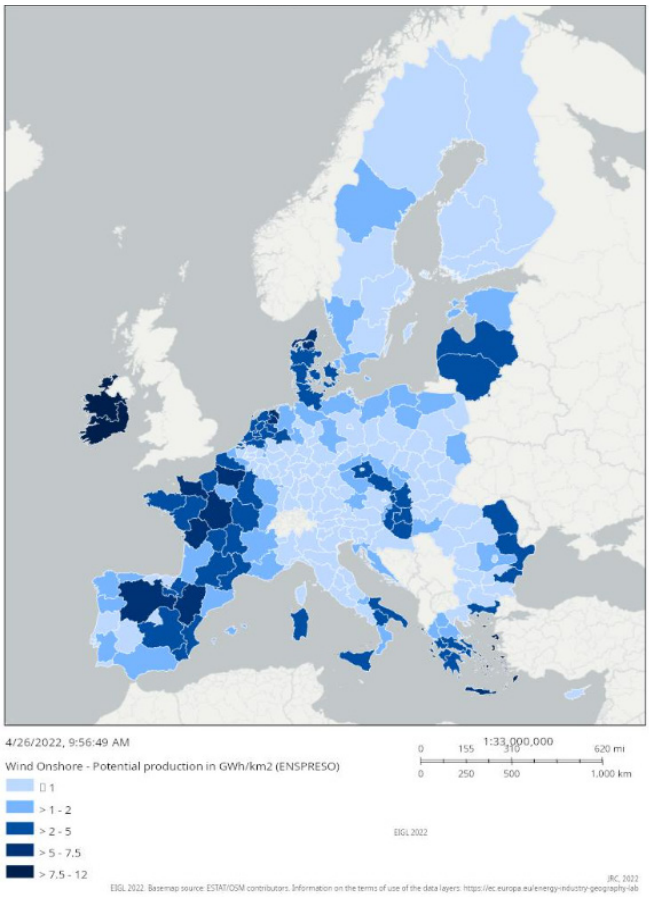


Fig. 1.1 Wind power generation potential in the EU Member States[6]

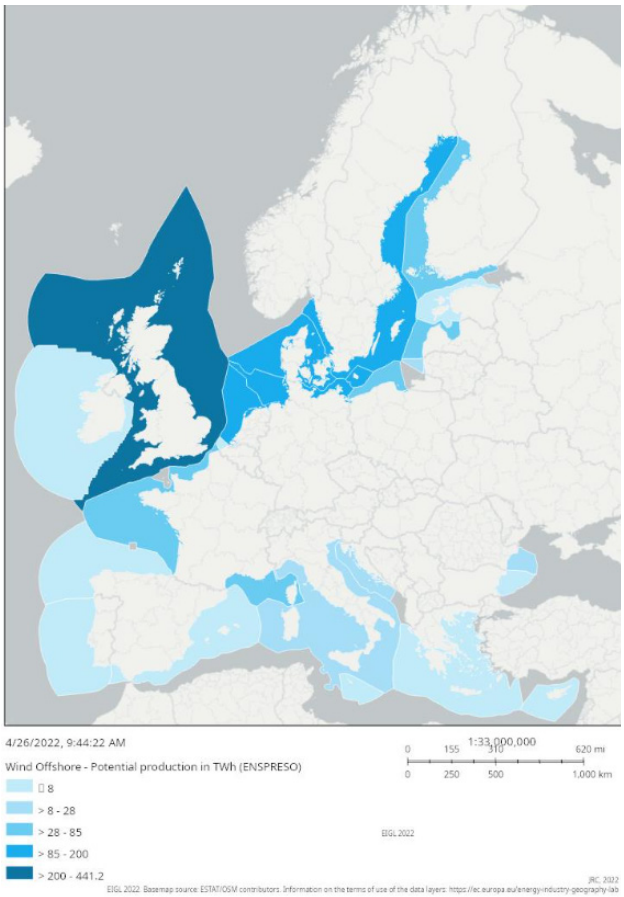


Fig. 1.2 Wind power generation potential in the maritime economic zone[6].

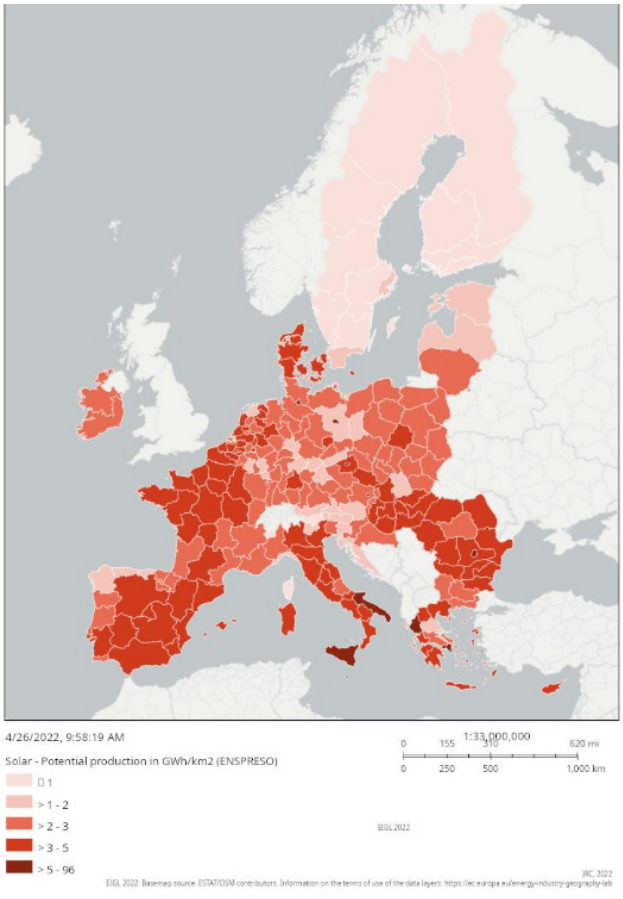


Fig. 1.3 Solar power generation potential in the EU member states[6].

As well as developing solar and wind energy systems, the EU aims to double the current level of deployment of individual heat pumps, with plans to increase the number of heat pumps to 10 million units over the next 5 years. **The faster deployment and integration of large-scale heat pumps, geothermal and solar thermal energy can be achieved through the following steps[6]:**

- *development and modernization of district heating systems that can replace fossil fuels in individual heating;*
- *utilization of industrial heat.*

One of the key energy sources that are expected to replace traditional fuels such as oil, gas and coal in sectors of the economy where their replacement is difficult is the production of renewable hydrogen and biomethane. It is expected that by 2030, 10 million tons of renewable hydrogen will be produced and 10 million tons will be imported through three main transport corridors, namely[6]:

1. *The Mediterranean Sea*
2. *the North Sea region*
3. *Ukraine.*

Achieving such ambitious goals requires rapid development of hydrogen infrastructure for production, import, and transportation to increase investment in this sector of the economy. Increasing the production of biomethane as a sustainable energy source (bioenergy accounts for 60% of the EU's renewable energy) to 35 billion cubic meters by 2030 is a cost-effective way to reduce natural gas imports from Russia. Biomethane production should be based on sustainable development goals and rely on organic, forestry and agricultural waste to minimize the impact on land use and food security[6].

Simplification Of Permitting Procedure Under REPowerEU Intiative

One of the key obstacles to the implementation of ambitious renewable energy development plans and creation of a healthy competitive environment is a slow and complicated permitting process.

Other barriers are as follows:

- *the complexity of the applicable placement rules and administrative permits for such projects;*
- *the complexity and duration of environmental impact assessment of such projects and related energy networks;*
- *problems with connection to the grid;*
- *restrictions on the adaptation of technological specifications during the permitting process;*
- *staffing problems of permitting authorities or grid operators*[9].

According to the information provided in the REPowerEU plan, the permitting period for wind energy projects can last up to 9 years, and for onshore solar power generating facilities - up to 4.5 years, However, the permitting period may differ among member states[6].

To address this problem, it is intended to simplify procedures at the national level and to attract all possible resources at the local and regional levels for the timely implementation of investments. Another way to solve this problem is to introduce the principle of using renewable energy as a higher public interest, to determine zones using performance targets and other ways to simplify permitting, and to minimize potential risks and negative environmental impacts.

Simplification and shortening of administrative permitting procedures is planned for facilities operating with:

- *renewable energy sources, including power units that combine different sources of renewable energy;*
- *heat pumps;*
- *equipment for joint energy storage, including power and heat facilities, as well as assets necessary for connecting such facilities, heat pumps and storage facilities, and integrating renewable energy into heating and cooling networks.*

The introduction of shorter and clearer deadlines for decision-making by the authorities empowered to grant permits for renewable energy facilities based on a complete application is intended to accelerate the deployment of renewable energy projects. The time spent on the construction of renewable energy plants and their connection to the grid should not be counted towards these deadlines, unless it coincides with other administrative steps in the permitting procedure[9].

The most common problems faced by renewable energy project developers are the following:

- *complexity and long duration of administrative permitting and grid connection procedures established at the national or regional levels;*
- *lack of sufficient staff and technical expertise in the bodies issuing permits to assess the environmental impact of proposed projects*[9].

The terms for obtaining permits should differ depending on the location of the facilities. According to the location, two groups of facilities can be distinguished:

- *facilities located in the areas designated as suitable for renewable energy sources (in this case, the term may be shortened);*
- *facilities located outside the RES acceleration areas.*

The term for completing the procedure may also depend on whether it is a new project that is to be implemented or an existing facility is to be reconstructed/modernized.

The areas identified as suitable for the deployment of renewable energy facilities should use the types of technologies that will not have a significant environmental impact. In addition, when identifying such areas, EU member states should exclude protected areas and consider measures for restoration and minimization of potential impacts (*Natura 2000* areas cannot be included in these plans).

In order to designate renewable energy zones, member states must prepare one or more plans covering the designation of such areas with defined conditions and simplification measures for projects located in each of these zones.

Member states will have the opportunity to prepare a single plan for all zones of the use of renewable energy sources and renewable energy technologies, or technology-specific plans, defining one or more zones for accelerating the use of renewable energy sources. Each plan should be subject to an environmental assessment in accordance with Directive 2001/42/EC[12] of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, which provides for an assessment of the impact of each technology on the relevant areas defined by the plan.

Currently, EU member states are preparing cartographic materials, studies, and a legislative framework for the creation of renewables acceleration areas. By the end of 2024, Poland plans to complete the RES mapping potential for onshore wind and solar energy and create a legal framework for renewables acceleration areas. Furthermore, the country is going to launch sensitivity mapping by the end of the year. By May 2025, the government intends to map the RES acceleration areas based on the preliminary RES potential map and establish a permitting procedure for facilities to be located in these areas. By February 2026, the government aims to establish RES acceleration areas as set out in the Renewable Energy Directive. The deadline for these plans to be prepared and approved is February 21, 2026.

[12] Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32001L0042

Conducting an environmental assessment

Conducting an environmental assessment by member states will have a more integrated and efficient approach to planning, ensure public participation at an early stage and take into account environmental considerations at an early phase of planning (strategic level). This will facilitate a faster and more rational deployment of different sources of renewable energy, while minimizing the negative environmental impact of these projects[9]. In case a plan may have a potential negative impact on other states, *transboundary consultations with affected parties are envisaged*. Moreover, in accordance with the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters[13], the *provisions on public participation and access to information apply to such plans*.

If renewable energy projects implemented in renewables acceleration areas comply with the rules and measures set out in such a plan (prepared by a member state), they are presumed to have no significant environmental impact. These projects should be exempted from the mandatory project-level environmental impact assessment within the scope of Directive 2011/92/EU, unless the state requires this procedure to be carried out according to a mandatory national list or if the activity may have a significant transboundary impact on the environment.

Renewable energy and energy storage projects located in renewables acceleration zones should benefit from simplified/accelerated administrative procedures. *Clear deadlines and legal certainty of the expected outcome of the permitting procedure should be defined*. In particular, "tacit approval" could be applied in case of no response from the competent authority for an intermediate administrative step by a specified deadline, if a project is not subject to an environmental impact assessment in accordance with the law, or if the principle of administrative tacit approval does not exist in the national legislation of the member state concerned.

Upon submission of a project application (accelerated renewable energy use), public authorities conduct rapid screening and determine whether a project will have a possible significant adverse impact on the territory (defined as a renewables acceleration area) and decide whether the project will have a possible known environmental impact in a cross-border context (or upon request of an affected party). In order to carry out screening, a competent authority may request additional available information from an applicant (without requiring a new assessment or data collection). If all the measures and requirements set out in the plans for the location of the RES acceleration areas are met, the projects should be considered approved.

If the screening reveals that a project may have a significant adverse environmental impact, the environmental impact assessment may be conducted. In the case of a derogation from the obligation to conduct such an assessment for wind and solar PV projects under justifiable circumstances, the authorized body should establish mitigation measures or, if they are not available, compensatory measures, which may take the form of monetary compensation (if other compensation measures are not available), to address the significant unintended adverse effects identified during the screening

[13] The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/994_015#Text.

process. Thus, if a project is planned to be implemented in acceleration areas for renewables, the period for determining the completeness of the permit application should not exceed 12 months (24 months in case of offshore wind farms), and for small projects (modernization of existing RES facilities, new facilities with a capacity of 150 kW), it should not exceed 6 months (12 months in case of offshore wind farms). Any of these terms may be extended for six months based on extraordinary circumstances.

Permits for renewable energy projects located outside the RES acceleration areas must be issued within two years or within three years for coastal projects, while for small projects, this period is one year or two years if located in coastal areas.

It is intended to establish a shorter permitting procedure (including the period of screening) for the modernization of power generating facilities that use renewable energy sources and are installed in renewables acceleration areas. Such facilities have already been installed in areas with significant renewable energy potential, which is an advantage over the installation of new facilities, and they have already been connected to the grid and undergone the environmental impact assessment and public review. The projects related to renovation/modernization of existing facilities and projects of solar power plants on existing buildings must obtain permits within 3 months, while projects aimed at installation of heat pumps with a capacity of less than 50 MW must receive a permit within 1 month.

Analysis Of The Initiative By Environmental Organizations

The following chapter is devoted to the analysis of initiatives within the REPowerEU program by leading environmental organizations and their proposals for improving its environmental component. REPowerEU, aimed at reducing the European Union's dependence on fossil fuels, is an important element of the energy transition that has a significant impact on both climate conditions and the social and economic stability of the participating states. The role of leading environmental networks in this context is to provide professional analysis, identify potential risks and develop recommendations for improving the environmental component of the initiative. These organizations use their experience and expert approach to propose effective alternatives that contribute to a sustainable energy transition.

The activities of three leading environmental networks have been analyzed:

1. **Climate Action Network (CAN)** Europe is a European coalition of more than 200 organizations working together to tackle the climate crisis. CAN Europe sees the REPowerEU as a strategically important plan to achieve ambitious emission reduction and climate neutrality targets.

2. **European Environmental Bureau (EEB)** is a network of more than 185 organizations that focuses on climate change, biodiversity and environmental protection in the context of the energy transition. The EEB emphasizes the need for a balanced approach to the rapid deployment of renewable energy while maintaining enviromental standards.

3. **Bankwatch Network** is an international network of organizations that analyzes the environmental and social aspects of project financing in Central and Eastern Europe. The network highlights the potential risks of excessive use of fossil fuels under REPowerEU and the need for transparency in the allocation of financial resources.

The chapter reviews the main principles, approaches and recommendations of these organizations regarding sustainable development, equity in the energy transition, integration of biodiversity into energy plans and broad community engagement. Particular attention is paid to the criteria necessary for balanced spatial planning, optimization of energy efficiency and strengthening the role of renewable energy sources.

CAN Europe sees the REPowerEU plan as an initiative that has been long needed in Europe. The plan is a significant step when it comes to adopting and accelerating the implementation of climate and energy policies, laying the groundwork for greater cohesion between and within member states and achieving 65% emissions reduction by 2030 and climate neutrality by 2040. Such changes are caused by the dependence of the EU energy sector on Russian fossil fuels, and rapid changes are needed to over

The following main principles for a safe and just energy transition have been specified by the network[14]:

- *developing a clear roadmap for implementing and monitoring energy efficiency and energy saving;*
- *keeping biodiversity issues at the center of attention during the large-scale active deployment of solar and wind energy with improved permitting procedure and proper spatial planning;*
- *ensuring that the transition aims to maximize social benefits and is based on principles of equity, providing everyone with the opportunity to participate in the process;*
- *launching a program to protect people from rising living costs due to higher energy prices and supporting households and communities that are actively engaged in the transition to cleaner energy.*

CAN Europe proposes to focus on the following goals and steps to accelerate energy transition.[15]

1. Energy efficiency and energy saving[15].

- *Launch an initiative to increase the rate of reconstruction/renovation of buildings to reduce the risk of energy loss and financial stability of households. As regards short term plans, member states should prioritize buildings with the lowest energy efficiency, as well as vulnerable and low-income households. They should be provided with technical support through advisory tools and access to financing on acceptable terms;*
- *Place the principle of "energy efficiency first" at the heart of short-, medium- and long-term actions. Targeted funding should be allocated and member states' implementation of the energy efficiency principle in all investment decisions should be considered;*
- *Accelerate the implementation of energy efficiency through the introduction of legislative initiatives that increase the annual energy saving obligations under the Energy Efficiency Directive[16] and mandatory energy efficiency standards for all existing buildings implemented through the Energy Performance of Buildings Directiv[17];*
- *Integrate energy reduction goals into existing industrial transitions by prioritizing the use of renewable energy sources and renewable hydrogen to speed up the industry's contribution to the green transition with clear plans and targets;*

- *Encourage and expand the implementation of local and regional heating and cooling plans, provide financial and advisory support to municipalities and citizens with regard to the decarbonization of heating systems.*

2. Accelerating the increase in renewable energy sources and heat supply.[15]

- *Encourage member states to install solar photovoltaic cells on roofs;*
- *Together with the rise of solar energy use, encourage the installation of heat pumps. National reconstruction programs should include measures for thermal insulation of buildings and massive installation of heat pumps;*
- *Incorporate the mechanisms for massive increase in solar and wind power generation, more structural reforms and actions such as spatial planning and mapping of the most suitable areas to fully utilize the potential of renewable energy sources as well as instruments for effective involvement of local communities and guaranteeing biodiversity protection into the action plan;*
- *Support the creation and empowerment of communities in the field of renewable energy by defining obligations, management criteria, and authority to oversee and monitor the realization of the set goals and regulations of energy communities in the legislation;*
- *Promote/advocate for the installation of solar panels, heat pumps, and solar collectors on rooftops as part of an overall strategy for energy security, affordability, sustainability, and resilience;*
- *Not to use subsidies for the installation of new fossil fuel boilers in new and reconstructed buildings. Prioritize redistribution of funding for low-income and vulnerable households;*
- *Develop a European Geothermal Strategy to identify the potential and viability, possible barriers and benefits of geothermal energy use. So far, geothermal energy has been largely neglected, although it can play an important role in the decarbonization of both individual and collective heating systems, including district heating networks;*
- *Propose sectoral and national short- and medium-term needs for the deployment of various flexible financing options. Energy markets should promote the use of flexible options such as heat and electricity storage, demand response, filling gaps in renewable energy sources, and optimized operation and expansion of networks to reduce the impact of fossil fuels.*

[14] Renewable Energy Planning and Mapping for Successful Acceleration with Nature and Communities at Its Heart: Guiding Principles for Member States [Online resource] – Retrieved from: https://caneurope.org/content/uploads/2024/02/CAN-Europe-contribution_RAAs-guidance_23022024.pdf

[15] REPOWERING FOR THE PEOPLE. Flagship actions the Commission's plan 'REPowerEU' should feature in the current fossil fuel and energy prices crisis [Online resource] – Retrieved from: https://caneurope.org/content/uploads/2022/05/Repower-for-the-People-Briefing-2.pdf

[16] Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_231_R_0001&qid=1695186598766

[17] Directive (EU) 2024/1275 of the European Parliament and of the Council of 24 April 2024 on the energy performance of buildings [Online resource] – Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401275&pk_keyword=Energy&pk_content=Directive

The end of the fossil fuel era[15].

- *Not to consider fossil fuels as a "transitional stage" that creates the possibility of a return to coal and dependence on liquefied natural gas;*
- *Avoid replacing imports of Russian fossil fuels with imports of fuels from developing countries. Importing fossil fuels from developing countries poses a significant risk of increasing investment in the extraction of such fuels and reducing investment in renewable energy sources;*
- *Introduce a clear priority for the use of hydrogen (100% renewable hydrogen) only for sectors of the economy that are difficult to decarbonize, such as steelmaking, chemical industry, fertilizer production, and certain segments of transportation.*

According to the Renewable Energy Directive, Member States are expected to support the faster deployment of renewable energy projects, carry out coordinated mapping for the deployment of renewable energy and related infrastructure, and map renewable energy acceleration zones by February 21, 2026. In this regard, CAN Europe has identified the following important criteria to be taken into account when conducting spatial planning and mapping[15]:

1. *The mapping of areas for renewable energy development must be aimed at ensuring that the EU reaches a share of renewable energy sources in the energy consumption of each individual member state of at least 42.5% by 2030, with a further target of 45%. It is also necessary to achieve climate neutrality no later than in 2050, and 100% use of renewable energy sources in energy consumption by 2040, in accordance with the commitments of the Paris Agreement.*
2. *A holistic approach for a balanced, equitable, efficient, environmentally friendly and synergistic expansion of renewable energy has to be developed.*
3. *Strategic planning should combine energy and biodiversity targets.*
4. *A common and coordinated mission for the public sector with stakeholder engagement, underlined by clear, proactive communication, has to be ensured.*
5. *Inclusive, early, and meaningful public participation involving local communities must be guaranteed.*
6. *Public information must be transparent and accessible.*
7. *Consistent legal framework and a forward-looking approach to spatial planning must be developed.*
8. *Periodical review and update of spatial planning and mapping based on the latest data have to take place.*

In addition, CAN Europe has published key principles (which are not exhaustive) that should be followed to effectively identify acceleration areas for renewables[15]:

1. *Renewables acceleration areas should be part of, and not a replacement of, the overall planning with comprehensive mapping of renewable energy.*

2. *Opportunities of obvious choice, i.e., utilization of the potential for RES development on artificial surfaces (roofs, facades, along transport infrastructure) and surfaces of canals and reservoirs should be used.*
3. *Member states' public authorities should adopt a more sophisticated approach to the definition of renewables acceleration areas, and the identification of such areas should not mean that other areas are prohibited (unless they are declared as such). The designation of acceleration areas should be seen as a dynamic process with constant reassessment of potential and a number of other variables.*
4. *Each plan should undergo a strategic environmental assessment with public involvement at its early stages. A catalog of effective standardized mitigation measures should be developed to be applied to each acceleration area separately. It is also necessary to create a transparent, centralized database for monitoring ecosystems and wildlife, as the need to reduce bureaucracy and environmental impact assessment will increase the importance of having up-to-date data.*
5. *Member states should ensure that the methodology and process for determining acceleration areas are transparent to all stakeholders, and developed in joint cooperation between government, business, and non-governmental organizations.*
6. *Public has to participate in the process of determining the acceleration areas, as this may be the only opportunity for the public to express its opinion (in the absence of EIA at the stage of issuing permits).*
7. *Community-owned projects must be prioritized, or a mandate for a certain percentage of ownership to the community has to be provided.*

European Environmental Bureau

In its publications and joint statement with other non-governmental organizations, the European Environmental Bureau (EEB) supports the general idea of refusing from fossil fuels and rapidly switching to renewable energy sources to increase their share in electricity production. Yet, given that lengthy administrative procedures under the REPowerEU have been identified as one of the obstacles to the rapid development of renewable energy, the EEB supports fast-track permitting. At the same time, this can undermine oversight of the environmental impact of such projects without sufficient effort being put into identifying and selecting areas suitable for these projects.

"While renewable energy sources are being promoted as a major public interest, we also need to be aware of the unintended consequences for nature and people that their production, transmission and distribution can cause. Communication between energy and environmental authorities as well as compliance with existing EU rules on nature and water protection should be key in the development of these projects," said Serhii Moroz, the EEB Biodiversity and Water Policy Manager.[18]

[18] EU's green independence from fossil fuels will require further and faster action, say NGOs [Online resource] – Retrieved from: https://eeb.org/eus-green-independence-from-fossil-fuels-will-require-further-and-faster-action-say-ngos/

The organization is also concerned about decisions regarding hydrogen and biogas, as hydrogen consumption may take a larger market share than necessary and thus displace renewable energy sources. In the context of sustainability and environmental friendliness, biogas production is also controversial, since the use of manure will lead to an increase in industrial livestock production and dependence on the feed base. Additionally, the use of food waste will create obstacles to waste prevention and emission reduction.

The organization notes that one of the most important steps is to increase the number of installed solar panels, heat pumps, electrification of heating and reconstruction of buildings based on energy saving and energy efficiency principles.

David Sabbadin, EEB Policy Specialist for Energy and Circular Economy said, "Over the next five years, 10 million heat pumps will be installed. This is a very positive signal for the market, but it would be better to completely ban the sale of gas boilers from 2025 so that our homes are gas-free by 2045. In addition, these heat pumps should collect the maximum amount of renewable energy by being combined with photovoltaic and solar thermal roofs, and should run on environmentally friendly gases: this requires a revision of the regulations on fluorinated greenhouse gases to implement this historic technology"[16].

Bankwatch Network

The international Bankwatch Network notes that the REPowerEU plan is not a new climate strategy. It includes measures to accelerate the energy transition, but its main idea is to stop using Russian fossil fuels, not all fossil fuels. As a result, EU member states will have the opportunity to use funds for fossil fuel projects, which have so far been excluded from EU state aid as the main source of the climate crisis. The EU has thereby introduced a "do no significant harm" exception to the fossil fuel rule, which should ensure that member states do not use the economic recovery package for unsustainable investments. As a consequence, restrictions are imposed on natural gas investment projects with the requirements that 30% of each of them have to be financed through loans only (projects must not be financed by grants), be implemented by 2026, and be clearly justified as essential. Such a derogation could lead to natural gas becoming an important element of the energy balance of states, rather than a short-term solution (because the infrastructure will already be built).[19] The given decision may negatively affect the development of the energy sector in Central and Eastern Europe. These member states may take this opportunity to invest in fossil fuels (pipelines and natural gas storage systems or liquefied natural gas terminals).

As per Bankwatch Network, if new investments are prepared properly and in cooperation with the public, there is a chance that this will allow stakeholders to participate in decisions where priorities need to be set, and more opportunities for renewable energy and energy efficiency will arise. The public should have the right to access information about all recipients of public funds, not just the largest ones. The EU Council's argument that publishing a larger set of data is an "administrative burden" should not be taken lightly, as it could mean a known way of making decisions behind closed doors To avoid misuse of public money, the principle of transparency should be reinforced.[19]

The analysis of the REPowerEU program by non-governmental organizations such as CAN Europe, European Environmental Bureau and Bankwatch Network underlines the fact that this plan is an important step in reducing the EU's dependence on fossil fuels and accelerating the energy transition to renewable energy sources. To do this, it is necessary to make every effort and focus on energy efficiency, engage communities in the green transition, take into account their interests and refuse from the use of fossil fuels. At the same time, the realization of ambitious goals, namely achieving a share

of renewable energy sources in the energy consumption of each individual EU member state of at least 42.5% by 2030, achieving a 65% reduction in emissions by 2030 and climate neutrality by 2040, depends on compliance with the principles of fairness, transparency and public involvement.

In line with the publication of the European Commission's Guidelines for the Designation of Renewables Acceleration Areas,[20] the Oeko Institute, CAN Europe, WWF EU, Birdlife Europe and the European Environmental Bureau have published their joint analysis and recommendations on spatial planning for renewable energy and the designation of renewables acceleration areas.[21]

The following recommendations were prepared based on the analysis:

- *Ensure public participation at the early stages of the spatial planning process, the mechanisms of involvement should be clearly outlined as part of the approval of RES acceleration areas, and EIA and SEA should be part of such approval. Ensuring public participation may include involving interested citizens in the process of collecting and verifying the potential of the territories, consulting them on the methods of mapping such territories, and creating a space for conflict resolution;*
- *Implementation of various models and opportunities for public participation in decision-making in a combination of formal and informal practices (online forums, interactive surveys) of public participation. It is also equally important to increase transparency by publishing maps of all planned and ongoing projects with further public nvolvement;*
- *Ensure basic standards and requirements for data quality with constant updating of data to the latest and creation of a centralized digital data repository;*
- *Promote coordination between national, regional and local levels of spatial planning by building a clear roadmap at the national level with inclusion of all levels in national strategies and plans, financial incentives and grants for lower levels of planning;*
- *Encourage multi-level mapping of the sensitivity of territories; Eliminate administrative barriers that delay decision-making by increasing funding and training for civil servants, and digitalizing administrative systems;*
- *Identify dual-use lands with prioritized use;*
- *Investing in the electricity distribution network. It is important to take into account the location of the network to the areas of RES acceleration in spatial planning.*

The organizations' expert recommendations point to the need for structural reforms, efficient allocation of funding, implementation of sustainable development technologies, and prioritization of social benefits. The approach based on the principles of transparency, inclusiveness and interaction between different stakeholders is the key to the successful achievement of the program's goals, which should become the basis for the long-term environmental and socio-economic progress of the EU countries.

[19] REPowerEU deal is a blow to a more climate-oriented energy policy in Central and Eastern Europe [Online resource] – Retrieved from: https://bankwatch.org/blog/repowereu-deal-is-a-blow-to-a-more-climate-oriented-energy-policy-in-central-and-easte rn-europe

[20] Guidance on designating renewables acceleration areas [Online resource] – Retrieved from: https://energy.ec.europa.eu/publications/guidance-designating-renewables-acceleration-areas_en

[21] Overview of Renewable Energy Spatial Planning and Designation of Acceleration Areas in Selected EU Member States [Online resource] – Retrieved from: https://caneurope.org/spatial-planning-for-renewables/

Prospects For The Implementation Of REPowerEU In Ukraine

Peculiarities of permitting procedures (EIA) for RES projects in Ukraine based on specific cases

Ukraine is situated between the European Union and Russia, which has been carrying out acts of aggression since 2014. This location gives us the opportunity to join the vector of energy development in accordance with the EU plans and to receive assistance in the implementation of the transition to renewable energy sources, which is vital given the constant shelling and destruction of energy facilities.

The adoption of the National Renewable Energy Action Plan until 2030 and the action plan for its implementation by the Cabinet of Ministers of Ukraine is an important step for the development of renewable energy in Ukraine.[22] This document sets targets and specifies measures as regards the development of renewable energy.

In 2021, electricity generation in Ukraine amounted to 158.4 billion kWh. The main share in this production was made up of NPPs - 54.4%, TPPs and CHPs - 29.9%, HPPs and PSPs - 6.6%. Renewable energy sources (including solar, wind, and biological plants) accounted for 7.9%. [23] Since the beginning of the full-scale invasion and aggressive war of the Russian Federation on the territory of Ukraine, electricity generation facilities have been subjected to constant missile and drone strikes, which necessitates diversification of sources and constant restoration of volumes of generation by restoring or building new facilities. According to the National Renewable Energy Action Plan until 2030 and the action plan for its implementation, about 25 percent of the installed renewable energy facilities in Ukraine have been occupied as a result of the Russian invasion. The situation with wind power plants is particularly difficult as 75 percent or about 1.25 GW of them are located in the occupied territories of Kherson and Zaporizhzhia regions (including the capacity occupied by 2022 - 1.4 GW). Moreover, about 14 percent of solar power plants are under occupation (more than 0.6 GW).[20]

Implementation of renewable energy projects requires obtaining permits to authorize such activities. As per the Law of Ukraine “On Alternative Energy Sources”, renewable energy sources are renewable non-fossil energy sources, namely solar, wind, aero thermal, geothermal, hydrothermal, wave and tidal energy, hydropower, biomass, organic waste gas, sewage treatment plant gas, biogas.[24] **The construction of wind power plants, biomass power plants, hydroelectric power plants and the facilities necessary for their operation requires an environmental impact assessment in accordance with the following articles of the Law of Ukraine “On Environmental Impact Assessment”:**

[22] Resolution of the CMU as of August 13, 2024 No. 761-r “On Approval of the National Renewable Energy Action Plan for the period up to 2030 and the Action Plan for its Implementation” [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/761-2024-%D1%80#Text

[23] Slovo i Dilo. How Ukraine produced electricity before the full-scale war [Online resource] – Retrieved from: https://www.slovoidilo.ua/2024/06/04/infografika/ekonomika/yak-ukrayina-vyroblyala-elektroenerhiyu-povnomassh tabnoyi-vijny

- *Clause 8, Section 2, Article 3 - non-hazardous waste treatment facilities with a capacity of 100 tons per day or more;*
- *Clause 20, Section 2, Article 3 - construction of overhead power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometers;*
- *Clause 2, Section 3, Article 3 - change of the designated purpose of agricultural land (if a new designation relates to at least one type of activity specified in Sections 2 and 3 of the Article) and change of the designated purpose of particularly valuable land;*
- *Clause 4, Section 3, Article 3 - hydroelectric power plants on rivers, regardless of their capacity; pumped storage power plants (PSPPs); wind parks, wind power plants with two or more turbines or a height of 50 meters or more;*
- *Clause 20, Section 3, Article 3 - construction of overhead power lines with a voltage of 220 kilovolts and more, as well as substations with a voltage of 330 kilovolts and more;*
- *Clause 21, Section 3, Article 3 - non-hazardous waste treatment facilities with a capacity of less than 100 tons per day.*

However, under the circumstances of martial law, it is important to ensure the rapid restoration or construction of new critical infrastructure facilities, and therefore, the Resolution of the Cabinet of Ministers of Ukraine № 1010 dated December 13, 2017 "On Approval of Criteria for Determining Planned Activities Not Subject to Environmental Impact Assessment and Criteria for Determining Expansions and Changes in Activities and Facilities Not Subject to Environmental Impact Assessment" has been amended to ensure a quick response and elimination of the damage caused by the armed aggression of the Russian Federation.

The amendments stipulate that the planned activities specified in Clauses 1-21 of Section 2 and Clauses 1-13 of Section 3 of Article 3 of the Law of Ukraine "On Environmental Impact Assessment" are not subject to environmental impact assessment if they are aimed solely at ensuring defense and energy security of the state as well as elimination of the consequences of emergencies and military aggression of the Russian Federation against Ukraine, namely activities related to:

- *construction of overhead power lines with a voltage of 220 kV and more and substations with a voltage of 330 kV and more during the martial law;*
- *restoration of facilities damaged or destroyed as a result of the military aggression of the Russian Federation against Ukraine and hostilities (from the beginning and during the period of martial law) intended for the vital activity of the population (electricity supply facilities) by means of their current or major repairs, and reconstruction (without increasing the class of liability consequences of the facility and within the previously allocated land plots, without changing the geometric dimensions of the facility).*

[24] The Law of Ukraine "On Alternative Energy Sources" [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/555-15#Text

The Ministry of Ecology and Natural resources has published a draft of the Concept Note, defining the scope of deviations from the rules of environmental impact assessment and strategic environmental assessment. While studying the document, a number of shortcomings and inconsistencies have been noticed. Moreover, the content of the note contradicts one of the goals of the reform that is "To ensure cross-sectoral implementation of climate and environmental measures by implementing EIA and SEA for all projects, programs and strategies, with the exception of clearly defined temporary deviations". More details on the analysis of the draft of the Concept Note can be found following the link below.[25]

Examples and analysis of existing cases

In accordance with the REPowerEU plan, Directive (EU) 2023/2413 provides for the simplification of procedures at the national level. Taking this into account, it is worth considering the stages and timeframes of the EIA procedure for wind farms in Ukraine based on the example of the planned activity *"New construction of the Nyzhni Vorota-1 wind farm on the territory of the Nyzhni Vorota territorial community of Mukachevo district, Zakarpattia region, near the villages of Bilasovytsia, Latirka and Tyshiv (outside settlements)"* (registration No. 202321810375, LLC "Ostrovskyi Wind Park").[26] The planned activity entails the construction of one 4.8 MW wind turbine with a tower height of 120 meters. This environmental impact assessment procedure was conducted by the Ministry of Environmental Protection and Natural Resources of Ukraine. The stages of the procedure and their specifics can be studied in more detail following the link below.[27] **The total period from the beginning of the procedure to the receipt of the environmental impact assessment conclusion amounted to 6 months and consisted of the following stages (in chronological order):**

1. *The environmental impact assessment procedure began with the publication of a notice of planned activities subject to environmental impact assessment February 22, 2023. The public discussion lasted 20 business days, during which the Ministry received comments and suggestions from the public on the planned activities, the scope of research and the level of detail of information to be included in the environmental impact assessment report. It has to be noted that from July 13, 2023, in accordance with the Law of Ukraine "On Amendments to Certain Laws of Ukraine on Improving and Digitalizing the EIA Procedure"[28], the period for public discussion of the notice of planned activities subject to environmental impact assessment was reduced from 20 to 12 business days).*
2. *On July 05, 2023, the announcement of the start of public discussion of the EIA report and the EIA report itself were made public. The period of public discussion of the EIA report was 25 working days.*
3. *The Environmental Impact Assessment Conclusion on the admissibility of the planned activities provided that the environmental conditions are met, and the Public Discussion Report were published in the Unified Register of Environmental Impact Assessment on August 22, 2023 (the period for issuing the EIA Conclusion is no more than 15 business days).*

The timing of the environmental impact assessment procedure is accurate only in terms of the time of public discussion of the notification of the planned activity subject to environmental impact assessment and the EIA report. The timing of the procedure is mainly influenced by the time of preparation of the EIA report and the studies required for a comprehensive analysis of the situation. This period may vary from case to case.

After the EIA, in accordance with the EIA Conclusion, it is also planned to change the designated purpose of the land from the land intended for commercial agriculture use to the land intended for the placement, construction, operation and maintenance of buildings and structures of energy generating enterprises, institutions and organizations. The estimated construction and installation period is 3 months.

During the preparation of the EIA report, the studies were conducted and included in the EIA report:

- *interim report for the spring period, which was carried out in April-May 2023 and includes studies of fauna (ornithofauna, entomofauna, herpetofauna, terifauna, bat fauna) and flora;*
- *technical report on preliminary engineering and geological research at the site conducted in May-June 2023;*
- *report on geological and geophysical studies performed in March 2023.*

Considering the above information, it can be seen that the business entity started conducting research after the start of the EIA procedure, which increased the time for preparing the EIA report and completing the procedure. The minimum period of the procedure is about 60 working days, which is 3 months. The current Ukrainian legal framework for conducting the EIA procedure is optimal for environmental impact assessment and does not require further reduction, which may result in significant losses in the quality of results (for example, in Sweden the decision-making period is up to 6 months, in Poland the duration of the procedure ranges from 60-120 days to 3 years)[25].

According to the Resolution of the National Energy and Utilities Regulatory Commission as of May 28, 2024 No. 992 "On Issuance of the Electricity Generation License to LLC 'Ostrovskyi Wind Park', the business entity received a license to conduct business activities of electricity generation within the places of conducting business activities for the production of electricity. LLC 'Ostrovskyi Wind Park' was founded on December 30, 2021. Thus, it took the business entity about 3 years to obtain a license for the right to conduct economic activity of electricity generation.

[25] Ecoclub. Position of NGOs on the possible narrowing of EIA and SEA [Online resource] – Retrieved from: https://ecoclubrivne.org/cn_eia_seo/

[26] Unified Register of Environmental Impact Assessment [Online resource] – Retrieved from: https://eia.menr.gov.ua/uk/case/id-10375

[27] Environmental Impact Assessment in Europe and Canada [Online resource] – Retrieved from: https://ecoclubrivne.org/ovd-v-evropi-ta-kanadi/

However, despite the purpose of the environmental impact assessment procedure to prevent environmental damage, ensure environmental safety, and rational use and restoration of natural resources, sometimes the procedure fails and does not fulfill its original goal. A good example of this is the planned activity "Construction of a 120 MW wind power plant on the territory of Volovets village council, Volovets district, and on the territory of Bereznyky, Dusyno, Nelipyno and Tybava village councils (outside settlements) of Svaliava district, Zakarpattia region" (registration No. 2018821379, Atlas Volovets Energy LLC). The planned activity envisaged the installation of 34 wind turbines, an electrical substation and three distribution points within the Borzhava valley of the Eastern Carpathians.

The environmental impact assessment procedure began with the publication of the notice on August 20, 2018. The Department of Ecology and Natural Resources of Zakarpattia Regional State Administration was responsible for conducting this procedure. With the beginning of the public discussion of the notice, the authorized territorial body (hereinafter - the ATB) received a large number of proposals and comments on the scope of the study and the level of detail of information to be included in the EIA report. The case has gained a public outcry.

The announcement of the start of public discussion of the EIA report and the EIA report itself were published in the Unified Register of Environmental Impact Assessment on January 15, 2019. As a result of the procedure, the ATB published the environmental impact assessment conclusion on the admissibility of the planned activity in the Unified Register of Environmental Impact Assessment on March 07, 2019. The procedure took about 6 months to complete.

On June 09, 2019, the NGO International Institute of Human and Global Studies "Noosphere" filed a lawsuit against the Department of Ecology and Natural Resources of the Zakarpattia Regional State Administration with the Zakarpattia District Administrative Court, asking to cancel the conclusion of the environmental impact assessment. On March 18, 2020, the Zakarpattia District Administrative Court satisfied the claims of the NGO International Institute of Human and Global Studies "Noosphere", declared the EIA conclusion unlawful and canceled it.[29]

The decision of the court was based on the following arguments:

- *improper consideration or lack of consideration of comments and suggestions of the public that were received regarding the scope of the study and the level of detail of information to be included in the EIA report;*
- *failure to provide public access to environmental impact assessment materials (EIA report) at the premises of the local government body whose territory may be affected by the planned activity;*
- *the EIA report does not contain relevant data and information about the impacts on human health and safety or the protected areas;*
- *The EIA report contains contradictions and inaccuracies in the information provided in different sections of the document.*

[28] The Law of Ukraine "On Amendments to Certain Laws of Ukraine on Improving and Digitalizing the EIA Procedure" [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/3227-20#n6

On November 3, 2020, the Eighth Administrative Court of Appeal in Lviv issued a ruling granting the appeals of the Volovets Village Council, Volovets district, Zakarpattia region, Tybava Village Council, Svaliava district, Zakarpattia region, Atlas Volovets Energy LLC, and reversing the decision of the Zakarpattia District Administrative Court as of March 18, 2020 in case No. 260/771/19.

As per the court ruling, the Department of Ecology and Natural Resources of the Zakarpattia Regional State Administration complied with the requirements of the environmental impact assessment procedure for the planned wind farm construction activity and the legislation on environmental protection, as well as maintained a balance between private, state and public interests. Moreover, it was stated that the presence of possible minor violations during the public hearing procedure, in particular, failure to take into account certain minor proposals did not affect the legitimacy of the conclusion.[30]

On November 27, 2020 and December 10, 2020, the International Charitable Organization "Ecology-Law-Human" and the NGO International Institute of Human and Global Studies "Noosphere" respectively filed cassation appeals with the Supreme Court. On April 13, 2022, the Supreme Court, comprising the panel of judges of the Administrative Cassation Court, decided to dismiss the cassation appeals of the above organizations.[31]

Alongside this case, the NGO International Institute of Human and Global Studies "Noosphere" filed a lawsuit to revoke the construction permit. The decision on the basis of this claim was made on January 23, 2020 by the Zakarpattia District Administrative Court, and the plaintiff was denied the claim.[32] However, on September 2, 2020, the decision was overturned by the Eighth Administrative Court of Appeal in Lviv.[33]

On December 3, 2021, the Eighth Administrative Court of Appeal received an appeal from the NGO International Institute of Human and Global Studies "Noosphere" to review the decision of the Eighth Administrative Court of Appeal dated November 03, 2020 in administrative case No. 260/771/19 due to newly discovered circumstances. However, following the decision of the Eighth Administrative Court of Appeal in Lviv as of August 23, 2022, case No. 260/771/19, proceeding No. H-A/857/5832/20, the case was dismissed.[34] A cassation appeal was filed by the NGO International Institute of Human and Global Studies "Noosphere" to the Supreme Court against this decision. On August 10, 2023, the Supreme Court, composed of the panel of judges of the Administrative Cassation Court, decided to dismiss the cassation appeal.[35]

The conclusion of the EIA on the permissibility of the planned activity was not canceled, but the construction permit was. However, Atlas Volovets Energy LLC filed a cassation appeal against the decision of the Eighth Administrative Court of Appeal dated September 02, 2020. The appeal was considered by the Supreme Court comprising the panel of judges of the Administrative Cassation Court, and on April 24, 2024, the resolution definitively canceled the construction permit.[36]

The environmental impact assessment took about 6 months to complete. The time period for appealing against the EIA Conclusion and the construction permit amounted to about 6 years.

This case is a clear example of the problematic nature of compliance with permitting procedures and the issuance of permitting documents based on EIA. The reasons for such situations are as follows:

- *difficulties as regards engaging competent executors of EIA reports;*
- *terms of obtaining permitting documents (the need to conduct research that extends the time and cost of such a procedure);*
- *low involvement of the public and stakeholders at the earliest stages of project planning;*
- *low institutional capacity of authorized bodies: limited human, financial, and expert resources of the relevant bodies, which are objectively unable to provide a qualified assessment of the environmental impact assessment report.*

For more information on the Ecoclub's proposals, please follow the link below.[37]

It is worth considering the possibility of implementing the REPowerEU plan in Ukraine as an alternative to addressing the existing shortcomings, in particular in the context of identifying and further approving areas for RES.

[29] The decision of the Zakarpattia District Administrative Court as of March 18, 2020 in case No. 260/771/19 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/88498315

[30] Decision of the Eighth Administrative Court of Appeal of Lviv dated November 03, 2020, case No. 260/771/19, proceedings No. A/857/5832/20 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/92787005

[31] Ruling of the Supreme Court composed of the panel of judges of the Administrative Cassation Court as of April 13, 2022, case No. 260/771/19, administrative proceedings No. K/9901/34454/20 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/103944042

[32] Decision of the Zakarpattia District Administrative Court as of January 23, 2020, case No. 260/1058/19 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/87319749

[33] Decision of the Eighth Administrative Court of Appeal of Lviv dated September 02, 2020, case No. 260/1058/19, proceedings No. A/857/3354/20, No. A/857/3365/20 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/91353681

[34] Decision of the Eighth Administrative Court of Appeal of Lviv dated August 23, 2022, case No. 260/771/19, proceedings No. H-A/857/5832/20 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/106037169

[35] Resolution of the Supreme Court composed of the panel of judges of the Administrative Cassation Court of August 10, 2023, case No. 260/771/19, administrative proceedings No. K/990/26571/22 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/112757712

The possibilities of implementing the REPowerEU plan in Ukraine

Currently, RES facilities go a long way from the beginning of the planning process to project realization. When it comes to implementing the approaches to RES development outlined in the REPowerEU plan and the formation of RES acceleration areas, it is important to explore the possibility of implementing the following stages:

Stage 1: mapping of areas suitable for the deployment of renewable energy projects (should be carried out with the involvement of all relevant authorities at the national, regional and local levels).

When mapping the territories, it is necessary to take into account the available RES capacities and the infrastructure necessary for their functioning (power grid, storage, etc.), as well as calculations of the potential amount of energy that can be obtained from the territory with the definition of specific types of electricity generation (with possible reuse of territories such as roofs, building facades). Before designating such territories, executive authorities need to identify and set area targets for the regions in accordance with the potential energy that can be obtained from such territories. The territories may have good potential for implementing RES projects, but at the same time, they may be located too far from consumption centers, with no necessary infrastructure for project implementation, and in such cases, the timing of such projects and their economic feasibility should be taken into account.

Web-based applications can be used to identify such areas. An excellent example is the PHOTOVOLTAIC GEOGRAPHICAL INFORMATION SYSTEM[38] which allows the user to obtain data on solar radiation and energy production by photovoltaic (PV) systems anywhere in most parts of the world. GLOBAL WIND ATLAS[39] has been designed to help planners find and assess the wind energy potential of territories, and the overview of existing facilities can be tracked using The Energy and Industry Geography Lab (EIGL).[40]

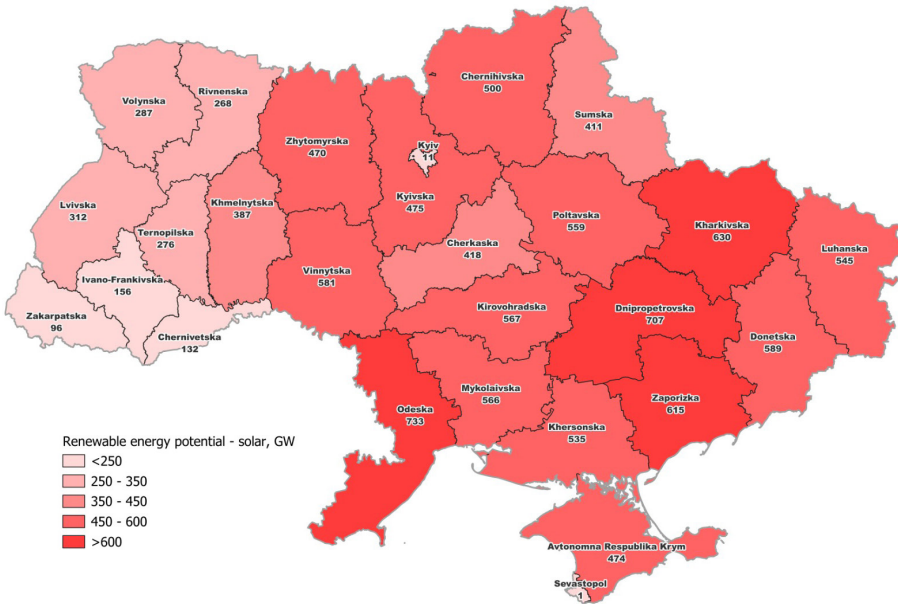


Fig. 4.1 Solar power generation potential in Ukraine.

[36] Resolution of the Supreme Court composed of the panel of judges of the Administrative Cassation Court dated April 24, 2024, case No. 260/1058/19, administrative proceedings No. K/9901/25888/20 [Online resource] – Retrieved from: https://reyestr.court.gov.ua/Review/118599491

[37] NGO "Ecoclub". Position of civil society organizations on the possible narrowing of EIA and SEA [Online resource] – Retrieved from: https://ecoclubrivne.org/eia_reform_position/

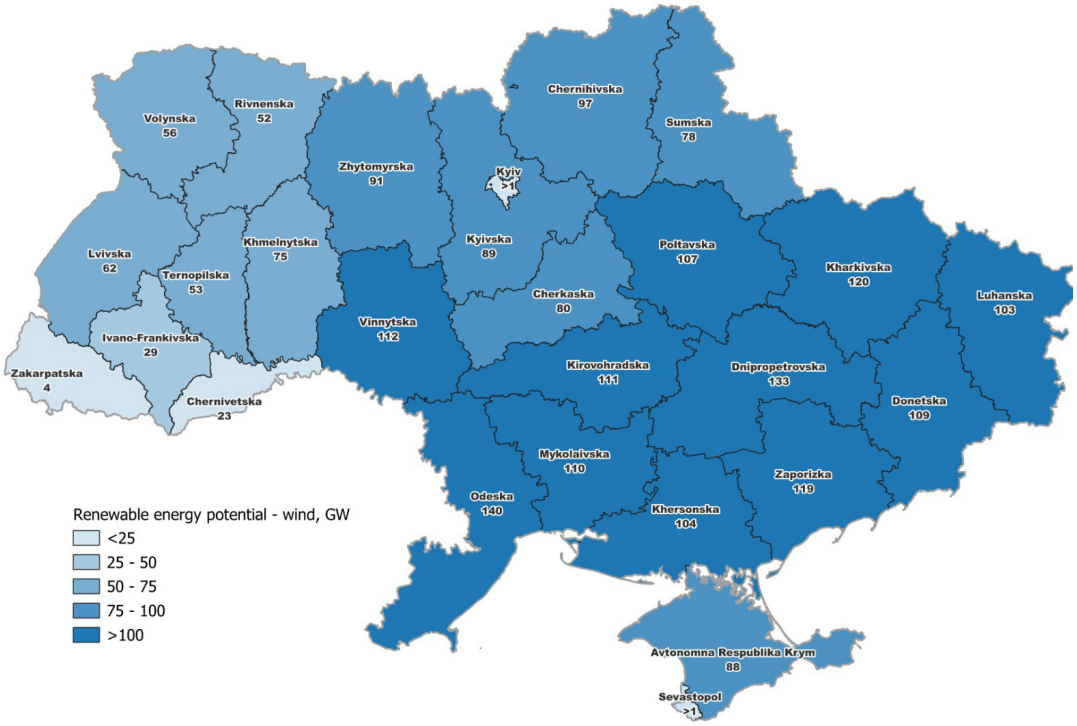


Fig. 4.2 Wind power generation potential in Ukraine.

The potential for solar and wind power generation in GW is shown in Figure 4.1 and Figure 4.2 prepared on the basis of a study by the Institute for a Sustainable Future at the University of Technology, Sydney, for Greenpeace Germany based on Scenario 1, which includes available land, excluding nature reserve land, as well as land with extremely difficult topography (slope over 30%, certain types of soil cover, dense forests, wetlands, moss and lichens), snow and ice cover, and water (permanent reservoirs)[41].

Stage 2. Spatial planning with the identification of land, inland water and marine areas where the introduction of specific types of renewable energy generation is not expected to have a significant impact on the environment.

When determining such areas, first of all, the area topography, land use designation, location of the area in relation to settlements (residential development), location of nature reserve areas, ecological network and other possible restrictions that prevent the location of RES facilities in such areas should be analyzed. It is necessary to assess the sensitivity of the environment to the location of the RES acceleration area and determine the specific technologies to be used to avoid significant negative environmental impact. An additional important aspect at this stage is the assessment of possible transboundary environmental impacts. Under the Convention on Environmental Impact Assessment in a Transboundary Context, such areas are not recommended to be included due to the fact that further procedures will include transboundary consultations and, accordingly, long timeframes for the procedures.

[38] PHOTOVOLTAIC GEOGRAPHICAL INFORMATION SYSTEM [Online resource] – Retrieved from: https://re.jrc.ec.europa.eu/pvg_tools/en/

[39] GLOBAL WIND ATLAS [Online resource] – Retrieved from: https://globalwindatlas.info/en/

[40] The Energy and Industry Geography Lab [Online resource] – Retrieved from: https://energy-industry-geolab.jrc.ec.europa.eu/

[41] Greenpeace. Ukraine: energy opportunities mapping. Assessment of solar and wind energy potential [Online resource] – Retrieved from: https://www.greenpeace.org/ukraine/rozsliduvannia-ta-zvity/1917/ukraina-maie-potentsial-soniachnoi-ta-vitrovoi-enerhii/

According to the EU Directive, the priority areas for RES acceleration are artificial and built surfaces, such as roofs and facades of buildings, transport infrastructure and its immediate surroundings, parking lots, farms, landfills, industrial sites, mines, artificial inland water bodies, lakes or reservoirs and, where applicable, municipal wastewater treatment sites, as well as degraded land unsuitable for agriculture[9]. Conducting activities in areas that have experienced significant anthropogenic impacts will potentially have less negative environmental impacts compared to other areas.

Conducting desktop studies of RES acceleration areas with the identification of key biodiversity zones is an important part of spatial planning, and has to include studies of fauna and its migration (ornithofauna, entomofauna, herpetofauna, terriofauna, bat fauna, ichthyofauna, etc.) and flora in accordance with the selected technologies. This will allow for the rapid preparation of materials for subsequent procedures and shorten the time for issuing permits. In fact, it would be a good idea to create a database to collect such information and data sets. The research data can be found and used from EIA reports and monitoring reports required by the EIA conclusion, studies by NGOs and government agencies; thus, it is necessary to consult the authorized body for designating RES acceleration areas with other possible stakeholders. Collecting and analyzing this information at the earliest possible stage reduces the chances of litigation in the future, as was the case with the construction of wind power plants within the Borzhava valley in the Eastern Carpathians.

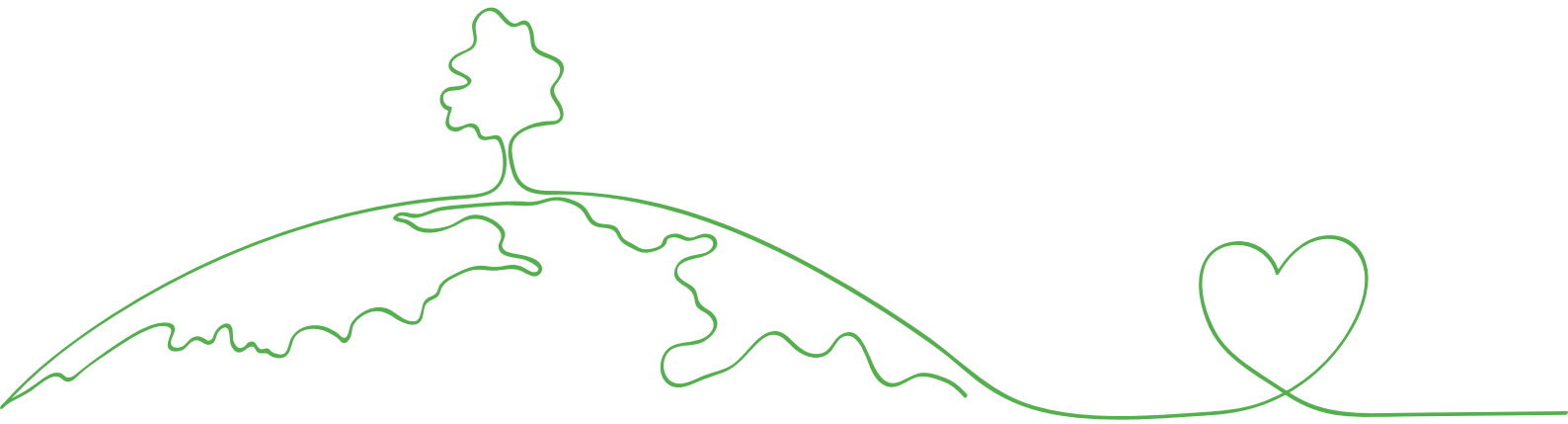
Taking into account all the studies, peculiarities of the territories and the information collected, the RES acceleration area plans should determine the conditions under which the negative impact associated with their realization will be minimized or avoided (the conditions should cover the entire project life cycle from construction to decommissioning). In addition to reducing the negative impact of the activity, this will help experts make decisions when assessing environmental impact in a shorter time, taking into account previous expert opinions. Moreover, a business entity may receive less work in preparing the EIA report and fewer proposals and comments from the public and stakeholders during public discussions, which will further reduce the time required to complete the procedure.

The analysis of the cumulative impact of the implementation of several technologies in the areas of RES acceleration or in existing facilities that have a negative impact on the environment is equally important, and apart from assessing the negative impact of the RES project, it is essential to take into account all the necessary infrastructure for its construction and operation. The specific conditions for mitigating the negative impact on the environment should be developed for such areas based on previous studies, technical characteristics of a certain type or specific types of generation and potential negative environmental impact.

The plans of the designated RES acceleration areas will have to undergo a strategic environmental assessment procedure in accordance with the Law of Ukraine “On Strategic Environmental Assessment,[42] which will allow to involve the interested or affected public and other parties at the earliest stages of planning, provide them with sufficient background information and proper consideration of their opinions, reduce the chances of conflicts in the future, and provide information on the interests of stakeholders for further consideration when preparing documents for potential business entities.

Stage 3. Reduction of time and simplification of preparation of documentation by a business entity for permits for planning, construction and commissioning of renewable energy facilities in the RES acceleration areas.

A business entity can reduce the time required to prepare materials by using previously conducted studies at the stage of spatial planning of land, inland water and marine areas. For example, these researches can be used in the preparation of an EIA report (such studies will only require verification of impact indicators during the implementation of the planned activity by fulfilling the conditions of post-project monitoring as required by the EIA conclusion on the admissibility of the planned activity) prior to submitting a notice of the planned activity subject to environmental impact assessment, which may further simplify the analysis and evaluation of materials by specialists of the authorized body. Post-project monitoring reports should be uploaded to the previously created database for further analysis and use of the experience gained when identifying the next RES acceleration areas.



Conclusions

REPowerEU is an ambitious EU plan created as a result of the Russian Federation's full-scale military invasion of Ukraine, and aimed at strengthening energy independence and achieving climate goals through the implementation of comprehensive measures, which include rapid reorientation of the energy sector towards renewable energy sources (increasing the share of RES in member states to 42.5% by 2030), energy saving and energy efficiency, simplification of administrative procedures and promotion of innovative technologies. The implementation of the plan contributes to reducing dependence on Russia's fossil fuels and developing a sustainable energy system capable of ensuring long-term environmental and economic stability.

European organizations note that while the REPowerEU program is an important step towards refusal from fossil fuels and accelerating the development of renewable energy sources, its implementation requires considering a number of critical factors. In particular, it is essential to ensure transparency and optimal spatial planning, avoid a return to fossil fuels as a «transitional phase» and integrate environmental priorities into all stages of the program.

Since the beginning of the full-scale invasion of the Russian Federation and the aggressive war against Ukraine, the energy infrastructure has been subjected to constant attacks and destruction for almost three years, and some of the power generation facilities are located on the occupied territories. Significant losses of the energy infrastructure require large-scale reconstruction, which may be a good chance for the transition of the industry to renewable energy sources. The implementation of the European initiative REPowerEU in Ukraine can result in a mutually beneficial partnership, economic competitiveness and make Ukraine an active participant in Europe's green transition. Derogations from the EIA that are provided for by the Concept Note of the Ministry of Environmental Protection and Natural Resources of Ukraine and the construction of new nuclear power units will distance our country from a sustainable energy system capable of ensuring long-term environmental and economic stability and will not be beneficial within the EU in the long term.

Mapping of areas suitable for the deployment of renewable energy projects with subsequent spatial planning, involving the identification of land, inland water and marine areas where the implementation of certain types of generation from renewable sources is not expected to have a significant impact on the environment, as well as the reduction of the timeframes and simplification of the preparation of materials for permitting documentation by a business entity can be started today. Consequently, during the reconstruction period, this will help restore the energy sector in accordance with the vector of its development in the EU.

Potential benefits associated with the realization of these steps are as follows:

- *faster increase in the share of renewable energy sources in energy generation;*
- *decarbonization of the energy sector;*
- *designation of renewables acceleration areas as one of the possible ways of developing RES without refusing from existing approaches;*

[42] The Law of Ukraine "On Strategic Environmental Assessment" [Online resource] – Retrieved from: https://zakon.rada.gov.ua/laws/show/2354-19#Text

- *the possibility to develop RES in other territories not included in the renewables acceleration areas;*
- *attraction of investments in the renewables acceleration areas;*
- *involvement of the public and other stakeholders at the earliest stages and due consideration of their opinions;*
- *greater predictability and speed of procedures for authorized bodies and business entities;*
- *possibility of forming industrial clusters with renewables acceleration areas;*
- *minimization of negative impact on the environment.*

Potential problems that will need to be addressed include the following:

- *Potential problems that will need to be addressed include the following:*
- *legislative and regulatory obstacles;*
- *insufficient number of investors;*
- *low institutional capacity of authorized bodies: limited human, financial and expert resources;*
- *unification of the approach to designating renewables acceleration areas at the local/regional levels;*
- *limited amount of environmental data and information necessary for assessing the sensitivity of territories.*

The RepowerEU initiative has significant potential, but its implementation in Ukraine requires a systematic approach. To minimize risks, it is necessary not only to harmonize legislation with EU directives, but also to strengthen control over environmental standards, ensure broad public participation, and create transparent monitoring mechanisms. The success of this initiative depends on how effectively Ukraine can combine the ambitious goals of the energy transition with the principles of sustainable development, transparency, and environmental safety.

Other Experts' Comments

The comment of Petro Testov, the head of the expert department of the NGO Ukrainian Nature Conservation Group

It is commonly believed that the EIA procedure is the key to determining the permissibility of RES construction. In fact, this procedure takes place at one of the last stages. Prior to this, a DLP may have already been developed, an SEA for the DLP may have been passed, land plots may have been allocated, and roads for preparatory work may have been laid. For a number of RES projects, there is no EIA procedure at all.

For some reason, everyone believes that the EIA procedure is key in determining the admissibility of building RES facilities. In fact, this procedure takes place at one of the last stages. Before that, the detailed land plan (DLP) may have already been developed, the SEA for the DPT has been completed, land plots have been allocated, and roads have been laid for preparatory work.

For a number of RES projects such as solar power plants, the EIA procedure is not required at all. However, the EIA procedure can be effective in cases where construction is permissible and make it more sustainable in terms of environmental conditions. For example, when a hydroelectric power plant is built on an existing dam, the EIA report may show that there is a need to make a fish pass and set the operating mode of the hydroelectric power plant in accordance with the characteristics of the spawning of local fish species.

However, there are cases when the construction of RES facilities is a priori harmful to biodiversity, and this cannot be corrected by any environmental conditions. Some examples include the construction of solar power plants in the steppes or on wet meadows (instead of construction on arable land), new dams for hydroelectric power plants, or wind farms on the high mountain ranges of the Carpathians.

Therefore, it is necessary to prevent the implementation of such projects at stages earlier than the EIA. It is explained by the fact that in the case of the EIA, on the one hand, we will have a clear contradiction with the Red Book and other environmental legislation, but on the other hand, significant resources in the form of time and money of business entities will be invested. Business will exert pressure on the authorities to make decisions, and the public will then go to court. There will be unnecessary conflicts. Therefore, to determine the territories where RES facilities can be built, it is necessary to first determine the no-go criteria from the point of view of biodiversity, and widely disseminate them among the authorities and potential investors.

The comment of Oksana Stankevych-Volosianchuk, PhD in Biology, Associate Professor of Uzhhorod National University, ecologist of the NGO «Ecosphere»

In my opinion, simplifying permitting procedures for the accelerated development of renewable energy in Ukraine is not currently a pressing issue. Firstly, in 2023, amendments were made to the Law of Ukraine "On Environmental Impact Assessment" that reduced the duration of the EIA procedure from 216 to 67 days, excluding the period of research. Secondly, at the moment, the EIA procedure is the only operating mechanism for assessing the impact of planned activities on the environment in Ukraine.

The SEA procedure is rather formal, and it is carried out mainly by non-specialists, and architects who develop a detailed plan of the territory. Thus, the reports on the SEO are

of extremely low quality and the state authorities do not pay attention to this. Therefore, in Ukraine, there are no mechanisms that would "cut off" projects that are known to be harmful to nature at the planning stage. Furthermore, it has to be mentioned fact that the business uses the EIA procedure itself as a "justification" for the need to implement the project, even if in the "Impact on Biodiversity" section the researchers clearly write that the activity will have a significant impact on valuable ecosystems and species that are under protection. In case RES construction projects are planned within the Emerald Network, EIA and SEA reports, together with road accidents, are subsequently challenged in court (for example, the construction of a wind farm on the Borzhava valley, construction of a cascade of 7 SHPPs on the Teresva River in the Zakarpattia region). Therefore, the cancellation of the EIA for RES in Ukraine will be a complete disaster for valuable natural areas.

At the same time, I believe that the implementation of RePowerEU in Ukraine can have positive consequences if it results in the identification and mapping of priority areas for the development of renewable energy. It is important to remember that achieving climate neutrality is a priori impossible without preserving natural areas, which are the main sinks of greenhouse gases and providers of climate ecosystem services[1]. This should be taken into account when selecting locations and territories for renewable energy development. Despite the fact that RES are put forward as the main public interest, priority should definitely be given to natural areas characterized by high biodiversity and landscape diversity: nature reserve fund (NRF) sites, elements of the national eco-network and Emerald Network sites, regardless of their status (adopted or proposed). These territories, even if they have high energy potential, should be excluded from renewable energy development plans without any discussion or doubt.

It is also essential to take into account the location of potential priority areas for energy development. The difficult access to the areas, close location of the objects of the NRF and the Emerald Network, as well as the lack of road infrastructure should significantly reduce the chances of such areas becoming priority for renewable energy development, and such territories should acquire such a status only after professional consultations with public involvement.

The plans to build 225 wind turbines with a total capacity of 1,167 MW in the highlands of the Ukrainian Carpathians by the company «Wind Parks of Ukraine» serve as a negative example of the accelerated construction of RES facilities. The most valuable high-altitude ranges, which have no analogues in Ukraine, (the mountain meadows of the mounts Krasna, Rivna, Liutianska Holytsia, Ostra, Apetska, Svydovets and Verkhovyna Watershed Ridge) have been chosen as the locations of these 7-8 wind farms. That is, we are talking about the loss of landscape diversity in a country where high-altitude landscapes occupy less than 1% of the territory. Moreover, these projects are planned on the territory of the Emerald Network objects, where forest and high-altitude biodiversity and habitats valuable for Ukraine and Europe are represented. All these ranges are covered with continuous protected forests and virgin forests up to the upper forest line. The roads to the mountain meadows (forestless areas of the subalpine belt) are absent in most cases. The construction of road infrastructure is only possible through these forests, which is a violation of the law. That is, these territories should not be considered promising for the development of any renewable energy sources at all.

Unfortunately, the high level of corruption in the government, law enforcement agencies, and judicial system of Ukraine contributes to such projects, demonstrating impunity for crimes against nature[2],[3] and it is another argument against the idea of

abolishing the EIA procedure for renewable energy projects in Ukraine.

Moreover, the construction of a wind farm in Nyzhni Vorota, Zakarpattia region, by the company «Wind Parks of Ukraine» demonstrates that, having found loopholes in the legislation, a business can easily do without the EIA. A business submits separate projects for the construction of a road to a wind farm and installation of concrete foundations for wind turbines, which do not require the EIA and environmental report (and this is, in fact, the construction stage in mountainous conditions that has the greatest negative impact on the environment) to the State Architecture and Urban Development Inspection of Ukraine. They are given construction permits, and by the time the EIA is completed, the wind turbine masts are already installed, and wind turbines and blades are mounted to them after receiving the environmental report. Therefore, the entire wind farm is built before receiving the environmental report. The business is 100% sure that this report will be given, no matter what the EIA conclusion is. The turbo mode of construction of RES is in effect. The EIA procedure has been leveled.

There is one more aspect that is worth paying attention to and raising for discussion. Of course, the unification of the Ukrainian energy system with the European one is an additional chance for the energy transition of both sides. Today, EU countries consider Ukraine as a promising territory for the development of renewable energy sources and achieving climate neutrality of the European continent. However, at the same time, we would not like Ukraine to become another raw material appendage for achieving someone else's lofty goals. This is exactly what the situation looks like today with the development of 1,167 MW of wind power capacity in the Carpathian highlands at the expense of especially valuable nature areas. According to the information of Hydrogen of Ukraine LLC, these capacities are part of the project «Hydrogen Valley Zakarpattia». Green hydrogen, obtained by destroying the especially valuable Ukrainian highlands, will be supplied to the Košice Steel Plant (Slovakia). At the same time, there are no

wind farms in Slovakia itself, in particular wind farms in the mountains. Slovakia is very careful about its mountain and highland landscapes, as a resource for the development of tourism, as well as for the preservation of biodiversity. The growth of the percentage of renewable energy in the structure of energy generation in Slovakia is currently very slow.

Environmentally harmful wind farm projects in the highlands of the Ukrainian Carpathians are financed by the state bank of Ukraine «Oschadbank». It is highly likely that they are financed by funds provided by European banks. Against the background of the EU Law on the Restoration of Nature, the destruction of Ukrainian nature for the sake of «green hydrogen» for export to the EU country looks like a double standard.

[1] Who will benefit from the conflict between wind energy and nature? / O. Stankevych-Volosianchuk – https://epravda.com.ua/experts/hto-vigraye-vid-konfliktu-mizh-vitroenergetikoyu-i-prirodoyu-800775/?fbclid=IwY2xjawHObeBleHRuA2FlbQIxMQABHVOuZhzszHH2m4m54wPyw8Q5OqvlE95b0UJTXVHMOL2eYwPn-tNzD5J0eQ_aem_NXBzGLujx_jYeyKz6Nnuag

[2] Uzhhorod foresters entered false information in documents to cut down trees in the nature reserve near the Runavalley (DOCUMENTS) / O. Mudra – https://zakarpattya.net.ua/News/233824-Uzhhorodski-lisivnyky-vnesly-u-dokumenty-nepravdyvu-informatsiiu-shch ob-vyrubaty-dereva-u-zakaznyku-pid-polonynoiu-Runoiu-DOKUMENTY?fbclid=IwY2xjawG6m3dleHRuA2FlbQIxMQABHfd5CiFwcYRdNRedlcWVHDI3cyJzeOTrfEdJobiVp2ipALjqA8vSjF_-2w_aem_8vHfCWwHk8_eb3POBOXaw

[3] How Kolesnik and Kovalchuk "tricked" the public and helped Efimov's Wind Parks avoid criminal liability and not pay 2 million in damages / O. Mudra - https://zakarpattya.net.ua/News/235362-IAk-Kolesnyk-i-Kovalchuk-obvely-navkolo-paltsia-hromadskist-i-dopomahaiut-Vitroparkam-lEfimova-unyknuty-kryminalnoi-vidpovidalnosti-i-ne-splatyty-2-mln-zbytkiv?fbclid=IwY2xjawG6lrxleHRuA2FlbQIxMAABHfqA6KDqVbTF7EV43Zcy7N3z6R5vclpCxwjN_-6eM5Y0KjeoZiXfV0LXOw_aem_ZWiwIOSAU86EdVSXXc2zxg