

**THE EVOLUTION AND THE PERSPECTIVES OF THE OFFSHORE PROJECT
“EX-30 TRIDENT” IN THE BLACK SEA**

Abstract:	<p><i>Considering the significant potential of offshore natural gas reserves in the Black Sea, which could become commercial exploitations in the coming years, the discussion on the growing development of offshore activities has turned into a key regional strategic issue. This factor is mostly motivated by its indisputable impact on Southeast Europe’s economy and energy security, but it is also influenced by the complexity of developments within the European energy market.</i></p> <p><i>In this regard, the Lukoil company, the concessionaire of the Trident offshore perimeter in the Black Sea, with estimated reserves of 30 billion m³, in 2023 received approval from the Romanian National Agency for Mineral Resources, regarding the continuation of the deposit exploration program until 2026. However, Lukoil has not commercially validated its natural gas reserves of the Trident perimeter in the Black Sea, and against the background of military developments in Ukraine and sanctions against Russia, which have directly affected Lukoil’s activity in EU member countries, the state of affairs remains uncertain.</i></p> <p><i>Moreover, in 2020, Lukoil put up its 87.8% stake in the Trident offshore project for sale. Based on these developments, the need to understand and research the perspectives of the Trident offshore project in the Black Sea is emerging. In addition, understanding and designing strategies for well-defined energy projects contributes to resilience in the face of crises, ensuring a balanced transition to sustainable and secure energy security.</i></p>
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Introduction

Energy security has become a central topic in international debates, having a direct impact on the economic, political and social stability of states around the world. In the current global context, characterized by increasing geopolitical tensions, climate change and an accelerated transition to renewable energy sources, the challenges in the field of energy security are more obvious than ever. One of the most significant aspects of energy security is the dependence of countries on fossil resources, especially oil and natural gas¹. Recent crises, such as the conflict in Ukraine, have revealed the vulnerabilities of European countries that rely on energy imports from Russia. This has led many states to reconsider strategies to diversify energy sources and look for alternatives to reduce dependence on traditional suppliers. At the same time, rising energy prices have put pressure on national economies, affecting both consumers and industries, which has raised concern for energy stability².

¹ Daniel Yergin, *The New Map: Energy, Climate, and the Clash of Nations*, Penguin Press, New York, 2020, p. 20

² *Ibidem*, p. 21

On the other hand, in the context of the energy transition, many states aim to reduce greenhouse gas emissions and implement transition policies towards green energy sources. This transition, while environmentally necessary, brings with it challenges related to infrastructure, technology and investment. Such rapid change can generate instability in energy markets, especially in regions that still depend on fossil fuels. Thus, energy security in the current international context proves to be a complex issue, influenced by geopolitical, economic, and ecological factors. The challenges are significant, but the opportunities for innovation and international cooperation are equally great. Strategic approaches aimed at diversifying energy sources, promoting energy efficiency, and investing in energy projects and renewable technologies are essential to ensure a stable and sustainable energy future¹.

Considering the significant potential of offshore gas reserves in the Black Sea, which could become commercial exploitations in the coming years, the discussion on the evolution of offshore activities has become a matter of regional strategic significance. This aspect is primarily driven by its undeniable effect on the economy and energy security of the Southeast Europe region, but also in the context of the complexity of changes within the European energy market. In the past decade, the consumption of natural gas has risen significantly, according to IEA data, which has led to the redevelopment of energy projects in the offshore sector of the Black Sea. In this context, Lukoil, the concessionaire of the Trident offshore perimeter in the Black Sea, with estimated reserves of 30 billion m³ of gas, in 2023 received approval from the National Agency for Mineral Resources of Romania, regarding the continuation of the exploration program for the deposits until 2026².

However, Lukoil hasn't commercially verified the natural gas reserves within the Black Sea's Trident perimeter. Given the backdrop of military actions in Ukraine and sanctions imposed on Russia, which had a direct impact on Lukoil's operations in EU member states, the situation is still unclear. Furthermore, Lukoil offered an 87.8% share in the Trident offshore project for sale in 2020. Therefore, it is necessary to examine the project's development and prospects.

Evolution of the Trident offshore project

Offshore natural gas energy projects have become increasingly important in the global energy landscape, contributing significantly to the energy security of countries and regions³.

In July 2010, Lukoil Overseas Atash B.V., together with the company Vanco International Ltd., were declared the winners of the exploration-development license for hydrocarbon deposits in the perimeters EX-29 Rapsodia and EX-30 Trident, located in the territorial waters of Romania in the Black Sea, following the X round of tender, organized by the National Agency for Mineral Resources of Romania in 2009. The initial participation shares of the concession holders were as follows:

- Lukoil Overseas Atash B.V. – 80%;
- Vanco International Ltd. – 20%⁴.

Thus, in February 2011, a consortium with the cooperation of Lukoil concluded the concession contract with the National Agency for Mineral Resources of Romania regarding the Rapsodia and Trident perimeter⁵. Lukoil Overseas, the subsidiary of Lukoil, which handles the Trident offshore project, opened an office in Bucharest in May 2011 to manage the project. The Trident perimeter in the Black Sea has an area of 1,006 km² and is located at about 170 km from the shore. The water depth within the Trident perimeter

¹ Jan Kalicki, David Goldwyn, *Energy and Security: Strategies for a World in Transition*, Johns Hopkins University Press, Baltimore, 2013, p. 42

² Energy Analytical Studies, *EX-30 Trident – Fact Sheet*, 25.04.2024, <https://energystudies.ro/ex-30-trident-fisa-descriptiva/> (27.10.2024)

³ Benjamin Sovacool, *Energy Security*, Vol. 4, Sage Publications, London, 2013, p. 344

⁴ Romgaz, *Approval of the increase of the participation share of SNGN Romgaz SA in the perimeter of exploration-development-production EX-30 Trident located in the Black Sea*, 31.01.2018, <https://www.romgaz.ro/sites/default/files/2024-05/Referat%20nr.%203492%20din%2031.01.2018%20pentru%20aprobarea%20creșterii%20.pdf> (27.10.2024)

⁵ Reuters, *Russia's LUKOIL clinches Romania Black Sea deal*, 24.02.2011, <https://www.reuters.com/article/business/-energy/russias-lukoil-clinches-romania-black-sea-deal-idUSWLB5105/> (27.10.2024)

fluctuates from 300 to 1.200 meters. According to seismic data, the area of the deposit can reach 39 km², and the reserves, to be confirmed by the evaluation drilling, can exceed the figure of 30 billion m³ of natural gas¹.

Since 2011, geological exploration works have been launched in the EX-30 Trident perimeter. The works were carried out by the company Lukoil Overseas, based on the Concession Agreement concluded with the Government of Romania. In the summer of 2012, Romgaz signed a Farm-Out Agreement (acquisition) with Lukoil Overseas Atash B.V. and Vanco International Ltd. (later PanAtlantic), becoming co-owner of the exploration operations in EX-29 Rhapsodia and EX-30 Trident perimeters, obtaining a 10% share of the rights and obligations of the two offshore perimeters. In 2018, following the withdrawal of PanAtlantic, Romgaz increased its participation share within the Trident perimeter. Currently, the participation share in the Concession Agreement is as follows: Romgaz - 12.2%, Lukoil - 87.8%². In the early years, Lukoil focused its efforts on geological exploration and assessing the potential of gas resources. This involved exploratory drilling and detailed geological analysis.

In 2012, Lukoil began exploration in the Trident offshore perimeter. For the first time in its corporate history, Lukoil initiated upstream activities on the territory of a member state of the European Union. The company has invested in advanced technologies to meet the challenges specific to offshore activities in the Black Sea, including drilling and environmental monitoring equipment³.

Following the drilling campaign, which took place in 2014-2015, three wells were drilled: one in block 29-Rhapsodia and two in block 30-Trident. The first exploration well, Lira-1X, in the Trident block discovered a gas-saturated range of 46 meters thick with a capacity of 30 billion m³. In 2016, following the unsatisfactory outcomes of exploration activities, Lukoil gave up the 20-Rhapsodia block concession, continuing the works only on the 30-Trident block⁴.

In 2017, a series of 3D seismic studies and analyses, electromagnetic surveys (EMS), as well as geochemical studies of the seabed were carried out within the Trident block. The main objective of these studies and analyses was to obtain confirmation that the gases from the Lira-1X exploration well extend over the entire area of the EX-30 Trident block. At the end of 2019, Lukoil drilled the third well within the EX-30 Trident block, the Trinity-1X well. The drilling works were carried out by the Italian company Saipem. Following the drilling of the well, several levels of natural gas-carrying formations were confirmed in the Trident perimeter. At the same time, both Lukoil and Romgaz noted that the well was a “geological success”, but did not confirm the exploitation forecasts of the deposit⁵. At certain stages, Lukoil had to initiate pilot projects to test the viability of extraction technologies and methods in the Trident perimeter.

Considering the interdependence between energy (in this case natural gas) and political processes at an international level, the Trident project in its evolution has faced various challenges, including geopolitical instability in the region and fluctuations in energy prices, which have influenced investment decisions. In 2021, the management of Lukoil, at the Saint Petersburg International Economic Forum (SPIEF), stated that it is considering the possibility of supplying gas from the Trident project⁶. However, in 2023, NAMR approved Lukoil to continue the exploration program in the Trident perimeter until 2026, so the exploitation and subsequent supply of natural gas remains in question.

¹ Lukoil, *Project in Romania*, 20.10.2011, <https://www.lukoil.com/InvestorAndShareholderCenter/RegulatoryDisclosure/-ArchiveRegulatoryDisclosure2011/20102011ReProjectinRomania> (27.10.2024)

² Romgaz, *Approval of the increase of the participation share of SNGN Romgaz SA in the perimeter of exploration-development-production EX-30 Trident located in the Black Sea*, 31.01.2018, <https://www.romgaz.ro/sites/default/files/2024-05/Referat%20nr.%203492%20din%2031.01.2018%20pentru%20aprobarea%20creșterii%20.pdf> (27.10.2024)

³ Renergy, *Energy Analytical Studies Analysis: Prospects of the offshore project EX-30 Trident in the Black Sea*, 20.05.2024, <https://renergy.md/analiza-energy-analytical-studies-perspectivale-proiectului-offshore-ex-30-trident-din-marea-neagra/> (27.10.2024)

⁴ Economica, *Lukoil and Romgaz have given up the Rhapsody oil perimeter in the Black Sea. No gas or oil found*, https://www.economica.net/lukoil-si-romgaz-au-renuntat-la-perimetrul-petrolier-rhapsodia-din-marea-neagra-nu-au-gasit-gaz-s-au-petrol_114846.html (27.10.2024)

⁵ Energy Analytical Studies, *EX-30 Trident – Fact Sheet*, 25.04.2024, <https://energystudies.ro/ex-30-trident-fisa-descriptiva/> (27.10.2024)

⁶ Tomas Vlcek, Martin Jirusek, *Russian Oil Enterprises in Europe. Investments and Regional Influence*, Palgrave Macmillan, London, 2020, pp. 159-160

At the same time, according to the financial reports of 2020 and 2021 (last updated by Lukoil), Romania is included in the category of states where Lukoil participates in exploration and production operations. Lukoil noted in its 2020 and 2021 financial reports that in 2019 exploration wells in the Trident perimeter were financed at 5.8 billion RUB. In its 2021 financial report, Lukoil mentions that in 2020 it had funding for its international exploration and production assets amounting to 38 billion RUB, of which 36 billion RUB were related to projects in Uzbekistan, and the other 2 billion RUB to projects in the EU, in particular Romania and Bulgaria¹. At the same time, we can see that Lukoil is a discreet company in terms of publishing data on its upstream activities in the offshore sector of the Black Sea. Thus, we note that the data presented represents the analysis of the financial status and results of Lukoil's operations noted in its last financial reports for 2020 and 2021.

In 2020, Lukoil, due to negative results of the exploration of additional wells and in the geopolitical context of Ukraine, announced its intention to exit the Black Sea offshore project by selling the Trident concession. Nevertheless, Lukoil has not been successful in finding buyers so far. The Romanian National Agency for Mineral Resources believes that Lukoil will continue to explore the Trident offshore perimeter until 2026, taking on the associated economic risks².

In 2024, works were carried out to prepare the drilling of wells in the Lira 2A deposit of the Trident offshore perimeter and tenders were held to purchase drilling works, after which in April 2024 NAMR approved the participation of the partners of the association in Stage II of the optional evaluation phase³. Thus, the Trident project continues to evolve, but specific details about recent advances and possible natural gas discoveries vary. Lukoil continues to show interest in exploring natural resources in the Black Sea, but in a cautious form. Looking ahead, the Lira-1X well in the Trident perimeter has a production capacity of 1 – 1.5 billion m³ of gas/year.

Prospects of the Trident offshore project

Oil and gas companies in the background of the energy transition wave have experienced a more difficult period. Government regulations and environmental policy favor companies that adopt sustainable practices. Investors are becoming increasingly concerned about the social and environmental impact of energy companies, leading oil and gas companies to adapt to attract capital⁴. Thus, Lukoil tries to streamline its processes and dispose of unprofitable assets by analyzing the costs and risks related to the development of offshore projects. As an additional restraint in this equation for Lukoil, there are also economic sanctions against Russia, adopted because of the conflict in Ukraine.

The prospects for the development of the Trident offshore project by Lukoil from our perspective are limited to the following working assumptions. Lukoil's interest in Romania's offshore sector is logical, as the company has an oil refinery (Petrotel) and a network of associated gas stations. The refinery has significant processing capacity, contributing to the production of fuels, lubricants, and other petroleum products. Therefore, the development of the Trident project would strengthen Lukoil's position in the regional energy market. Lukoil's interest in Romania is manifested through a combination of commercial strategies and investments. The company seeks to improve refining technologies and implement new sustainable gas solutions, thus responding to growing environmental requirements. In addition, Lukoil aims to expand its presence in the regional market, given the constant demand for petroleum products in Southeast Europe⁵.

Against the background of the global energy transition, Lukoil is in a complex position. Although the company continues to focus on traditional extraction and refining activities, it is also investing in emerging technologies, including natural gas (the energy transition fuel), which allows it to adapt to changes in the regional energy landscape.

¹ Lukoil, *Financial Results*, <https://www.lukoil.com/InvestorAndShareholderCenter/FinancialReports> (27.10.2024)

² Matei Ionescu, *Lukoil has not commercially validated its gas reserves in the Trident Perimeter in the Black Sea and extends until 2026 the additional exploration campaign*, "Economedia", January 16, 2023, <https://economedia.ro/lukoil-nu-si-a-validat-comercial-rezervele-de-gaze-pe-care-le-are-in-perimetrul-trident-din-marea-neagra-si-lungeste-pana-in-2026-campania-de-explorare-suplimentara.html> (27.10.2024)

³ Profit, *Romgaz continues its association with Lukoil in the Black Sea*, 21.08.2024, <https://www.profit.ro/povesti-cu-profit/energie/romgaz-continua-asocierea-cu-lukoil-in-marea-neagra-21707282> (27.10.2024)

⁴ David Infield, Leon Freris, *Renewable Energy in Power Systems*, John Wiley&Sons, New Jersey, 2020, pp. 21-22

⁵ Rozali Plieva (Akhrieva), *Strategii rossiykiy kompaniy na vneshnikh rynkakh*, Dashkov – K, Moskva, 2020, p. 63

Lukoil will continue the exploration program of the EX-30 Trident perimeter in the Black Sea until 2026 because like any other concessionaire in the offshore sector on the Black Sea, the company will have to periodically present a program of works and geological analyses in the Trident perimeter. Lukoil's commitment to continue the exploration program until 2026 may also reflect a favorable climate in terms of regulations and policies in Romania, which can support investments in the energy sector. Investments in exploration are often long-term. Future profits from the explorations could be anticipated by the company, which would support the program's continuation

At the same time, in addition to the favorable economic and strategic reasons, we can also mention some risks associated with the exploration of the Trident perimeter. In the context of the objective of Romania's accession to the OECD (estimating 2026¹) and the OECD recommendations to no longer concede new natural gas exploration perimeters, for climate reasons, Trident exploration is subject to uncertain variables regarding the prospect of developing a final investment decision or marketing the project in the future². Also, against the background of military operations in Ukraine and economic sanctions on Russia, Lukoil is subject to economic difficulties in the EU market³. Thus, Lukoil put up for sale the concession in the Trident perimeter. Possible buyers can be Romgaz (project partner of Trident) or KMG (strategic partner of Lukoil).

Lukoil's investments in exploration and offshore gas development and production potential are expected to generate a positive impact on the company's economy. In addition, because natural gas is considered as a source of energy transition, according to the EU opinion⁴, the Trident project can contribute to the achievement of the climate objectives of the states in the region, and Lukoil can recover its investments from the project. In this regard, the *win-to-win* strategy can be applied. At the same time, the OECD recommendations, to which Romania has set itself the goal to adhere in 2026, regarding the non-exploration of new natural gas deposits, due to climate objectives, must be regarded by Lukoil as a last chance for the final development of the Trident offshore project and the marketing of natural gas reserves. Thus, OECD recommendations to Romania on the exploration of new natural gas deposits contribute to catalyzing decisions on the EX-30 Trident offshore project.

Offshore projects in the Black Sea represent a significant opportunity for the economic development of the region, having a considerable impact on energy security and diversification of energy sources. At the same time, the prospects for offshore projects in the Black Sea are influenced by European regulations and energy transition objectives, and the Trident project is no exception. The European Union aims to reduce carbon emissions and promote renewable energy sources, which could influence the future of traditional hydrocarbon extraction projects. However, in the current context, where energy prices are volatile and the need for secure energy resources is critical, many countries in the region believe that the development of offshore deposits remains essential.

A balanced approach, combining sustainable development with immediate energy needs, will be essential to fully harness the potential of the Trident offshore project in its operation. Another crucial aspect of the future of the project is the commitment to sustainable practices, but also the overcoming of geopolitical instability in the region. If these conditions are met, the Trident project could turn the Black Sea into a significant source of energy for the region alongside the Neptun Deep project⁵, contributing to economic development and long-term energy security.

¹ Libertatea, *Romania aims to join the OECD in 2026, says the Government. What is the Organization for Economic Co-operation and Development*, 04.08.2024, <https://www.libertatea.ro/stiri/romania-obiectiv-aderarea-ocde-oecd-2026-ce-este-ocde-oecd-4977373> (28.10.2024)

² OECD, *Economic Surveys Romania*, March 2024, p. 107, https://www.oecd.org/en/publications/oecd-economic-surveys-romania-2024_106b32c4-en.html (11.11.2024)

³ Daniel Yergin, *The New Map: Energy, Climate, and the Clash of Nations*, Penguin Press, New York, 2020, p. 20

⁴ European Parliament, *Energy transition in the EU*, [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754623/EPRS_BRI\(2023\)754623_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754623/EPRS_BRI(2023)754623_EN.pdf) (28.10.2024)

⁵ Mihai Melinte, *The Neptun Deep Project and the Redesign of the Regional Energy Security*, "Studia Securitatis", Vol. 17, No. 2, Sibiu, 2023, p. 182

Impact of the Trident offshore project on regional energy security

Energy security is the ability of a state or a region to ensure constant, reliable and sustainable access to the energy resources necessary to support economic development and the welfare of the state. This involves not only the availability of resources, but also the diversification of energy sources, the appropriate infrastructure, price stability and protection against external threats¹.

Key aspects of energy security can be noted as follows:

- Diversification of sources: dependence on a single supplier or on one type of energy (e.g. natural gas or oil) can create vulnerabilities. States are encouraged to develop alternative sources, including renewable energy, nuclear energy or fossil fuels from various sources of supply.
- Infrastructure: A robust infrastructure including pipelines, power grids and import terminals is essential to ensure continuous energy flows. Investments in upgrading and expanding this infrastructure are crucial to prevent disruptions and ensure energy security.
- Geopolitical stability: Conflicts or political instability in the region can affect supply. Thus, energy security also depends on international relations and cooperation between states.
- Sustainability: in the context of climate change, energy security must also include the transition to cleaner energy sources. Promoting renewable energy, energy efficiency and reducing carbon emissions become key priorities.
- Energy prices: price stability is another important aspect of energy security. Sudden price fluctuations can affect economies, and countries need to develop strategies to deal with these variations².

As a result of the above, we can emphasize that energy security is a multidimensional field that requires an integrated approach, with collaboration between government, the private sector and civil society. By promoting diversification, upgrading infrastructure and transitioning to sustainable energy sources, states can ensure a stable and resilient energy future, able to meet economic and environmental challenges.

Concerning energy security in Southeast Europe, particularly in the Black Sea basin, this is an issue of increasing importance, given the region's geostrategy and the significant energy resources available. This area is crucial not only for the states around it, but also for Europe, considering the increased need for diversification of energy sources. In recent years, the Black Sea has become a focal point for the exploration and exploitation of natural gas. Recent gas discoveries in perimeters such as those in the Romanian area (Neptun Deep, Trident) and those off the Turkish coast (Sakarya) have attracted the attention of investors and international energy companies. These resources can help reduce the European Union's dependence on imported gas and support the transition to cleaner energy sources.

At the same time, energy security in Southeast Europe is threatened by geopolitical tensions in the region. The conflict between Russia and Ukraine, as well as the energy policies of the countries in the region on the transit of gas through Ukraine, affect regional energy stability³. Thus, Southeast European states must work together to develop the necessary infrastructure, such as pipelines and gas terminals, and form regional alliances that ensure constant and secure access to energy resources, such as the Vertical Gas Corridor⁴.

With Black Sea gas, Southeast Europe has the potential to emerge as a local center in the gas market, playing a key role in European energy stability. By exploiting Black Sea gas, Southeast European countries can offer a viable alternative to traditional gas sources⁵. It contributes to the diversification of the European gas market and to the improvement of the energy security of the entire region⁶. In this respect, investments in offshore gas exploration, development and production in energy projects such as EX-30 Trident generate a significant impact on energy security. Here are some working assumptions for which this potential of the Trident offshore project is promising:

¹ Daniel Yergin, *The New Map: Energy, Climate, and the Clash of Nations*, Penguin Press, New-York, 2020, p. 20

² Carlos Pascual, Jonathan Elkind, *Energy Security. Economics, Politics, Strategies, and Implications*, Brookings Institution Press, Washington D. C., 2010, pp. 51-52

³ Energy Analytical Studies, *Perspectives of gas transit through Ukraine*, 31.05.2024, <https://energystudies.ro/perspectivele-tranzitului-de-gaze-prin-ucraina/> (29.10.2024)

⁴ CE Energy News, *New phase of the Vertical Corridor initiative to begin in July 2024*, 27.05.2024, <https://ceenergynews.com/oil-gas/new-phase-of-the-vertical-corridor-initiative-to-begin-in-july-2024/> (29.10.2024)

⁵ Rozali Plieva (Akhrieva), *Strategii rossiysskiy kompaniy na vneshnikh rynkakh*, Dashkov – K, Moskva, 2020, p. 63

⁶ George Scutaru, *Black Sea's offshore energy potential and its strategic role at a regional and continental level*, "New Strategy Center", KAS, Bucharest, p. 9

- The Trident project can contribute to strengthening Romania's economic security, catalyzing the development of related economic branches (direct and indirect cumulative economic impact);
- The advancement of the Trident offshore project can contribute to the development of the region's energy-critical infrastructure as well as energy technical know-how.
- Developing a new stage in Romania's energy sector and industrial redevelopment by opening gas plants within national energy complexes (e.g. Mintia);
- With the exploration of natural gas from the Trident perimeter, they can be used for the development of renewable energy projects in the region (taking into account that natural gas is considered the fuel of energy transition);
- Trident has strong potential, fostering the development of the natural gas business environment at regional level. At the same time, the project can strengthen Lukoil's presence in the EU energy market.

Although there are several optimistic and valuable variables regarding the development of the Trident project, Lukoil has started to revise its energy strategy. In the context of geopolitical developments in the region and in response to European sanctions and other political decisions regarding its energy operations in the European Union, the company has changed its investment policies at the European level since 2023. Military tensions between Russia and Ukraine demonstrate that energy is a fundamental part of the system of international relations and new geopolitical ties¹. Antagonism between Gazprom and Naftogaz is felt in Europe's energy markets, and Lukoil's investments and energy projects are no exception to this antagonism. As an example, the ISAB refinery in Sicily was sold by Lukoil to G.O.I. ENERGY², and the Rosenets port terminal in Bulgaria was transferred under state control³, the concession to Lukoil being terminated due to sanctions⁴.

In the background of military operations in Ukraine, Lukoil, as well as other Russian oil and gas companies, began to bear problems with its assets in Europe (see also the example of Gazprom in Germany⁵). Because of these significant changes in the operating conditions of its subsidiaries, Lukoil began to project new visions regarding its energy activities. In this respect, the Trident offshore project in the Black Sea is also targeted. Regarding Lukoil's oil operations in Romania, according to Kpler⁶ (the global platform for commercial intelligence), now through the Caspian Pipeline Consortium (CPC) pipeline, Lukoil provides only part of the raw material needed for the Petrotel refinery in Ploiesti, the rest being provided through alternative sources. The refining capacity of the Petrotel refinery is 2.7 million tons per year, with a share of the Romanian oil market of 8-10%⁷. In the summer of 2023, Lukoil stated that "EU economic sanctions do not impose restrictions on the conduct of the company's activity under optimal conditions in Romania, but future developments and how any future restrictions may or may not influence the continuation of the company's activity in its energy projects cannot be anticipated. Now, Lukoil has not declared the sale of those 30-32 billion m³ of natural gas in the EX-30 Trident perimeter. The Company will continue the field exploration program until 2026 with a minimum program of work. This reveals 2 hypotheses, either Lukoil wants to maintain a latent strategic position in the offshore Black Sea area, or Lukoil is looking for buyers for its assets in the Trident perimeter. At the same time, in 2024, Lukoil's total investments in field exploration are planned at the level of 47 billion RUB⁸. Although the company is not discreet in its reports on the projects where

¹ Daniel Yergin, *The New Map: Energy, Climate, and the Clash of Nations*, Penguin Press, New York, 2020, p. 20

² Financial Intelligence, *Lukoil sells Sicilian Refinery to G.O.I. ENERGY and Trafigura*, 09.01.2023, <https://financialintelligence.ro/lukoil-vinde-rafinaria-din-sicilia-catre-g-o-i-energy-si-trafigura/> (29.10.2024)

³ Offshore Technology, *Bulgarian Parliament Votes to end Lukoil's Concession to Operate Rosenets Oil Terminal*, 24.07.2023, <https://www.offshore-technology.com/news/lukoil-rosenets-oil-terminal/> (19.10.2024)

⁴ Boyko Nitzov, *Can Bulgaria Survive Without Russian Oil*, Working Paper, Center for The Study of Democracy, Sofia, 2022, p. 6

⁵ Reuters, *German Regulator Takes over Gazprom Germany to Ensure Energy Supply*, 04.04.2022, <https://www.reuters.com/business/energy/german-regulator-takes-over-gazprom-germania-ensure-energy-supply-2022-04-04/> (29.10.2024)

⁶ Kpler, *Company*, <https://www.kpler.com> (30.10.2024)

⁷ Eugenia Gusilov, *Key Romanian Refineries*, "COER", Issue Brief, February 2021, p. 7

⁸ Interfax, *"LUKOIL" v 2024 godu uvelichit investitsii v geologorazvedku na 30%*, 04.04.2024, <https://www.interfax.ru/business/954092> (30.10.2024)

exploration investments will be made, we can deduce the possible assumption that the Trident project will see an additional investment in exploration.

At the same time, as the activity of Lukoil is based to a full extent on activities of exploration, exploitation, and refining of oil, gas, or petrochemical-related products, the significant change in their prices worldwide, including CO₂ certificates (against the background of the energy transition), could significantly affect the cash flows and the fair value of the company's assets, including access to financing sources. These issues indicate that there is significant uncertainty that could significantly cast doubt on the entity's ability to continue operating in certain energy projects¹.

Currently, as previously noted, Lukoil is in the exploration phase of the EX-30 Trident perimeter. The extension of the exploration period until 2026 envisages the execution of additional reprocessing works, complex analyses, and the integration of geological and geophysical data available in the Trident offshore perimeter, to assess the potential of the discovery made and to identify possible natural gas expansions in the perimeter. Also, the extension of the exploration period allows Lukoil to outline new prospects (execution-results). This will lead to a reduction of the risks associated with the future drilling program in the Trident offshore project, as well as its exploitation.

Conclusions

Currently, about 1-2 out of 10 m³ of gas produced in Romania comes from onshore resources, the gap from the offshore perimeter is filled by onshore production. Further development of the EX-30 Trident project can increase offshore production with a perspective of 1-1.5 billion m³ of gas/year. Thus, the Trident project has strong potential, advancing the business environment in the natural gas sector and strengthening the presence of Lukoil in the energy market of the European Union, with the risks related to the European sanctions applied to Russia and Russian companies. At the same time, the OECD recommendations, to which Romania aims to adhere in 2026, regarding the non-exploration of new natural gas deposits, can be seen as a last chance for the development of the Trident offshore project and the marketing of natural gas reserves.

The importance of offshore gas from the Trident project for Romania is significant from several points of view.

- Energy Security: the exploitation of gas from the Trident project can contribute to increasing Romania's energy security;
- Economic Development: the natural gas extraction project can generate jobs and stimulate regional economic development, contributing to the growth of Romania's GDP;
- Investment attraction: providing a favorable framework for investments in the energy sector can attract foreign capital, which could lead to the modernization of Romania's energy infrastructure;
- Diversification of the Energy Source: Black Sea gas, in this case from the Trident project, can contribute to the diversification of Romania's energy mix, helping to better integrate into the European energy market;
- Environmental impact: it is also important to take into account the environmental impact of offshore gas exploitation, ensuring that environmental standards are respected and that negative impacts are minimized;
- Regional Collaboration: The Trident offshore project can facilitate cooperation with other countries in the region, helping to establish regional energy partnerships.

The EX-30 Trident offshore project represents a significant opportunity for Romania's development, in the context of Black Sea gas exploitation, together with the Neptun Deep project.

With the potential to contribute to energy security, and boost the local economy and industry, this project could have a positive impact on energy infrastructure. In conclusion, the offshore gas in the Black Sea, in this case, the EX-30 Trident project, represents an opportunity for Romania, but it is essential to manage it responsibly (considering Lukoil's participation in this project) and follow the principles of sustainable development.

¹ Profit, *Fate of Lukoil in Romania: all roads lead to Kazakhstan*, 12.01.2023, <https://www.profit.ro/povesti-cu-profit/energie/soarta-lukoil-in-romania-toate-drumurile-duc-in-kazahstan-20978393> (30.10.2024)

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