Vol. 7, No. 2, 2021



УДК 327.35.82

https://doi.org/10.23939/shv2021.02.001

РОЛЬ НАТО У ГАРАНТУВАННІ ЕНЕРГЕТИЧНОЇ БЕЗПЕКИ ЗА УМОВ ЗМІН ГЛОБАЛЬНОГО ЕНЕРГЕТИЧНОГО ЛАНДШАФТУ

Ярина Турчин

Національний університет "Львівська політехніка" Researcher ID R-1932-2017 Author ID: 57192268948 turchynj@ukr.net

Ольга Івасечко

Національний університет "Львівський політехніка" ORCID: 0000-0003-2141-3309 ivasechko.2011@ukr.net

(надіслано – 12.05.2021, прийнято до друку 28.09.2021)

© Турчин Я., Івасечко О., 2021

Визначено ключові проблеми на шляху гарантування енергетичної безпеки та роль НАТО у їх вирішенні. Висвітлено позицію Альянсу в енергетичному питанні. Проаналізовано документи самітів НАТО в Бухаресті від 2008 р., Чикаго від 2012 р., та Стратегічну Концепцію НАТО від 2010 р. З'ясовано, що Альянс розподілив свою роль у вирішенні енергетичних проблем на три сфери, як-от: підвищення рівня обізнаності; захист критичної енергетичної інфраструктури; поглиблення енергоефективності у військових. Досліджено роль Центрів передового досвіду, їхню спеціалізацію, а також цілі. Акцентовано увагу на деструктивному впливі гібридних війн на енергетичну безпеку. Висвітлено дії РФ щодо погіршення енергетичної безпеки за допомогою кібератак, задля послаблення ролі та оборонних дій НАТО. Зазначено, що перспективним напрямом з метою забезпечення енергетичної безпеки Альянсу є співпраця з Україною. Репрезентовано ключові завдання, які стоять перед Україною для стабільності її енергетичної системи. Зроблено висновок про те, що діяльність НАТО посідає важливе місце в захисті енергетичної безпеки, адже Альянсу вдалося чітко визначити напрямки своєї діяльності в цій сфері.

Ключові слова: НАТО, енергетична безпека, Центри передового досвіду, гібридна війна, кібератака, Російська Федерація.

NATO'S ROLE INENSURING ENERGY SECURITY IN THE CONDITIONS OF CHANGES IN THE GLOBAL ENERGY LANDSCAPE

Yaryna Turchyn

Lviv Polytechnic National University Researcher ID R-1932-2017 Author ID: 57192268948 turchynj@ukr.net

Olha Ivasechko

Lviv Polytechnic National University ORCID ID 0000-0003-2141-3309 ivasechko.2011@ukr.net

(Received - 12.05.2021, accepted - 28.09.2021)

The article identifies key problems on the path of energy security and the role of NATO in solving them. The Alliance's position on the energy issue has been determined. The documents of the NATO summits in Bucharest in 2008, in Chicago in 2012, and the NATO 2010 Strategic Concept have been analyzed. It turned out that the Alliance has divided its

role into three areas: raising awareness; protecting critical energy infrastructure and deepening energy efficiency in the military. The role of Centers of Excellence, their specialization, and goals have been investigated. The impact of hybrid wars on energy security has been also considered. The actions of the Russian Federation to deteriorate energy security through cyberattacks in order to weaken the role and defensive actions of NATO have been highlighted. It is noted that cooperation with Ukraine is a promising direction for ensuring the energy security of the Alliance. The key tasks that Ukraine faces for the stability of its energy system have been identified. It is concluded that the work of NATO occupies an important place in protecting energy security, because the Alliance managed to clearly define the directions of its activities in this area.

Key words: NATO, energy security, Centers of Excellence, hybrid warfare, cyberattack, Russian Federation.

Introduction

In conditions of the changing nature of world development and global change, energy is a vital part of the modern economy, because it directly or indirectly affects all areas of human activity and is an integral part of the development of any country. Threats and challenges to energy security are dynamic, interconnected and can vary depending on domestic, regional and global conditions. Thus, the issue of energy security today is perceived not only in the national dimension, but also in the Euro-Atlantic and transnational dimensions.

The use of energy power as a weapon and lever of influence, terrorist attacks on important objects of energy infrastructure, the rise of cybercrime in the energy sector, the problem of energy efficiency in military operations have forced NATO to add energy security to its organizational program. Although the activities of the political organization, mostly of a military nature, in the field of energy are a precedent in international politics, however the North Atlantic Alliance has many achievements due to its relatively short but successful activity in this field.

However, the question of NATO's role in the field of energy security remains open, and in a changing international environment it does not lose its relevance. For Ukraine, as a country that gained NATO Enhanced Opportunity Partner status in 2020 and full membership in this Organization is a priority enshrined in the Constitution, cooperation with the North Atlantic Alliance to ensure energy security is of particular importance. Energy wars of the Russian Federation with Ukraine in 2006 and 2009, hybrid threats and actions by official Moscow on energy infrastructure objects (including the construction of the Nord Stream-2 main pipeline) and other Member States of the Alliance only actualize the research.

The authors analyze the genesis of NATO's role in energy security in the conditions of a changing global energy landscape.

The Proceedings of the NATO Summit in Bucharest in 2008 have been used to write the article [Bucharest Summit Declaration Issued by the Heads of

State and Government participating in the meeting of the North Atlantic Council in Bucharest 2008]. The reports of NATO and the European Union, which determine the strategic interests of their Member States in protecting the energy system, have been also analyzed [Energy security: A state side view - NATO Review 2007]. In order to understand the national system of energy security, works of Ukrainian researcher Barannik have been considered, in particular, the work "National Security: essence, features, concept and geopolitical factors" [Barannik 2017]. Foreign researchers Monaghan (2006), Grubliauskas (2018) and Lunyte (2014) accentuate NATO's role in energy protection, emphasizing the provisions adopted in the strategies and the summit declarations. Grubliauskas (2014) also provided a detailed analysis of energy security. In addition, the focus is on the materials published on the Alliance's website on energy security and the organization's prospects in this area [NATO's role in energy security 2020]. A separate group of sources, which includes periodicals of NATO and the Centre of Excellence on Energy Security, namely publications of "Energy Security": "NATO Review", have been considered Grubliauskas (2014, 2018), (Lyndon 2016), and in publication under title "Energy security: A state side view - NATO Review" (2007). However, as of today, there is virtually no comprehensive research in domestic political science on NATO's role in addressing energy security issues.

The first formal statement on the topicality of energy security was made in NATO's Strategic Concept in 1999, which states that "Alliance security interests may depend on other risks of a wider nature, for example, those involving disruptions of the flow of vital resources" [The Alliance's Strategic Concept Approved by the Heads of State and Government participating in the meeting of the North Atlantic Council in Washington 1999]. It is important to note that NATO's role in energy security is a concept that has entered scientific discourse since the 2006 Riga Summit.

At the Bucharest Summit in 2008, Member States of the Alliance presented a report on "NATO's role in energy security", which set out guidelines, outlined options and recommendations for further measures of the

Alliance? There with, the summit stated that NATO's efforts "will add value and be fully coordinated and in line with the goals of the international community, including cooperation with a number of organizations specializing in energy security", "exchange" and "support" are key terms [Bucharest Summit Declaration Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Bucharest 2008].

Energy security as a strategic direction of NATO's activities

The issue of ensuring energy security was also enshrined in NATO's 2010 Strategic Concept [Strategic Concept for the Defense and Security of The Members of the North Atlantic Treaty Organization 2010]. NATO is not just a military alliance; it also has a clear political security agenda, which was emphasized in the 2010 Strategic Concept. A stable and safe energy supply is important for the national security of Allies and is therefore of interest to NATO. The Alliance is a value organization where freedom and democracy are among its core principles. If energy dependence and vulnerability can affect the Alliance's freedom of decision-making, they cannot be ignored [Strategic Concept for the Defense and Security of The Members of the North Atlantic Treaty Organization 2010]. Although the North Atlantic Alliance is not an energy institution, energy security is part of the interests of Member States. That is why strategic awareness of global and regional energy development is part of NATO's energy security agenda in terms of ensuring energy security. The process of political consultation, supported by joint intelligence, helps to create a confidential environment by Member States of Alliance, where energy transformations are discussed, the conclusions of which affect their security in the broadest sense.

At the Chicago Summit in 2012, leaders of NATO Member States decided to integrate energy security considerations additionally into NATO policy, further develop the partnership, significantly increase the energy efficiency of the military and establish the NATO Energy Security Centre of Excellence [Lunyte 2014].

The seminar of the North Atlantic Council on Global Energy Development, which took place in January 2014, was an important milestone in this direction. With the support of external experts, this informal gathering provoked a lively discussion on the consequences for the change of energy landscape in the security sector. As the Alliance is not an energy institution, it often takes into account expert

advice provided by other international organizations, such as the International Energy Agency and various scientific institutions [Monaghan 2006]. It is important to emphasize that in order to ensure energy security; NATO's role is divided into three so-called trajectories: raising awareness; protection of critical energy infrastructure; deepening energy efficiency in the military. In our opinion, the approach of the North Atlantic Alliance to "smart energy", which is aimed at improving energy efficiency in the army, is interesting. In addition, progress has been made as energy issues have been included in the NATO Defense Planning Process as a prerequisite for setting standards of interaction [Grubliauskas 2018].

It is also worth noting that there is no common position among NATO Member States on addressing energy security issues. One of the key reasons for this caution is the divergence of national interests. Traditionally, energy security is one of the "sensitive" national and economic issues, so the vast majority of countries do not seek to raise this issue at summits and meetings. Despite the European Commission's efforts to develop a promising energy policy, Member States continue to conclude individual agreements with energy suppliers [Energy security: A state side view – NATO Review 2007].

It is advisable to mention the hybrid wars, the use of which is growing every year. Russia has a special place in this issue, as it applies a number of hybrid threats to energy assets, policies and energy supply of Member States of the Alliance and Partner countries. Official Moscow is using political and economic leverage in conjunction with disinformation campaigns against Bulgaria and Romania in order to undermine their efforts to reduce dependence on Russian energy sources. Russian-backed cyberattacks on energy facilities have been detected in other NATO countries, such as Poland, Turkey, Britain and the United States [Dupuy, Nussbaum, Butrimas, Granitsas 2021]. The Russian Federation consistently uses energy security as an integral part of its foreign policy, and the case with Ukraine demonstrates that energy is a part of Russia's hybrid war arsenal.

The Russian side is considering the western flank and has a long-term strategy for this large area, where it seeks to restore its own dominance, limit NATO's presence here, and use the Baltic and Black Seas to strengthen its presence, implement hostilities and plans in the South-East and Central Europe, the Eastern Mediterranean, the Caucasus, the Middle East and the Balkans. This could cause weakening of NATO's energy security actions. The Russian Federation also

aims to strengthen its armed forces through a corridor between the Caspian, Azov, Black and Adriatic Seas, which is of some concern to the Alliance [One Flank, One Threat, One Presence. Astrategy for NATO's Easternflank 2020].

In November 2019, NATO Member States agreed on a series of recommendations to consolidate the Alliance's role in ensuring energy security, including increasing attention to the uninterrupted supply of fuel to military. NATO Member States support striving for energy supplies diversification and will further strengthen strategic dialogue both within the Alliance and with Partner countries in the context of ensuring energy security [NATO's role in energy security 2020].

A special merit of the Alliance is its analytical capabilities, which allow making a deeper analysis of how energy, economic, environmental and other factors can influence NATO's policies and activities. Awareness rising also includes Partner countries. For example, individual Partners may meet with 30 NATO Member States in so-called "30 + n" meetings, which provide Member States with detailed information about the energy policies of these Partners and their perception of security [Tramburini n/d]. Here, a special role is given to Ukraine's energy security in the context of hybrid threats from the Russian Federation.

NATO Centers of Excellence in energy security

The opening of Centers of Excellence (COEs) has been a significant progression the actions of the Alliance on ensuring energy security. These are international military organizations that train and teach leaders and experts from NATO Member States and Partner countries. Such Centers help develop doctrine, improve interoperability and capabilities, and test and validate concepts experimentally. International military organizations offer expertise and experience that benefits the Alliance [Centres of Excellence 2019, Dempsey 2006].

Centers of Excellence, as a rule, specialize in one functional area and act as experts in issue of this area, including energy. NATO Centers of Excellence disseminate their in-depth knowledge through trainings, conferences, seminars, concepts, doctrines, a variety of materials and works. In addition to providing leaders, NATO units and Partner countries with opportunities to increase their awareness and training, CEOs also help the Alliance to expand interoperability, develop doctrines and standards, analyze, evaluate lessons learned and experiment to test and verify concepts [COE Catalogue 2019].

NATO Member States have identified the following objectives of the NATO Centre of Excellence in the energy security area [Bruzga 2012], namely: providing technical, scientific and academic expertise on energy security to facilitate risk analysis; decisionmaking related to energy security, development of environmentally friendly and efficient military capabilities in support of Smart Defense; conducting scientific, technical and academic analysis of various aspects of energy supply and protection of critical energy infrastructure in areas related to the activities of the North Atlantic Alliance; supporting NATO operations through targeted technical scientific evaluation, as well as providing advice and solutions for the development of energyefficient forces; identifying future needs for NATO's transformation efforts and seeking to prevent or mitigate existing military threats and challenges resulting from the global energy shortage and the complexity of the international energy system [Bruzga 2012].

Energy dimension of Ukraine-NATO cooperation

Another promising area for NATO's energy security is cooperation with Ukraine. This is due to many factors, primarily geopolitical, as Ukraine's location, in fact at the crossroads of Central and Eastern Europe, has influenced the formation of transit routes through the country, which also include energy infrastructure route lines. The hybrid war waged by the Russian Federation in eastern Ukraine not only meets the categories of threats identified by the North Atlantic Alliance, but NATO also considers the energy factor as a defining instrument of Russia's influence on the conflict [Grubliauskas 2018].

According to the Annual National Program of Cooperation between Ukraine and NATO for 2016, a number of key tasks to achieve the stability of the Ukrainian energy system, namely: reforming the legislative process regarding the regulation of the activity of energy and fuel complexes; reviving cooperation in the field of energy security with NATO Member States; diversification of energy sources and resources, methods of their transportation and transport routes; borrowing NATO experience to improve the energy efficiency of the Armed Forces of Ukraine, have been identified [Annual National Program of Ukraine's Cooperation with NATO for 2016 2016].

Confirmation that Ukraine is making progress in achieving its goals is the fact that in 2018, official Kyiv applied to participate in the work of the NATO Centre of Excellence on Energy Security [H. E. Ambassador of

Ukraine in Lithuania visited The NATO Energy Security Centre of Excellence 2018]. Three years later, in July 2021, Ukraine joined the work of the Energy Security Center of the North Atlantic Alliance, which operates in Lithuania. The key priority of the Ministry of Energy of Ukraine in the near future is the disconnection of the Ukrainian power system from the power systems of Russia and Belarus and its further synchronization with European networks ENTSO-E [Lebedyna 2021].

Another important step in the direction of cooperation Ukraine with NATO to ensure energy security is that in August 2021 the Cabinet of Ministers of Ukraine approved by resolution developed by the Ministry of Energy Security Strategy of Ukraine. The energy security strategy defines the target model of the energy security system as a component of national security. The document identifies 29 key threats to energy security. These include, in particular, external risks - cyber threats to critical energy infrastructure, aggression by the Russian Federation, and internal possible non-completion of integration with EU electricity and gas supply systems, depreciation of fixed assets, lack of energy reserves, etc. [The Cabinet of Ministers has approved the Energy Security Strategy 2021]. Nevertheless, the Strategy fixes three main forecast scenarios of changes in the energy sector and their impact in the medium term on the development of fuel and energy, in the context of the impact of exogenous and endogenous factors, such as: maintaining current trends and the state of affairs; "unfriendly influence", "positive transformation". In order to prevent possible negative consequences under the first two scenarios, as well as to prevent the stagnation of the energy sector, systemic actions aimed at implementing the scenario of "positive transformation" and ensuring energy independence are extremely important.

Conclusions

It can be concluded that NATO's role in energy security is potentially important, despite the Organization's military nature. Globalization has changed the understanding of international security, and the North Atlantic Alliance through its military and political capabilities can change its approach to protecting energy infrastructure. In the terms of ongoing competition for access to certain resources and sources, the Alliance needs to step up its efforts to find the most appropriate solutions. This should be done in cooperation with Member States, a partner, as well as it is important to provide for building capacity for defense reform and military training. And in extreme situations it is possible to include military protection of infrastructure from armed attacks. The problem of ensuring Afghanistan's energy security in the context of

the seizure of power in the country by "Taliban" may serve as a prospect for further research, as NATO fuel convoys have been repeatedly attacked in Afghanistan, which, undoubtedly, demonstrates the importance of security of fuel supply during military operations. In our opinion, the intensification of cooperation between NATO and Ukraine in the field of energy security is promising not only for the Ukrainian side. NATO member states can also learn from Ukraine's experience in responding to threats of power outages, seizing important energy facilities and energy sources and resources in a hybrid war, the capacity and security of energy infrastructure in the occupied territories.

Today, NATO has capabilities and resources that can help neutralize threats to the energy sector. At this stage, the North Atlantic Alliance has formulated its role in ensuring energy stability, defined the directions of its activities, but energy security is not perceived by NATO members as a strategic and priority factor. To realize and expand its role, it is necessary to carry out organizational and internal reforms that will allow the organization to strengthen its influence, increase the level of response to threats, ensure the stability of the energy system in the transnational dimension and go beyond traditional military problems.

СПИСОК ЛІТЕРАТУРИ

Бараннік, В., Брежнєва, Т. (2017). Енергетична безпека як стратегічний пріоритет НАТО. *Стратегічні пріоритет* и отримано з http://nbuv.gov.ua/UJRN/spa_2017_2_12

Грубляускас, Ю., Рюлє, М. (2018). Енергетична безпека: надзвичайно важливе питання для членів і партнерів Альянсу. *NATO Review*. Отримано з https://www.nato.int/docu/review/uk/articles/2018/07/26/energetichna-bezpeka-nadzvichajno-vayolive-pitannya-dlya-chlenv-partnerv-al-yansu/index.html

Кабінет Міністрів затвердив Стратегію енергетичної безпеки. (4 серпня 2021). Міністерство енергетики України. Отримано з https://www.kmu.gov.ua/ news/kabinetministriv-zatverdiv-strategiyu-energetichnoyibezpeki?fbclid= IwAR2YChJQcebkSZ4ulScIFl2HzgERgTkijN9P6vyfZrLr5Axdw NBHDSo6ZHI

Лебедина, О. (7 липня 2021). Україна стала членом Центру енергетичної безпеки НАТО. *ZN.UA*. Отримано з https://zn.ua/ukr/ECONOMICS/ukrajina-stala-chlenom-tsentru-enerhetichnoji-bezpeki-nato.html

Річна національна програма співробітництва України з НАТО на 2016 рік. (2016). Отримано з https://zakon.rada.gov.ua/laws/show/45/2016#n12

Bruzga, A. (2012). NATO Center of Excellence to be opened in Lithuania. *Journal of Energy Security*. Отримано з http://www.ensec.org/index.php?option=com_content&view=article&id=344:nato-center-of-excellence-to-be-opened-in-lithuania&catid=123:content&Itemid=389

Bucharest Summit Declaration Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Bucharest. (2008). *NATO: e-library*. Отримано з https://www.nato.int/cps/en/natolive/official_texts_8443.html

Centres of Excellence. (2019). *NATO*. Отримано з https://www.nato.int/cps/en/natohq/topics_68372.htm.

COE Catalogue. (2019). *NATO*. Отримано з https://www.act.nato. int/images/stories/structure/coe_catalogue_20190118.pdf

Dempsey, J. (2006). U.S. Senator Urges Use of NATO Defense Clause for Energy — Europe — International Herald Tribune. *The New York Times*. Отримано з https://www.nytimes.com/2006/11/28/world/europe/28iht-nato.3702073.html

Dupuy, A., Nussbaum, D., Butrimas, V., Granitsas, A. (2021). Energy Security in the Era of Hybrid Warfare. *NATO Review*. Отримано з https://www.nato.int/docu/review/uk/articles/2021/01/13/energetichnabezpeka-v-dobu-gbridnihvon/index.html?fbclid=IwAR1SYhCP4JKs9SdhQI44Mak-XR9hhS-amQU2JX5jJILI0_06nxF_1hYVYpA

Energy Security: a State Side View. (2007). *NATO Review*. Отримано з https://www.nato.int/docu/review/articles/2007/10/01/interview-energysecurity-a-state-side-view/index.html.

Grubliauskas, J., Ruhle, M. (2018). Energy Security: a Critical Concern for Allies and Partners. *NATO Review*. Отримано з https://www.nato.int /docu/review/articles/2021/01/13/energy-security-in-the-era-of-hybrid-warfare/ index.html

Grubliauskas, J. (2014). NATO's Energy Security Agenda. *NATO Review*. Отримано 3 https://www.nato.int/docu/review/articles/2014/05/09/natos-energy-security-agenda/index.html.

H. E Ambassador of Ukraine in Lithuania visited the NATO Energy Security Centre of Excellence. (2018). *ENSECCOE*. Отримано з https://e-ambassador-of-ukraine-in-lithuania-visited-the-nato-energy-security-centre-of-excellence/361

Lunyte J. (2014). Energy Security in the NATO Framework. *NATO Security Centre of Excellence*. Отримано з https://enseccoe.org/data/public/uploads/2017/02/esoh_no_7.pdf

Lyndon, G., Hanania, J., Donev, J. (2016). Energy Education Energy Security. *University of Calgary*. Отримано з https://energyeducation.ca/encyclopedia/ Energy_security.

Monaghan, A. (2006). Energy Security – What Role for NATO? *NATO Defense College Research Paper*. Отримано з https://www.files.ethz.ch/isn/25557/rp_29.pdf

NATO's Role in Energy Security. (2020). *NATO Review*. Отримано з https://www.nato.int/cps/en/natohq/topics_54208.htm?selectedLocale=en

One Flank, One Threat, One Presence. A Strategy for NATO's Eastern Flank. (2020). Center for European Policy Analysis. Отримано з https://cepa.org/ cepa_files/2020-CEPA-report-one_flank_one_threat_one_presence.pdf?fbclid= IwAR2KencJU3p2qX9vDB94A3Sden2Q2gmGOMYf4X0r6nf EVuLw2Z_vkq794IE

Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization. (2010).

NATO: *e-library*. Отримано з [https://www.nato.int/lisbon2010/strategic-concept-2010-eng.pdf.

Tamburini, F. (n.d.). NATO's Role in Energy Security: Does NATO Meet the Needs of Member States? *Francesco Tamburini*. Отримано з https://www.academia.edu/12290344/NATOs_role_in_energy_security_does_NATO_meet_the_need s_of Member States.

The Alliance's Strategic Concept Approved by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Washington. (1999). *NATO*. Отримано 3 http://www.internationaldemocracywatch.org/attachments/344_Nato% 20Strategic% 20Concept% 20(1999).pdf

REFERENCES

Annual national program of Ukraine's cooperation with NATO for 2016. [In Ukrainian]. (2016). Retrieved from https://zakon.rada.gov.ua/laws/show/45/2016#n12

Barannik, V., Brezhnieva, T. (2017). Energy security as a strategic priority for NATO. [In Ukrainian]. *Strategic priorities*. Retrieved from http://nbuv.gov.ua /UJRN/spa_2017_2_12

Bruzga, A. (2012). NATO Center of Excellence to be Opened in Lithuania. *Journal of Energy Security*. Retrieved from http://www.ensec.org/index.php?option=com_content&view=article&id=344:nato-center-of-excellence-to-be-opened-in-lithuania&catid=123:content&Itemid=389

Bucharest Summit Declaration Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Bucharest.(2008). *NATO: e-library*. Retrieved from https://www.nato.int/cps/en/natolive/official_texts_8443.html

Centres of Excellence. (2019). *NATO*. Retrieved from https://www.nato.int/cps /en /natohq/topics_68372.html

COE Catalogue. (2019). *NATO*. Retrieved from https://www.act.nato.int/images/stories/structure/coe_catalogue _20190118.pdf

Dempsey, J. (2006). U.S. Senator Urges Use of NATO Defense Clause for Energy – Europe – International Herald Tribune. *The New York Times.* Retrieved from https://www.nytimes.com/2006/11/28/world/europe/28iht-nato.3702073.html

Dupuy, A., Nussbaum, D., Butrimas, V., Granitsas, A. (2021). Energy Security in the Era of Hybrid Warfare. *NATO Review*. Retrieved from https:// www.nato.int/docu/review/articles/2021/01/13/energy-security-in-the-era-of-hybrid-warfare/index.html

Energy Security: a State Side View. (2007). *NATO Review*. Retrieved from https://www.nato.int/docu/review/articles/2007/10/01/interview-energy-security-a-state-side-view/index.html.

Grubliauskas, J. (2014). NATO's Energy Security Agenda. *NATO Review*. Retrieved from https://www.nato.int/docu/review/articles/2014/05/09/natos-energy-security-agenda/index.html

Grubliauskas, J., Ruhle, M. (2018). Energy Security: a Critical Concern for Allies and Partners. [In Ukrainian]. *NATO Review*. Retrieved from https://docu/review/articles/

2018/07/26/energy-security-a-critical-concern-for-allies-and-partners/index.html.

H.E Ambassador of Ukraine in Lithuania visited the NATO Energy Security Centre of Excellence. (2018). *ENSECCOE*. Retrieved from:https://enseccoe.org/en/newsroom/h.e-ambassador-of-ukraine-in-lithuania-visited-the-nato-energy-security-centre-of-excellence/361

Hrubliauskas, Y., Riulie, M. (2018). Energy Security: an Extremely Important Issue for Alliance Members and Partners. *NATO Review*. Retrieved from https://www.nato.int/docu/review/uk/articles/2018/07/26/energetichna-bezpekanadzvichajno-vayolive-pitannya-dlya-chlenv-partnerv-alyansu/index.html.

Lebedyna, O. (7 July 2021). Ukraine Has Become a Member of the NATO Energy Security Center. *ZN.UA*. [In Ukrainian]. Retrieved from https://zn.ua /ukr/ECONOMICS/ukrajina-stala-chlenom-tsentru-enerhetichnoji-bezpeki-nato.html

Lunyte, J. (2014). Energy Security in the NATO Framework. *NATO Security Centre of Excellence*. Retrieved from https://enseccoe.org/data/public/uploads/2017/ 02/esoh_no_7.pdf

Lyndon, G., Hanania, J., Donev, J. (2016). Energy Education Energy Security. *University of Calgary*. Retrieved from https://energyeducation.ca/encyclopedia/Energy_security

Monaghan, A. (2006). Energy Security – What Role for NATO? *NATO Defense College Research Paper*. Retrieved from https://www.files.ethz.ch/isn/ 25557/ rp_29.pdf

NATO's Role in Energy Security. (2020). *NATO Review*. Retrieved from https://www.nato.int/cps/en/natohq/topics_54208.htm?selectedLocale=en.

One Flank, One Threat, One Presence. A Strategy for NATO's Eastern Flank. (2020). *Center for European Policy Analysis*. Retrieved from https://cepa.org/cepa_files/2020-CEPA-reportone_flank_one_threat_one_presence.pdf?fbclid= IwAR2KencJU3p2qX9vDB94A3Sden2Q2gmGOMYf4X0r6nf EVuLw2Z_vkq794lE

Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization. (2010). *NATO: e-library.* Retrieved from https://www.nato.int/lisbon 2010/strategic-concept-2010-eng.pdf

Tamburini, F. (n.d.). NATO's Role in Energy Security: Does NATO Meet the Needs of Member States? *Francesco Tamburini*. Retrieved from https://www.academia.edu/12290344/NATOs_role_in_energy_security_does_NATO_meet_the_need s_of_Member_States.

The Alliance's Strategic Concept Approved by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Washington. (1999). *NATO*. Retrieved from http://www.internationaldemocracywatch.org/attachments/344_Nato%20Strategic%20Concept%20(1999).pdf

The Cabinet of Ministers Has Approved the Energy Security Strategy. (4 August 2021). *Ministry of Energy of Ukraine*. [In Ukrainian]. Retrieved from:https://www.kmu.gov.ua/news/kabinet-ministriv-zatverdiv-strategiyu-energetic hnoyibezpeki?fbclid=IwAR2YChJQcebkSZ4ulScIFl2HzgERgTkijN 9P6vyfZrLr5 AxdwNBHDSo6ZHI