António Tavares, PhD
Lusófona University of Porto
e-mail: p4471@ulp.pt
ORCID: 0000-0003-3222-727X

Wiktoria Kolano, MA
WSB University in Dąbrowa Górnicza
e-mail: wkolano@wsb.edu.pl
ORCID: 0000-0003-3047-8622

Jowita Aniołek
WSB University in Dąbrowa Górnicza
e-mail: jwirska@wsb.edu.pl
ORCID: 0009-0008-9682-6240

DOI: 10.26410/SF_1/24/10

ENERGY SECURITY IN THE LIGHT OF AMENDMENTS TO THE NATIONAL ENERGY LAW

Abstract

Poland's energy security depends on solutions that, thanks to new legislation, will improve the use of the potential of 'green energy' and contribute to reducing energy costs and protecting the environment. On 7 September 2023, the Act of 28 July 2023 amending the Energy Law entered into force. The amended Act transposes European energy acts into Polish law. A new energy sales formula is being pursued, consisting

of partnership trading in electricity generated by prosumers. The new solutions are a response to the expected changes in the area of renewable energy sources, which in Poland is not prosumer-friendly. The amended Act provides the tools to introduce a new method of operation in the energy area, which is the main focus of the economy.

Key words

Energy law, aggregation, flexibility services, active consumer, citizen civic community

Introduction

Energy security is directly linked to the development of modern technology, economics, sustainable development policy and environmental protection[1]. There are many factors that influence energy security. Among other things, the origin of energy supply sources and their coordination and storage of fuels are important[2]. Climatic, social and technical factors cannot be overlooked either. Renewable energy sources are closely linked to the climate and their efficiency depends on the geographical location of a country. The technologies introduced must be socially acceptable so that their implementation does not meet with disapproval and so that the public wants to participate in these changes. Factors relating to the technical aspect include first and foremost minimising the risk of failure of the energy installation system. The state, which ensures energy security, should by its actions contribute to the creation of such a legal and economic system in which the certainty of energy supply is ensured and which at the same time protects the environment. The Polish power system and related regulations do not exist in a vacuum. They integrate with the policy of the European Union and adapt to the requirements that the EU imposes on its members[3]. The Act of 10 April 1997 – Energy Law contains a legal definition of "energy security", which means "a state of the economy that makes it possible to cover the current and prospective demand of consumers for fuels and energy in a technically and economically justified manner, while maintaining the requirements of environmental protection". The social, economic and environmental benefits are to be brought about by 'citizen energy communities' based on economic cooperation. At the heart of the sharing economy are unused goods that can be beneficially developed through cooperation between individuals[4]. This leads to creativity and gives rise to innovative activities which, in the economic sphere, become competitive with traditional enterprise. The concept of the sharing economy (shawing economy) has given rise to companies such as Uber, Airbnb or BlablaCar, whose business is to manage and provide platforms that put users in touch with each other. New technologies make it possible to reduce the costs of transactions, as well as of searching for and collecting information, as they make it possible to coordinate dispersed knowledge. They make the market more competitive, which has a positive impact on the quality and price of the goods on offer. Technological progress has brought enormous changes in the economic sphere. Society has begun to move away from the passive consumption of goods in a centralised corporate world[5]. Human relationships and social trust issues have begun to be valued and consumer decisions have become more informed. New

1 See: K. Żukrowska, M. Gracik, *Bezpieczeństwo międzynarodowe. Teoria i praktyka,* Warszawa 2006.

2 See: M. Jurgilewicz, I. Protasowicki, *Współczesne determinaty bezpieczeństwa energetycznego Unii Europejskiej* [in:] T. Z. Leszczyński, *Bezpieczeństwo Europy. Economic Context,* Kraków 2015.

3 A nnouncement of the Speaker of the Sejm of the Republic of Poland of 15 June 2012 on the announcement of the consolidated text of the Act – Energy Law [Journal of Laws 2012, item 1059].

4 https://war.pl.ekonomia sharing [access:05.03.2024].

5 https://prawo.uni.wroc.pl> Sharing economy [access: 08.03.2024].

business models are shaping the economy and challenging legislatures. Indeed, the law has to follow the new challenges and technologies through which economic development takes place. "A European Agenda for the Sharing Economy" was a communication issued on 2 June 2016 by the European Commission noting that the existing legal framework is not adapted to the sharing economy. According to the European Commission, the blurring of the boundaries between consumer and supplier creates consequent dangers for the consumer[6]. In its draft resolution of 11 May 2017, the European Parliament recognised the need to increase the protection of consumers using peer-to-peer transactions and to distinguish professionals from community partners. The peer-to-peer model creates a marketplace that connects sellers or service providers with customers, whereby anyone can be both a customer and a seller[7]. This marketplace benefits from the potential for social inclusion and is characterised by its ease of access and ease of use which translates into its development. The above acts refer primarily to online platforms, but cannot be ignored as they relate to the peer-to-peer model that is expected to cover the Polish energy market in the near future. 5 June 2019. The European Parliament and the Council of Europe issued a directive on common rules for the internal market in electricity. Article 1 of the document indicates that the object of the directive is to establish common rules that apply to the generation, transmission, distribution, storage and supply of electricity[8]. The aim of the Directive is to create fair and competitive electricity markets respecting consumer protection, with transparent and affordable energy prices, security and access.

Methodological and Methodical Assumptions

The study on energy security in the light of changes in the energy law of the Republic of Poland is based on the application of an interdisciplinary research approach that combines methods of legal, economic and policy analysis. The main research steps and techniques used in this article are outlined below:

1. Literature review and desk study:
   - Academic literature, press articles, government reports and publications of international organisations on energy security and energy policy were analysed.
   - Key theories, models and concepts on energy security and their application in the Polish context are identified.
2. Legal analysis:
   - A detailed analysis was made of the current energy legislation in Poland, including the Energy Law and other legislation related to the energy sector.
   - Changes to energy law in recent years have been analysed, taking into account their legislative and political context.

6 A. Nadolska, W. Nadolski, *Legal frameworks governing the aspects of the sharing economy in Poland*, "Legal Journals of the Bureau of Sejm Analyses of the Chancellery of the Sejm" 2019, no. 2 (62).

7 https://wwwifirma.pl.blog.peer-to-peer [access: 10.03.2024].

8 Directive 2019/944 of the EU Parliament and of the Council of 5 June 2019, on common rules for the internal market in electricity and amending Directive 2012/27/EU.

- Key legal developments affecting Poland's energy security were identified, such as regulations on renewable energy sources, energy efficiency, energy infrastructure and market mechanisms.

3. Case studies:
   - A case study method was used to analyse specific energy initiatives and projects, such as the construction of new energy sources, the modernisation of energy infrastructure and the implementation of sustainable energy policies.
   - An assessment was made of the effectiveness of these projects in terms of improving Poland's energy security.
4. Comparative analysis:
   - The impact of the European Union's energy policy on national energy regulations and strategies is taken into account.

The methodology adopted made it possible to assess the impact of changes in the energy law on Poland's energy security. The combination of these approaches provides a sound basis for formulating policy recommendations and further research in the area of energy security.

Amendments to the Energy Law

The amendment of the Energy Law in Poland is related to the Act of 28 July 2023 amending the Energy Law and certain other acts, the text of which was finally determined after consideration of the Senate's amendments. The above law implements:

1. Directive 2009/31/EC of the EU Parliament and of the Council of 23 April 2009 relating to the geological storage of carbon dioxide.
2. Directive 2009/73/EC of the European Parliament and of the Council of the EU of 13 July 2009 related to the rules of the internal market in natural gas.
3. Directive 2018/2021 of the European Parliament and of the EU Council of 11 December 2018 related to the promotion of the use of energy from renewable sources.
4. Directive 2019/944 of the EU Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity[9].

Significant changes affect energy consumers as well as renewable energy generators[10]. Investment in electricity grids requires appropriate procedures that facilitate the implementation of new provisions in the energy law.

The changes concern new ways of managing energy installations. The amended Act contains provisions allowing for the expansion of the Polish electricity grid. The amended Act contains provisions making the expansion of the Polish electricity grid possible. According to the current data as of 1 July 2025, the Central Energy Market Information System (CSIRE) is to be established in Poland as an IT system. It is to collect and process data relating to the Polish energy market. The system is to be publicly accessible and all energy consumers will be able to use it. Pursuant to the Act of 20 May 2021

9 Act of 28 July 2023 amending the Energy Law and certain other acts [Journal of Laws 2023 item 1681].

10 https://globenergia.pl [access: 21.03.2024].

amending the Energy Law (Journal of Laws 2021, item 1093, as amended), Polskie Sieci Elektroenergetyczne is to perform the functions of the Energy Market Information Operator (OIRE), which is related to the construction and implementation of CSIRE. The statutory obligation concerning the launch of CSIRE is the conclusion of an agreement by the entities obliged to use the system with OIRE, as stated in Article 21 of the aforementioned Act. Article 20 of the Act also states that the Energy Distribution System Operator is to provide the OIRE with information on metering points in electronic form. The system is to contain information on the relationship between energy suppliers and energy users. Meters at electrical installations containing data on the amount of energy taken from the grid and returned to the grid by the user are to be used as the main source of information. One of the tasks of the CSIRE will be to count the amount of energy exchanged between the prosumer, i.e. the user using his/her own photovoltaic installation, and the grid[11]. It should be noted that it will be mandatory for prosumers to use this system. The operation of the CSIRE will be geared towards simple and free access to information on their contracts and energy consumption. Access to competitive offers on the energy market will be simple[12]. It will also be simple and quick to change energy supplier. Energy consumers in households and micro-entrepreneurs who consume less than 100 MWh per year will be able to use an electronic comparator of offers from electricity sellers[13]. The "technical" process of changing energy seller is expected to take no more than 24 hours, which is to be achieved through automatic verification in the CSIRE system. According to the new regulations, the direct line will also be available to those consumers who are connected to the National Energy System. It consists of connecting electricity generators with energy consumers directly, without the involvement of the distribution network. This solution is expected to improve the use of renewable energy sources and is expected to affect competitiveness in the energy market. President of the Energy Regulatory Office Rafał Gawin noted that 'This solution will encourage the creation of local energy sources and respond to the expectations of large industrial consumers, for whom it is important to be able to produce renewable energy in the immediate vicinity of an industrial plant and have this energy consumed by that consumer. This translates into a lower carbon footprint – the direct line will promote the decarbonisation of the economy and respond to the expectations of big business. Thanks to this solution, a RES installation that is in a direct location next to a company's plant can directly transmit energy without being connected to the National Grid[14]. Energy needs will thus be met on site". Regulations in the energy law are combined with concepts related

11 https://pro-sun.com.pl [access: 25.03.2024].
12 https://www.gzov.pl [access: 28.03.2024].
13 https://www.ure.gov.pl [access: 30.03.2024].
14 https://www.infor.pl [access: 05.05.2024].

to the operation of the energy system. These include the aggregator, the active customer or the flexibility service. According to Article 3 para 6e of the Energy Law, aggregation is "the activity of combining the volume of capacity or electricity offered by customers, electricity generators, or electricity storage holders, taking into account the technical capacity of the network to which they are connected for the purpose of selling electricity, providing system services or flexibility services in the electricity markets"[15]. The aggregator thus acts as an intermediary that buys surplus electricity from prosumers, stores it and helps sell it[16]. It manages the energy of smaller prosumers. Article 3(13e) of the Energy Law defines an active consumer as a "final consumer acting individually or in a group" who consumes or stores or sells self-generated electricity, carries out energy efficiency improvement projects, provides system or flexibility services – provided that its activities, with the exception of energy consumption, do not constitute the subject of its main business activity. A flexibility service is related to a situation where an active consumer is faced with an energy surplus and agrees to place it in energy storage and, in the event of an energy deficit, agrees to reduce its consumption[17]. System services, on the other hand, involve activities related to the supply of electricity or the regulation of steady-state voltage[18]. Article 3(11k) of the Energy Law defines flexibility services as "services provided to the electricity distribution system operator by an aggregator or by system users who are active consumers, generators, holders of electricity storage facilities, whose networks, installations and equipment are connected to the electricity distribution network, excluding the coordinated 110 kV network, in order to ensure the security and increase the efficiency of the development of the distribution system, including the management of network congestion in the electricity distribution network, excluding the coordinated 110 kV network. According to the definition appearing in the European Union Directive of 5 June 2019, "Citizen energy community" means a legal entity that:

a. is based on voluntary and open participation and which is effectively controlled by members or shareholders who are individuals, local authorities, including municipalities, or small businesses;
b. has as its main objective not financial gain, but rather environmental, economic or social benefits for its members or shareholders or the local areas in which it operates;
c. may engage in the generation, including from renewable sources, distribution, supply, consumption, aggregation or storage of energy, the provision of energy efficiency or electric vehicle charging services, or the

15 Announcement of the Marshal of the Sejm of the Republic of Poland of 24 January 2024 on the announcement of the consolidated text of the Act – Energy Law [Journal of Laws 2012, item 1059].

16 https://globenergia.pl [access:07.05.2024].

17 https://globenergia.pl/zmiany-w-prawie-energetycznym-omawiamy key differences [acccess: 10.05.2024].

18 Announcement of the Marshal of the Sejm of the Republic of Poland of 24 January 2024 on the announcement of the consolidated text of the Act – Energy Law [Journal of Laws 2012, item 1059].

provision of other energy services to its members or shareholders[19].

According to the Energy Law of 10 April 1997, civic energy communities can exercise their activities through various legal forms, i.e. cooperatives including housing cooperatives, housing communities, associations (excluding ordinary association), partnerships (excluding partnerships), farmers' cooperatives. To form a civic energy community its members must belong to the same electricity distribution operator. The area of operation of the OSE is adequate with the place of connection of the installations that belong to this community to the electricity distribution network, the rated voltage of which is not higher than 110 kV. It is important to note that the activities of an OSE are local activities and may not include interconnections with other countries. An OSE may undertake its activities with an entry in the list of civil energy communities, which is maintained by the President of the Energy Regulatory Office[20]. This list is public and posted on the Office's website. In order to obtain an entry in the above-mentioned register, an application must be submitted, accompanied by the statute or an agreement with the OSE. Citizen energy communities are an attempt to reduce energy costs, the idea being to enable the end consumer of electricity to take part in the generation of energy and share it with other consumers. In simple terms: Mr Kowalski will be able to pass on the surplus electricity he generates to Mr Nowak, who has a shortage of that energy. In theory, the system looks perfect. It presents a model in which entities outside the energy sector voluntarily generate, transmit and manage energy. Such a model is supposed to lead to the decentralisation of the energy system of European Union countries. It increases the security of energy infrastructures, which will be more difficult to destroy and which remain operational.

Summary

The price of electricity in Poland is one of the highest in Europe. According to the Buisness Insider website, "on average, the daily Polish electricity price was 820% higher than the Portuguese one this year". 90 per cent of the electricity Portugal generated in April 2024 comes from 'green sources', but only 4 per cent involves photovoltaics[21]. This is thanks to pumped storage power plants and reservoirs with energy storage functions, which are marginal in Poland. From "green sources" comes 35% of Polish energy, which has nowhere to be stored. Poland does not have a nuclear power plant and cannot simply abandon conventional power plants, whose operation is linked to the purchase of CO2 emission rights, which increases the price of energy. The lack of energy storage facilities precludes the possibility of using the

19 Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity and amending Directive 2012/27/EU.

20 Announcement by the Speaker of the Sejm of the Republic of Poland of 24 January 2024 on the announcement of the consolidated text of the Energy Law Act [Journal of Laws 2012, item 1059].

21 https://Businessinsider.com.pl [access: 15.05.2024].

energy produced at a later date. When there is a large supply of 'green energy' and little demand for it, then the operation of photovoltaic power plants and wind farms is curtailed in order to stabilise the energy system[22]. The Polish Power Grid then issues an order to limit the production of 'green energy' which is a disadvantageous solution for prosumers and the environment. The purpose of the amendment to the Energy Law is to transform the mechanisms operating in the area of this law, which is to allow the best possible use of the energy potential of power grid users. The modifications introduced have the potential to improve operating methods and contribute to increasing Poland's energy security.

Bibliography

Announcement of the Speaker of the Sejm of the Republic of Poland of 15 June 2012 on the announcement of the consolidated text of the Act – Energy Law, „Journal of Laws" 2012.

Bogdanowicz P., *Interes publiczny w prawie energetycznym Unii Europejskiej,* Warsaw 2012.

Czarnecka M., Ogłódek T., *Prawo energetyczne: komentarz,* Warsaw 2012.

Directive 2019/944 of the EU Parliament and of the Council of 5 June 2019, on common rules for the internal market in electricity and amending Directive 2012/27/EU

Galecki A., Bolewski A. *Energy security as a challenge of the 21st century*, Poznań 2017.

Jurgilewicz M., Protasowicki I., *Współczesne determinaty bezpieczeństwa energetycznego Unii Europejskiej,* [in:] Leszczyński T., *Bezpieczeństwo Europy. Economic Context*, Kraków 2015.

Kaczmarski M, *Bezpieczeństwo energetyczne Unii Europejskiej*, Warsaw 2010.

Nadolska A., Nadolski W., *Legal frameworks governing the aspects of the sharing economy in Poland,* "Legal Journals of the Bureau of Sejm Analyses of the Chancellery of the Sejm" 2019, no. 2(62).

Tavares A., Kolano W., *The role of Poland in ensuring European Security*, *"Security Forum"* 2022, No 1.

Żukrowska K., Gracik M., *Bezpieczeństwo międzynarodowe. Theory and Practice,* Warsaw 2006.

https://war.pl.ekonomia sharing

https://prawo.uni.wroc.pl> Sharing economy

https://wwwifirma.pl.blog.peer-to-peer

https://pro-sun.com.pl

https://www.gzov.pl

https://www.ure.gov.pl

https://www.infor.pl

https://globenergia.pl

About the Authors

António Tavares, PhD, Professor at the Lusófona University. Director of First-cycle political science and electoral studies. Director of Second-cycle studies of International Relations at Lusófona University. He is an expert in the field of political science and security.

22 https://Wysokienapięcie.pl [access: 18.05.2024].

Wiktoria Kolano, Deputy Director of the Academic Center for Education about Auschwitz, and the Holocaust of the WSB University. Employee of the Department of Security Studies at the WSB University, PhD student. The reserve non-commissioned officer of the Armed Forces of the Republic of Poland. Her research interests focus, inter alia, on the differences in the opportunities for the organization and functioning of the security sectors of countries, with a particular emphasis on Poland and Portugal.

Jowita Aniołek, the representative of the International Association of Security Sciences "Save the Word".