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POLAND'S COMMITMENTS TO THE DECARBONIZATION OF THE ENERGY SECTOR

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Abstract. This article presents remarks concerning Poland's commitments to the decarbonization of the energy sector, from the perspective of compliance with the obligations arising from EU law and the directions set out in the EU energy policy. Due to national circumstances, the implementation of the decarbonization target for the energy sector, despite the declarations made as part of the national energy policy, raises some doubts, and limit the effectiveness of implementation of the sustainable development principle.

Keywords: European Union, decarbonization, energy sector, sustainable development

INTRODUCTION

Decarbonization of the energy sector is an important element of the European Union's policies, both in terms of the Union's energy and environmental policies and in general of all the activities related to the promotion and implementation of sustainable development. The European Union "shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment" [Nowicki 2019, 227]. This results, *inter alia*, in the integration of sustainability aspects into all EU economic policies, including energy policy. The normative basis for such action is Article 11 TFEU, according to which environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development. This provision creates specific legal obligations,[1] both for the Union institutions and the Member States [ibid., 232]. They should also be implemented in the energy sector.

[1] See the opinion of Advocate General Jacobs of 26 October 2000 in the case C–237/98 *PreussenElektra*, point 231 (ECLI:EU:C:2000:585).

For the purposes of the present study, by the term "energy sector" we understand the whole system of power and heat generation as two areas which, due to growing demand, are of significant importance for the state and its tasks. Energy, due to its economic, social, and political importance [Walaszek–Pyzioł 2018, 141], is subject to special legal regulations. This sphere of economic activity is subject to a number of requirements, both in the area of creating energy security and the use of natural resources and other technologies, such as renewable sources, in the process of its production. The unique role of the energy sector is enhanced by its connection with the intensive economic development of modern countries, which results in increased energy demand. This in turn affects the issues of the state's energy security, which is an element of internal security for which the state is responsible.[2] While energy security in the area of thermal energy provision is to a large extent based on dispersed sources and a dispersed system of its supply, the provision of electricity supply is covered by state action and is of a monopolized nature. A manifestation of monopolization is the functioning distribution system based on a power grid monopoly and the regulatory participation of the state in this market. However, the key issue is to ensure continuous development of the energy sector, which is caused by the broadly understood development of the state, both in the economic and social sense. Such development must, nevertheless, respect and implement the principle of sustainable development, which, among other things, necessitates the reduction of the energy sector's emissions.

The considerations on the State's contribution to the decarbonization of the energy sector,[3] within the scope of this study, will be limited to the power generation system and, more specifically, to the raw materials used in the power generation process. In order to analyse the decarbonization obligations of the power sector, two main groups of power generation technologies should be identified. In the case of renewable energy sources, account should be taken of the way in which energy is produced, in the context of the use of those gifts of nature which are regenerative in nature and which can be a source of energy. This characteristic clearly distinguishes these sources from energy production using non-renewable resources such as coal or lignite, oil, natural gas, or peat. In the case of the use of non-renewable resources in the energy generation process, there is the very negative impact of these processes (technologies) on the environment. For this reason, such technologies are referred to as high emission technologies. In view of the challenges of the 21st century and the global problems of today's world, related to climate change, shrinking resources and the need to change the paradigm

[2] Pursuant to the disposition of Article 146(4)(7) of the Constitution of the Republic of Poland of 2 April 1997, Journal of Laws No. 78, item 483 as amended, ensuring the internal security of the state belongs to the Council of Ministers.

[3] As the power industry we understand the two basic segments of this market, i.e. power engineering and heat engineering, and as a separate part of this industry we distinguish renewable energy sources.

of economic development, many countries and international organizations place great emphasis on low-carbon technologies for energy production.

Polish energy policy, which encompasses measures to reduce the negative impact of the energy sector on the natural environment, is the result of documents and legal acts adopted by the national legislator. It is also a result of the standards of the European Union laws in force in this respect, both those whose regulations have direct effect and those requiring their implementation into our legal system. The main national legal act determining the direction of the state's activities in the discussed scope are the provisions of the Constitution of the Republic of Poland, which introduce the policy of sustainable development as a fundamental political principle of the state[4]. The constitutional lawmaker, however, defines the principle of sustainable development very broadly, in at least a few provisions, referring to its constituent elements [Nowicki 2019, 221]: obliges public authorities to ensure health protection (Article 68(1) of the Constitution), to prevent the effects of environmental degradation (Article 68(4) of the Constitution) and to pursue a policy ensuring environmental safety for present and future generations, including supporting citizens' actions to protect and improve the state of the environment (Article 74 of the Constitution), or making the introduction of restrictions on the exercise of constitutional freedoms and rights subject to the necessity dictated, *inter alia*, by environmental or health protection (Article 31(3) of the Constitution). An important constitutional regulation is also a universal obligation to take care of the state of the environment and bear responsibility for the deterioration it causes (Article 86 of the Constitution). This matter is covered by many statutory acts, whose provisions impose on the addressees of their standards obligations related to the use of the natural environment and introduce administrative[5] and criminal liability.[6]

In turn, the Energy Law Act,[7] when defining the principles of shaping the state's energy policy, indicates a number of objectives of this regulation, which are directly related to the subject matter discussed. These include: creating conditions for sustainable development of the country, ensuring energy security, economical and rational use of fuels and energy, taking into account environmental protection requirements and obligations resulting from international agreements. In the Po-

[4] Article 5 of the Constitution. However, the doctrine stresses that there is no uniform position on the legal nature of the constitutional principle of sustainable development, and positions are expressed which consider it to be a systemic principle, a directive on the interpretation of legal standards governing environmental protection, as well as a political principle [Rakoczy 2015, 36].

[5] For example, see Section III "Administrative fines" of the Act of 27 April 2001, the Environmental Protection Law, Journal of Laws of 2019, item 1396 as amended. For more on administrative sanctions see Nowicki 2017, 649.

[6] Examples of acts regulating criminal liability are: Act of 6 June 1997, the Penal Code (Chapter XXII), Journal of Laws of 2019, item 1950; Act of 16 April 2004 on Nature Conservation (Chapter 11), Journal of Laws of 2018, item 1614 as amended); Act of 27 April 2001, the Environmental Protection Law (Section II provisions from Article 330); Act of 13 April 2007 on Prevention and Remediation of Environmental Damage (Chapter VI), Journal of Laws of 2019, item 1862.

[7] Act of 10 April 1997, the Energy Law, Journal of Laws of 2019, item 1655 as amended.

lish legal system, apart from the energy law in the strict sense, a number of other laws directly or indirectly related to the energy sector operate, whose regulations concern obligations to reduce the sector's emissions.[8] Additionally, the issue of the decarbonization of the energy sector is reflected in government documents which define the obligations of the state and individual participants of this market in this area.[9]

1. THE EUROPEAN UNION LEGISLATION[10] CREATING OBLIGATIONS FOR POLAND IN THE FIELD OF REDUCTION OF ENERGY SECTOR EMISSIONS

The legal issues of the energy market are based on the primary legislation of the European Union. The standards of the Treaty on European Union, defining the basic principles and objectives of the common market thus shape, *inter alia*, the rules of the energy market. In particular it is important to indicate here sustainable economic growth, price stability, a highly competitive social market economy, and a high level of environmental protection and improvement, which the EU legislator has listed as objectives of the European Union (Article 3(3) TEU). The EU's energy policy, like any other economic policy, therefore has its origins in the concept of the internal market, and is a reflection of both the concern for this market and the instrument for its construction. The regulations adopted by the EU institutions aimed at achieving stabilization of greenhouse gas concentrations in the air in such a way as to prevent dangerous anthropogenic interference with the climate system also result from the United Nations Framework Convention on Climate Change of June 1992 signed in Rio de Janeiro,[11] and the so-called Paris Agreement, i.e. the 21st United Nations Framework Convention on Climate Change of December 2015. Moreover, the provisions of Polish law, as well as European Union law, must comply with the obligations arising from relevant international law and international agreements.[12]

[8] As an example, we can point out: Act of 20 February 2015 on Renewable Energy Sources, Journal of Laws of 2018, item 2389 as amended; Act of 20 May 2016 on Wind Power Plant Investments, Journal of Laws of 2019, item 654 as amended; Act of 20 May 2016 on Energy Efficiency, Journal of Laws of 2019, item 545 as amended; Act of 14 December 2018 on the promotion of electricity from high-efficiency cogeneration, Journal of Laws of 2019, item 42 as amended; Act of 8 December 2017 on the power market, Journal of Laws of 2018, item 9 as amended; Act of 6 December 2006 on the principles of development policy, Journal of Laws of 2019, item 1295; Act of 25 August 2006 on biocomponents and liquid biofuels, Journal of Laws of 2019, item 1155 as amended; Act of 24 July 2015 on preparation and implementation of strategic investments in transmission networks, Journal of Laws of 2018, item 404 as amended.

[9] These documents will be further discussed.

[10] When we use the terminology of the European Union law we understand it broadly and include in it EU legal acts and other sources referred to as *soft law*.

[11] This Convention was approved by the EU by Council Decision 94/69/EC of 15 December 1993 (OJ EU.L. of 1994 No. 33, p. 11).

[12] As an example, we can point out: The Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and related environmental aspects of 17 December 1994, Journal of Laws of

As far as EU primary law is concerned, energy market issues are more widely regulated by the provisions of the Treaty on the Functioning of the European Union. The EU legislator has decided that the internal market, environment, cross-border networks, and energy issues fall under shared competence between EU bodies and Member States (Article 4(2) of TFEU). At the same time, the TFEU indicates that the internal market ensures the free movement of goods, persons, services, and capital with a view to making sustainable progress in all sectors (Article 26 of TFEU). This also applies to the energy sector, which is regulated under Title XXI of the TFEU "Energy." Under Article 194(1) TFEU, in the context of the establishment and functioning of the internal market and taking into account the need to preserve and improve the environment, the Union policy on energy aims, in a spirit of solidarity between Member States, to ensure the functioning of the energy market; ensure the security of energy supply in the Union; promote energy efficiency and energy saving and the development of new and renewable forms of energy; as well as promote the interconnection of energy networks. Among other important regulations one should also include provisions introducing trans-European networks, *inter alia*, in energy infrastructure, in order to achieve the objectives of the internal market (Article 170(1) of TFEU). The trans-European networks are intended to be a system of open and competitive markets favouring the interconnection and interoperability of national networks and access to those networks (Article 170(2) of TFEU). However, in the opinion of the authors, the most important provision of Article 11 TFEU cited above, according to which environmental protection requirements must be taken into account in defining and implementing Union policies and activities, in particular with a view to promoting sustainable development, is of key importance for the area under consideration. This requirement served as the right signpost in the process of concretising the assumptions and objectives of the development of the energy policy of the European Union, in accordance with the principle of sustainnable development, under the so-called EU secondary legislation.

The secondary legislation of the European Union, which is the basis for shaping the Polish energy market, including activities aimed at reducing the sector's emissions, also includes a number of legal acts, among which we may list:

1) Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC;[13]

2) Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, Euratom, Directives 2000/60/EC, 2001/80/EC, 2004/35 /EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006;[14]

2003 No. 105, item 985; Agreement on the International Energy Programme, drawn up in Paris on 18 November 1974, Journal of Laws of 2018, item 1367.

[13] OJ EU L 140, p. 16 as amended.

[14] OJ EU L 140, p. 114.

3) Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC;[15]

4) Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC;[16]

5) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC;[17]

6) Regulation of the European Parliament and of the Council (EC) No 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005;[18]

7) Regulation of the European Parliament and of the Council (EC) No 714/2009 of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003;[19]

8) Regulation of the European Parliament and of the Council (EU) 2019/942 of 5 June 2019 establishing the European Union Agency for the Cooperation of Energy Regulators;[20]

9) Decision of the European Parliament and of the Council No 2009/406/EC of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020;[21]

10) Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council;[22]

11) Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009;[23]

[15] OJ EU L No. 211, p. 55.
[16] OJ EU L No. 211, p. 94.
[17] OJ EU L 315, p. 1.
[18] OJ EU L No. 211, p. 36 as amended.
[19] OJ EU L No. 211, p. 15 as amended.
[20] OJ EU L No. 158, p. 22.
[21] OJ EU L No. 140, p. 136 as amended.
[22] OJ EU L No. 328, p. 1.
[23] OJ EU L No. 115, p. 39.

12) Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013;[24]

13) Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU.[25]

This EU legislation is part of the so-called Third Energy Package, which aims to "develop an effective single European electricity and gas market, ensure transparency of retail markets to keep prices as low as possible, improve security of supply, raise the standard of services and strengthen consumer protection" [Czarnecka and Ogłódek 2012]. The aforementioned EU legal acts are the basis for shaping the Polish energy law and introducing mechanisms related to the reduction of emissions in the Polish energy sector. Within the framework of the state energy policy, an important role is played by the legal regulations on the support of renewable energy sources. An important EU document concerning obligations related to the creation and promotion of such sources is the Communication from the Commission Europe 2020. Strategy for smart, sustainable and inclusive growth (Brussels. 3.3.201, COM 2010), which was adopted in March 2010.

2. IMPLEMENTATION OF POLAND'S COMMITMENTS IN THE FIELD OF DECARBONIZATION OF THE ENERGY SECTOR

The figures adopted in the Polish energy system for the reduction of the sector's emissions must take into account the obligations arising from EU membership. According to the content of relevant legal acts and other documents, including the above-mentioned Europe 2020 strategy, the European Union has undertaken to reduce greenhouse gas emissions by 20% by the year 2020. The basis for calculating the reduction is the 1990 emissions.[26] The EU's emission reduction policy is to continue after 2020. The European Council set the objective of further reducing emissions by 40% by 2030. Among the tools used in the EU to reduce greenhouse gas emissions is the so-called European Union Emissions Trading System (EU ETS) [Jarno 2016, 125]. The adopted document indicates the division of economic sectors into those which have a significant impact on exhaust gas emissions (EU ETS) and those which have a marginal impact (non-ETS) and are excluded from the ETS. The assumption adopted at the EU level is to include the EU ETS sectors in the EU legislation, while activities related to the reduction of emissions in non-ETS sectors have been delegated to Member Sta-

[24] OJ EU L No. 156, p. 26.
[25] OJ EU L No. 156, p. 1.
[26] Which represents a 14% reduction compared to 2005.

tes' systems, including the choice of methods and tools used in these sectors to achieve the adopted objectives.

The EU legal acts and its other documents have become the basis for changes in Polish law in the field of energy law, including renewable energy sources, and have inspired the development of many national documents at government level. Such a document is the so-called *State Energy Policy until 2025*.[27] In defining the most important principles of the energy policy doctrine, the reduction was indicated, among other things, of the carbon footprint of the energy sector by supporting the development of Renewable Energy Sources (RES). One of the directions adopted in this document is to maintain stable support mechanisms for the use of renewable energy sources, including ensuring stability of mechanisms supporting the development of RES and creating conditions for safe investment. At the same time, it is guaranteed that any significant changes to these mechanisms will be introduced sufficiently in advance to guarantee stable investment conditions. Similarly, the issue of decarbonization of the energy sector, including the participation of RES in this process, is included among the objectives of the state's energy policy, which was adopted in the successive document: *Poland's Energy Policy until 2030* (Resolution of the Council of Ministers No. 202/2009 of 10 November 2009). Also in the draft document: *Poland's energy policy until 2050*, the operational goal is to reduce the impact of the energy sector on the environment, which will include, *inter alia*, increasing the use of renewable energy sources.[28] The latest government document is a draft document: *Poland's Energy Policy until 2040*, which was firstly published as a draft document on the website of the Ministry of Energy on 8th of November 2019, and was finally approved by the Council of the Ministers on 2nd of February 2021 (so-called PEP2040). It must be underlined that this is a significant step in the development of the fuel and energy sector.

The aim of PEP2040 is energy security, ensuring the competitiveness of the economy, energy efficiency and reducing the environmental impact of the energy sector, while making optimal use of Poland's own energy resources. As part of its implementation, the document assumes the reduction of carbon dioxide emissions by 30% by 2030 (in relation to the 1990 level), using renewable energy sources at the level of 21%–23% in gross final energy consumption in the same year. Both assumptions are linked. However, the increase in the share of RES PEP2040 is made dependent on granting Poland additional financial resources from the European Union. Nevertheless, PEP2040 still indicates hard coal as the basis for the national energy balance. The document also contains a statement which, depending on interpretation, may question the actual performance of Poland's emission reduction commitments. PEP2040 states that "Poland, as an EU Member State, will contribute to the objectives of the EU and other international

[27] Journal of Laws of 2005 No. 42, item 562.
[28] Website of the Ministry of Energy: www.me.gov.pl

commitments in accordance with its capabilities."[29] Bearing in mind also the adopted assumption that in 2030 the total share of coal in electricity generation will be at the level of 55%–60%,[30] one may have justified doubts as to the effectiveness of Poland's activities in this area. On the other hand, plans to develop a legal framework for the use of hydrogen, among other fuels in transport as well as in other sectors, and prospects for the implementation of nuclear energy seem promising (although not entirely realistic). As a result, the most desirable direction of development of the energy sector, from the perspective of its decarbonization, is the development of renewable energy sources, which was also described in PEP2040. However, an element of concern is its dependence on obtaining additional financial resources from the European Union, which is being justified by the so-called just transition. Facing the pandemic of COVID-19 and its consequences, PEP2040 plays also an important part in the National Recovery Plan, which is the basis for disbursement of funds under the Recovery and Resilience Facility.

CONCLUSIONS

Poland, being a Member State of the European Union, must comply with the obligations arising from EU law and follow the directions set out in the EU energy policy. However, due to national circumstances, the implementation of the decarbonization target for the energy sector, despite the declarations made as part of the national energy policy, may raise some doubts. Basing the national energy balance on hard coal, with the desire to protect the competitiveness of the economy in the sector in question, as well as political reservations as to the policy that burdens with the costs of transformation of this sector economies with a high use of coal fuels, are activities that may limit the effectiveness of implementation of the sustainable development principle. As a result, the most desirable direction of development of the energy sector, from the perspective of its decarbonization, is the development of renewable energy sources, which is also described in PEP2040. Nevertheless, this should be a goal pursued by the state regardless of the level of financial assistance from the European Union. The final beneficiary of a sustainable energy policy is every human being, and the transition to a low/zero emission economy is a matter for our health, life, and the survival of the whole species in general.

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