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LEGAL ASPECTS OF GEOTHERMAL ENERGY USE IN POLAND

Abstract

Geothermal energy, understood as the energy stored in the form of heat beneath the earth's surface, is one of the types of renewable energy sources. In Poland, geothermal energy is the renewable energy source with the highest technical potential, which results from the fact that there are natural sedimentation-structure basins in Poland, filled with hot underground waters of various temperatures. One of the basic factors determining the potential development of undertakings oriented at the use of geothermal energy is the legal environment, understood as a system of legal regulations relating to human activity connected with the use of geothermal energy. The subject of this study is the analysis of legal conditions for ventures geared towards geothermal energy exploration, documentation, and extraction. In Poland there is no uniform legal act regulating these issues in a comprehensive way. The provisions of the Geological and Mining Law and the Water Law, but also the provisions of the Construction Law, Environmental Protection Law, Energy Law, and Renewable Energy Sources Act apply to the analysed projects. The complexity and multilayer character of legal regulations determines the multitude of legal procedures reflecting the regulatory function of the state, realised through the system of concessions, permits, permissions, and approvals. The aim of this study is to present the legal regulations applicable in Poland relating to the use of geothermal energy, and to analyse the level of rationing of activities undertaken in this field.

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Introduction

Geothermal energy, in legal terms, is the energy accumulated in the form of heat under the earth's surface.[1] It is classified by the legislator as a renewable energy source[2] and as such is part of the concept of sustainable energy development (SED), based on the principle of efficient use of energy, and human, economic, and natural resources.[3] Shaping the energy policy in the spirit of sustainable energy development must take into account the increase in the use of renewable energy sources, including the increase in the share of distributed generation, protection of natural resources, and integration between social, environmental, and economic objectives. It even seems necessary to take actions aimed at using the geothermal energy potential in Poland in the context of these assumptions.

Poland is considered to be a country with very good geothermal conditions, although it lies outside the volcanic areas. More than 80% of the country's area is covered by three geothermal provinces: Central European (Polish Lowland), Pre-Carpathian and Carpathian, for which the water temperature ranges from 30 to 130 °C (and locally even 200 °C) and the depth in sedimentary rocks ranges from 1 to 10 km.[4] Despite

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[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 amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140, 5.6.2009, p. 16–62; art. 2(10) of the Act of 20 February 2015 on Renewable Energy Sources, Polish OJ, 2018, item 2389, hereinafter referred to as the RESA.

[2] M. Kaczmarczyk, "Podstawy geotermii", *GLOBEnergia. Odnawialne Źródła Energii*, 2009, No. 2, p. 13 ff.

[3] A. Plutowicz, "Przesłanki rozwoju rynku odnawialnych źródeł energii w Polsce w świetle idei zrównoważonego rozwoju", *Problemy Ekorozwoju*, 2009, No. 1, p. 113.

[4] K. Sala, "Przemysłowe wykorzystanie energii geotermalnej w Polsce na przykładzie geotermalnego zakładu ciepłowniczego w Bańskiej Niżnej", *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego*, 2018, No. 2, p. 76; M. Michałowski, "Proekologiczne wykorzystanie energii geotermalnej Polski", *Inżynieria Mineralna*, 2011, No. 2, p. 3.

the positive assessment of geothermal conditions in Poland, the share of geothermal energy in the value of energy produced, including the value of energy produced from renewable energy sources is marginal[5] and the development of geothermal energy in Poland is described as a stage of experimental development.[6]

The legal conditions for the use of geothermal energy are determined by the technical conditions, shaped primarily by the geological conditions. Basically, geothermal resources are divided into hydrothermal and petrothermal resources, while with regard to their location, a distinction is generally accepted between so-called deep geothermy (> 400 m deep), using either the heat of dry, hot rocks, or directly the heat of warm and hot groundwater and shallow geothermy (up to 400 m deep).[7] This distinction is generally equivalent to high-temperature geothermy (high enthalpy geothermy), which enables the direct use of earth heat for heating, recreational, or agricultural purposes, and low-temperature geothermy (low enthalpy geothermy), which can be used, in particular for heating purposes, using heat pumps.[8]

In Poland, there is no uniform legal regulation directly dedicated to investments and projects related to the use of geothermal energy. The legal environment of these investments is shaped in particular by sector-specific environmental regulations, conditioned by the level of interference in particular environmental resources (minerals, water) and horizontal regulations, relating to the comprehensive regulation

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[5] Geothermal energy in 2016 represented 0.2% of the value of energy obtained in Poland from renewable energy sources see G. Berent-Kowalska, J. Kacprowska, D. Piwko, A. Jurgaś, *Energia ze źródeł odnawialnych. Analizy statystyczne*, Warszawa: Główny Urząd Statystyczny, 2018, p. 20. See also B. Kępińska, "Przegląd stanu wykorzystania energii geotermalnej w Polsce w latach 2016–2018", *Technika Poszukiwań Geologicznych. Geotermia, Zrównoważony Rozwój*, 2018, No. 1, p. 11 ff.

[6] Energy Policy of Poland until 2040. Appendix 1. Assessment of the implementation of the previous state power industry – Project, Ministry of Energy, Warsaw, 2019, p. 32, https://www.gov.pl/web/energia/polityka-energetyczna-polski-do-2040-r-zapraszamy-do-konsultacji1 [last accessed 11.8.2021].

[7] J. Kaniuczak, M. Nazarkiewicz, "Geotermia a ochrona zasobów środowiska", *Polish Journal for Sustainable Development*, 2016, v. 20, p. 77.

[8] J. Kapuściński, A. Rozdoch, *Geotermia niskotemperaturowa w Polsce i na świecie. Stan aktualny i perspektywy rozwoju. Uwarunkowania techniczne, środowiskowe i ekonomiczne*, Warszawa: Ministerstwo Środowiska, 2010, p. 46. See also M. Ł. Michalski, "Kierunki wykorzystania światowych zasobów energii geotermalnej", *Energetyka*, 2007, No. 6–7, p. 490 ff.

of environmental protection as such (environmental protection law, impact assessment), as well as administrative regulations regulating investment and construction processes *in genere* (construction law, spatial development).

The subject of the further part of the study is the analysis of the legal conditions of undertakings aimed at using geothermal energy in Poland. The scope of the study was limited to establishing what are the legal conditions for the implementation of investments enabling the use of geothermal energy. Outside the scope of the study, however, are the issues of the legal environment of the already performed activities, in particular those related to regulation of the energy sector and legal and financial instruments.

In the comparative legal field, the legal solutions adopted in the Czech Republic relating to the concept of special interference with the earth's crust have been presented. One of the manifestations of this interference is the industrial use of the thermal energy of the earth's interior. This solution is an example of the development of mining law regulation by creating new legal concepts corresponding to contemporary needs.

I. Legal Conditions of Low-Temperature Geothermal Energy

1. Geological and Mining Law

The basic legal act determining the legal environment for investments in low-temperature geothermal energy is the Act of 9 June 2011 Geological and mining law.[9] In the Polish legal system, heat accumulated inside the earth is not a mineral. Such a mineral, however, is thermal water, which is understood to mean groundwater with a temperature of not less than 20°C at the outflow from the intake.[10] According to the legal definition adopted in the geological and mining law, geological labour is, among other things, designing and carrying out research for the purposes of

[9] Polish OJ, 2019, item 868, hereinafter referred to as the Geological and Mining Law or abbreviated GML.

[10] Art. 5(1) and (2) clause 2 of the GML.

using the Earth's heat or using groundwater; while geological works are types of geological labour that involve carrying out all activities below the surface of the ground, including the use of blasting agents, as well as the decommissioning of excavations after these activities. At the same time, the legislator *expressis verbis* stipulates that the Geological and Mining Law does not apply to the drilling of excavations and drill holes with a depth of up to 30 m in order to use the heat of the Earth outside the mining areas.

Investments in low-temperature geothermal energy requiring excavations or drill holes with a depth of more than 30 m in order to use the heat of the ground are subject to the regulation of geological and mining law, with the scope of the resulting regulation being determined by the depth of the works performed. The legal conditions of geological works carried out at depths of up to 100 m and over 100 m are different.

The basic document, determining the legality of geological works with the use of geological works carried out at depths exceeding 30 m, is the project of geological works. The detailed scope and requirements for the project of geological works are specified in the Regulation of the Minister of the Environment of 20 December 2011 on detailed requirements for the project of geological works, including works whose performance requires obtaining a concession.[11]

The basic form of regulation of geological works in Polish law is, in the form of an administrative decision, approval of a geological works design. However, in the case of geological works involving drilling for the purpose of utilizing the Earth's heat, the legislator has withdrawn from this form of regulation in favour of only declaring the geological works design to the relevant public administration bodies. Pursuant to art. 85(2) of the GML the geological works design involving drilling for the purpose of utilizing the Earth's heat should be reported to the starost.[12] In this case, the legislator has applied the construction of the so-called tacit consent. The commencement of geological works may take place if within 30 days of the date of submission of the geological works design, the starost, by way of a decision, does not object to it. A starost may raise an objection if: 1) the method of performance of the

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[11] Polish OJ, 2011, No. 288, item 1696.

[12] W. Mucha, "Geotermia w Polsce – aktualne regulacje prawne", *Technika Poszukiwań Geologicznych. Geotermia, Zrównoważony Rozwój*, 2011, No. 1–2, p. 269.

intended geological works threatens the environment, 2) the geological works do not meet the legal requirements.[13]

It is the duty of the person performing geological works, including on the basis of the notification of geological works, to document on an ongoing basis the course of geological services, including geological works, and their results. The results of geological works, together with their interpretation, determination of the degree of achievement of the intended purpose, together with their justification, are presented in the geological documentation. The geological documentation, documenting the course of geological works intended to make use of the Earth's heat and the results thereof, are prepared in paper and electronic form within 6 months of the completion of the works and are submitted to the authority to which the design of geological works has been reported (the relevant starost), but the documentation is not subject to approval in the form of an administrative decision.

The legal conditions discussed above, resulting from the provisions of geological and mining law, concern geological works related to the use of the Earth's heat carried out at a depth greater than 30 m. In the case of works carried out at a depth greater than 100 m, apart from the forms of regulation indicated above, there are additional legal requirements related to the so-called mining supervision. In accordance with art. 86 of the GML, the provisions concerning the mining plant and its operation and mining rescue are applied accordingly to geological works carried out at a depth of more than 100 m. This means that the execution of excavations and drill holes beyond the indicated depth is subject to the legal regime applicable to the operation of a mining plant. A characteristic element of this regime is the plan of the mining plant operation, which is the basis for conducting works. A mining plant operation plan is an act of long-term planning, the content of which is determined by statutory requirements.[14] The obligation to develop the plan is imposed on an entity conducting activities regulated by the provisions of geological and mining law, i.e. in the case under analysis the entity conducting

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[13] More H. Schwarz, *Prawo geologiczne i górnicze. Komentarz*, vol. 1, Wrocław: Salome, 2nd ed., 2013, p. 462; G. Klimek, in B. Rakoczy (ed.), *Prawo geologiczne i górnicze. Komentarz*, Warszawa: Wolters Kluwer, 2015, p. 466.

[14] M. Szalewska, in B. Rakoczy (ed.), *Prawo geologiczne i górnicze. Komentarz*, Warszawa: Wolters Kluwer, 2015, p. 549 ff.

geological works, which notified the design of geological works. The plan is prepared for the period from 2 to 6 years, unless the assumed duration of the works is shorter – then the plan is prepared for the entire duration of the works. The statutorily defined, obligatory scope of the mining plant operation plan includes three essential parts: 1) description of the organisational structure, 2) definition of the spatial boundaries of works and 3) description of detailed undertakings necessary to ensure the enumerated values (safety, environment, deposit protection, damage prevention and repair).[15] The plan of the mining plant operation for the purposes of geological works must take into account the conditions resulting from the geological works project reported to the relevant starost. The mining plant operation plan prepared by the entrepreneur is subject to approval by the mining supervisory authority, which is the director of the district mining office. It is the entrepreneur's obligation, prior to submitting the plan for the operation of a mining plant to the mining supervision authority, to obtain the opinion of the relevant head of the commune (mayor, city mayor) as to the compatibility of the intended activity with the intended use of the real estate in the local spatial development plan or in separate regulations, and in the absence of a local spatial development plan – in the study of conditions and directions of spatial development of the commune. The opinion of the mayor, the geological works project and the mining plant operation plan itself are attachments to the plan approval application. Approval of the mining plant operation plan takes the form of an administrative decision.

The adoption of a regime relevant to the operation of a mining plant for geological works carried out at a depth greater than 100 m results in the fact that, apart from the obligation to draw up and submit a plan for the operation of the plant for approval, the entrepreneur conducting such works is also subject to other obligations resulting from the administrative and legal regulation of mining activities. These obligations include in particular: operating the plant under the direction and supervision of persons having the required qualifications, observing the requirements for products, machines, and equipment

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[15] Appendix No. 7 to the Regulation of the Minister of the Environment of 8 December 2017 on the plans for the operation of mining plants, Polish OJ, 2017, item 2293.

used in the operation of the plant, recognising the hazards associated with the operation of the mining plant and taking measures to prevent and remove these hazards, having appropriate material and technical means and traffic services to ensure the safety of employees and the operation of the mining plant, assessing and documenting occupational risk and applying the necessary solutions to reduce this risk, including by drawing up a safety and health protection document, and having and properly storing the documentation of the operation of the plant. Such activities are also subject to the control and supervision of the mining supervisory authorities, which are the President of the State Mining Authority and directors of district mining authorities. Under the supervision exercised, the mining supervisory authority is entitled to: 1) order the rectification of irregularities arising as a result of a breach of the regulations applicable to the operation of the mining plant or of the conditions set forth in the mining plant operation plan, 2) suspend in whole or in part the operation of this plant or its equipment, specifying the conditions for resuming operation of this plant or its equipment, 3) order the adoption of necessary preventive measures, 4) order the performance of certain activities necessary to ensure the proper operation of the mining plant, other than preventive measures. These authorities may also examine the correctness of the solutions applied or provided by the entrepreneur to be applied, and make measurements to assess the state of safety in the mining plant and the state of public safety or the environment in connection with the operation of the mining plant, or order the entrepreneur, by way of a decision, to make these examinations or measurements.

2. Water Law

The legal conditions of low-temperature geothermal energy resulting from water law are determined by the type of geothermal installation. Taking into account the fact that the contractual division of geothermal installations distinguishes two basic systems – closed system and open system,[16] these conditions should be referred to this very division. In

[16] Cf. J. Kapuściński, A. Rozdoch, *supra* note 8, p. 46.

the case of a closed system, the medium transporting heat is a substance filling the collector pipes circulating in a closed circuit, i.e. without direct contact with the environment. This solution is not subject to water law regulations and does not remain within the sphere of influence of this legal regulation. The only exception to this rule may be the case of locating the geothermal installation in the water intake protection zone.

In an open system, the heat transfer medium from the rock mass is underground water pumped from a well. After the heat is released, the used water is discharged into the sewage system, or underground, or surface water and can be used for other purposes (irrigation, consumption).[17] Groundwater intake, for the purposes related to the operation of a geothermal installation in the open system, belongs to a wide category of water use, covered by the administrative and legal regulation of water law.[18] Water use in the Polish legal system includes four forms: common use, ordinary use, special use, and water services. According to the legal definition, the common use of water serves to satisfy personal, household, or agricultural needs, without the use of special technical devices, as well as use for recreation, tourism, water sports, and amateur fishing.[19] The ban on the use of special devices, as a definition element of the general use of water, makes it impossible to include geothermal installations in this classification. On the other hand, the notion of ordinary water use refers to the right of the landowner to use the waters he or she owns and the groundwater in his/her land. This right, however, does not include the right to construct water facilities without the required water law consent and is limited by the amount of water intake and discharge. The usual use of water involves the collection of groundwater or surface water in an average amount not exceeding 5 m3 per day per year and the introduction of sewage into water or soil in an amount not exceeding 5 m3 per day in total. For technical reasons, these restrictions generally preclude geothermal installations from classifying water intake as normal water use. Water intake, which does not constitute an ordinary use, is classified by the Polish legislator as water services. Apart from surface water intake and groundwater intake, water services also include: the use of water for

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[17] Ibid., p. 47.

[18] Polish OJ, 2019, item 2268, hereinafter referred to as water law or abbreviated as WL.

[19] Art. 32(2) WL.

power generation purposes, including water power generation, and discharge to water or land of water intake and unused water. This means that, under Polish law, the use of groundwater for the operation of geothermal installations in the open system should be classified as water services, and depending on the adopted technical solutions this use may include more than one water service.

Water services, in the Polish legal system, are subject to strict administrative and legal regulations based on the concept of so-called water-law consents.[20] The basic form of water services regulation are water-law permits, issued in the form of an administrative decision, by the bodies of specialized water administration – Polish Waters. A water law permit is issued for a definite period of time and specifies the purpose of water facilities and other works, the purpose and scope of water use, conditions for exercising the right and obligations necessary for the protection of environmental resources, of the interests of the population, and of the economy, within the scope of the impact of the intended use of water. In a situation where investments or activities within the scope of using water services may affect the possibility of achieving environmental objectives, which include, among others, the protection of groundwater bodies and undertaking remedial actions, as well as ensuring a balance between intake and supply of these waters so as to achieve their good condition, it becomes necessary for the investor to obtain a water law assessment.[21] This assessment is a document necessary to obtain a water-law permit.

3. Construction Law

A typical element of the technical infrastructure of low-temperature geothermal energy is heat pumps. Therefore, a fundamental question arises as to the scope of subjecting these investments to the construction

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[20] See more B. Rakoczy, *Prawo wodne. Praktyczny przewodnik*, Warszawa: Wolters Kluwer Polska, 2018.

[21] This concerns use of water services involving groundwater intake of 1 million m^3 or more per year or groundwater intake of 100 000 m^3 or more per year if the intake is carried out in a body of groundwater at risk of failing to meet the environmental objectives owing to quantitative status in accordance with the river basin management plan.

law regulations. In the current state of the law, the installation of heat pumps has been *expressis verbis* classified as construction work for which no building permit is required.[22] These works do not have to be reported to the architectural and construction administration authorities. Thus, it should be assumed that they have been excluded from the scope of construction law regulations. An exception to this rule is construction works consisting in the installation of heat pumps at a building object entered in the register of monuments or in an area entered in the register of monuments, for which a building permit and reporting of construction works are required respectively.

4. Environmental Protection Law

One of the basic principles articulated in the Act of 27 April 2001 Environmental Protection Law[23] is the principle of the general use of the environment. According to art. 4 of the Environmental Protection Law, the general use of the environment is the right of everyone and includes the use of the environment, without the use of installations, to satisfy personal and household needs, including leisure and sports, for the introduction of substances or energy into the environment, and the general use of water. With reference to low-temperature geothermal energy, it should be assumed that it does not fall within the scope of the idea of general environmental use because of the element of use of the installation. Assuming that the devices used in low-temperature geothermal energy (in particular heat pumps) are installations within the meaning of the environmental protection law, it should be pointed out that they have not been covered by the legislator's permitting regime and thus fall within the notion of ordinary use of the environment. The absence of the requirement to obtain a permit for the use of low-temperature geothermal installations does not mean the absence of administrative and legal regulations with respect to the equipment in use. This regulation is mainly based on a system of generally applicable legal

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[22] Art. 29(2) item 16 of the Act of 7 July 1994 Construction Law, Polish OJ, 2019, item 1186.

[23] Polish OJ, 2019, item 1396, hereinafter referred to as the Environmental Protection Law or abbreviated as EPL.

regulations affecting directly the legal sphere of the addressees without the need to specify them by means of an individual administrative act. These are primarily orders and prohibitions contained in the Environmental Protection Law, which relate to the use of installations and equipment, with particular emphasis on the requirement to observe emission standards and environmental quality standards.

II. Legal Conditions of Deep Geothermal Energy

The specificity of the geological structure of Poland results in the fact that in our country there are basically no conditions for obtaining energy from the heat of rocks located inside the Earth. Thus, the analysis of legal conditions of deep geothermy should be limited to deep hydrothermal geothermy, using warm and hot groundwater, among others, through the exploitation of thermal waters.

1. Legal Status of Thermal Waters in Poland

In the Polish legal system thermal waters have been explicitly classified by the legislator as minerals and regulated by the geological and mining law. In accordance with art. 5(1) of the Geological and Mining Law, minerals are not water, except for medicinal waters, thermal waters, and brine. At the same time, the legislator has defined thermal waters as groundwater which has a temperature of not less than 20° C at the outlet from the intake, with the provision that they do not come from the drainage of mine workings. The consequence of considering thermal waters as minerals and subjecting them to the regime of geological and mining law is the exclusion of applying to thermal waters the provisions of the water law, which results directly from art. 7(1), item 2 of the WL. Thermal water deposits, in accordance with art. 10(2) of the GML, are mining property. The normative structure of mining property is a legal instrument of Polish geological and mining law based on the identification of a specific type of property. The criterion for the identification is a specific object of property – a statutorily defined type of minerals, including thermal waters. The doctrine indicates that the

basis for identification of mining property is the legislator's assumption that typical civil law instruments are unreliable in relation to this type of property, while at the same time believing that this issue in its entirety cannot be separated from civil law.[24] In the opinion of A. Lipiński, mining property is a subjective right 'similar' to the ownership of property – it is an exclusive right, effective *erga omnes* and includes the use of the object of property.[25] Unlike the classic construction of the right of ownership, it is an inalienable right with a limited possibility of disposal. Mining property is a right vested exclusively in the State Treasury. This means that mineral deposits covered by mining property are not components of the property within which they are located and are not connected with the ownership right to land property.[26] The only form of disposal of the mining property right by the State Treasury is to establish mining usufruct. At the same time, it is the only form provided for by Polish law of making the deposit constituting the mining property available to other entities. In the literature on the subject, a dispute over the legal nature of mining usufruct emerged. In the opinion of some representatives of the doctrine, mining usufruct does not constitute a limited property right, but is a subjective right *sui iuris,* effective against any person, described as an absolute right.[27] A. Lipiński takes a different view: in his opinion mining usufruct is a typical obligation to which, according to the legislator, the provisions of the Civil Code[28] concerning lease,[29] in the scope not regulated by the Geological and Mining Law, should apply. The content of this right is

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[24] B. Rakoczy, in B. Rakoczy (ed.), *Prawo geologiczne i górnicze. Komentarz*, Warszawa: Wolters Kluwer, 2015, p. 69.

[25] A. Lipiński, "Komentarz do art. 10–12 ustawy z dnia 9 czerwca 2011 r. Prawo geologiczne i górnicze", *Prawne Problemy Górnictwa i Ochrony Środowiska*, 2017, No. 2, p. 24.

[26] Ibid., p. 16.

[27] H. Schwarz, *supra* note 13, p. 162; B. Rakoczy, "Użytkowanie górnicze w prawie polskim", in B. Rakoczy (ed.), *Wybrane problemy prawa geologicznego i górniczego*, Warszawa: Wolters Kluwer, 2016; similarly G. Radecki, "Odpowiednie stosowanie przepisów o dzierżawie do użytkowania górniczego", in G. Dobrowolski, G. Radecki (eds.), *Prawna regulacja geologii i górnictwa w Polsce, Czechach i na Słowacji. Wybrane zagadnienia*, Katowice: Infomax, Marasik-Bielejec, E., Bielejec, G., 2014, pp. 204–205.

[28] The Act of 23 April 1964 Civil Code, Polish OJ, 2019, item 1145.

[29] A. Lipiński, "Komentarz do art. 13–17 ustawy z dnia 9 czerwca 2011 r. Prawo geologiczne i górnicze", *Prawne Problemy Górnictwa i Ochrony Środowiska*, 2018, No. 1–2, p. 43; similarly J. A. Stefanowicz, "Koncesje i użytkowanie górnicze w nowym prawie

the exclusive use of the space covered by the use, with such use taking place within the limits set by the Acts and by the agreement on the establishment of mining usufruct and for the purpose of carrying out activities regulated by the Geological and Mining Law. Mining usufruct is established by means of an agreement concluded between the State Treasury and the future mining usufructuary, with this agreement being the only possibility of establishing the right in question.[30] The mining usufruct establishment agreement is a payable agreement, in which establishing the remuneration is an element of *essentialia negotii*. The legislator stipulated the written form for this agreement under pain of nullity. Pursuant to art. 15(1) item 2 of the GML, anyone who, as a result of geological works, has documented a deposit of mineral, constituting an object of mining property, excluding a deposit of hydrocarbons, to an extent enabling the preparation of a deposit development project and has obtained a decision approving the geological documentation of that deposit on the basis of a relevant concession, is entitled to apply for the establishment of mining usufruct for its benefit with priority over others. Taking into account the fact that the prospecting and exploration of thermal water deposits does not constitute a licensed activity with respect to the establishment of mining usufruct of a thermal water deposit, the principle of priority of the establishment of this right resulting from art. 15(1) of the GML will not apply.

The identification of mining property as a property right, of a primary and absolute nature, the subject of which is a mineral deposit and mining usufruct as a derivative right to this deposit, does not settle the issue of the administrative and legal regulation of mining activities within this deposit. Both the normative category of mining property and mining usufruct rights are civil law institutions which regulate the principles of exercising property rights to the deposit as a specific subject of civil law relations. These institutions do not shape the sphere of administrative and legal relations related to the restriction of freedom of economic activity in geology and mining. A classic instrument for

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geologicznym i górniczym", *Zeszyty Naukowe Instytutu Gospodarki Surowcami Mineralnymi i Energią Polskiej Akademii Nauk*, 2011, No. 81, p. 16 ff.

[30] R. Mikosz, "Użytkowanie górnicze – kilka uwag *de lege ferenda*", in J. Gołaczyński, P. Machnikowski (eds.), *Współczesne problemy prawa prywatnego. Księga pamiątkowa ku czci Profesora Edwarda Gniewka*, Warszawa: Wydawnictwo C.H. Beck, 2010, pp. 391–392.

the regulation of geological and mining activities is a licence which constitutes a specific type of administrative-legal permit. However, under Polish law, these two areas of legal regulations – the private and public law spheres – are linked by introducing the principle of mutual dependence of the instrument of mining usufruct as a private law instrument, and licence as a public law instrument. In accordance with art. 13(1a) of the GML, the mining usufruct agreement becomes effective on the date of obtaining the licence. This means that the necessary condition for the occurrence of legal effects of an agreement establishing mining usufruct, including in particular the right to use the deposit for remuneration, is obtaining a licence. At the same time, the legislator assumed that in case of failure to obtain the licence within one year from the date of concluding the mining usufruct agreement, the agreement expires, and the mining usufruct itself expires also in the case of expiration, withdrawal, or loss of licence validity, regardless of the reason. Moreover, in accordance with art. 12(4) of the GML, the provisions on mining usufruct do not apply to geological works, the performance of which does not require obtaining a licence. Therefore, it should be assumed that the performance of geological works, for which the legislator does not require obtaining a licence, within the deposit which is the mining property, do not require the establishment of mining usufruct, and such works are de facto carried out in the private sphere without an agreement.

2. Licensing of Geological and Mining Activities within a Thermal Water Deposit

One of the administrative and legal forms of business regulation is licences. The doctrine of administrative economic law indicates that it is an act of permission of the public authority for the undertaking and performance of economic activity by an entrepreneur, in the area constituting a state monopoly.[31] In the court's jurisprudence there is

[31] Cf. C. Kosikowski, *Koncesje w prawie polskim*, Kraków: IPSiIZ, 1996, p. 26; C. Kosikowski, *Koncesje i zezwolenia na działalność gospodarczą*, Warszawa: Wydaw. Prawnicze „LexisNexis", 2002, p. 47; M. A. Waligórski, *Koncesje, zezwolenia i licencje w polskim administracyjnym prawie gospodarczym*, Poznań: Wydawnictwo Naukowe Uniwersy-

a well-established view that a licence is a public subjective right granted by a decision of a competent administrative authority to an individually designated entity which meets certain statutory requirements for both the subjective and objective performance of a specific type of business activity.[32]

One of the areas of business activity subject to licensing is geological and mining activities, including in particular those conducted in relation to the subject of mining property.[33] As J. Kabza points out, the economic rationale for including these activities in the licensing scheme is negative externalities, including in particular undesirable effects on the environment, spatial order, health, and the problem of common goods characteristic of mining activity.[34] As a rule, the Polish legislature imposes an obligation on an entrepreneur to obtain a licence for both exploration and identification, as well as extraction from deposits of minerals covered by mining property. An exception to this rule is thermal waters, therapeutic waters, and brine, in the case of which the legislator binds the obligation to obtain a licence only for activities involving mineral extraction, while activities involving the search for and recognition of thermal water deposits do not require a licence. The licence for the extraction of thermal waters is issued by the Marshal of the Voivodship for a definite period of time covering a period from 3 to 50 years. The Marshal grants a mining licence in agreement with a commune head (mayor, mayor of the city) competent for the place of the intended activity. The criterion for the arrangement is not to violate the intended use and method of use of the property specified in the

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tetu im. Adama Mickiewicza, 2012, p. 32 ff.; D. R. Kijowski, *Pozwolenia w administracji publicznej. Studium z teorii prawa administracyjnego*, Białystok: „Temida 2" przy współpr. Wydziału Prawa Uniwersytetu w Białymstoku, 2000, p. 143 ff.; K. Łastawski, "Reglamentacja działalności przedsiębiorców i wykonywania wolnych zawodów", *Studia Prawnicze i Administracyjne*, 2013, No. 1, p. 37 ff.

[32] Judgment of the Supreme Court of 8 May 1998, III RN 34/98, *OSNP*, 1999, No. 5, item 157.

[33] M. Nieć, "Koncesjonowanie poszukiwań, rozpoznawania i eksploatacji złóż kopalin a wymagania racjonalnej gospodarki", *Przegląd Geologiczny*, 2018, No. 3, p. 170; A. Szydzik, "Koncesja w ustawie – Prawo geologiczne i górnicze w świetle ostatnich zmian legislacyjnych", *Przegląd Geologiczny*, 2018, No. 9, p. 542.

[34] J. Kabza, *Koncesje i zezwolenia. Analiza ekonomiczna*, Warszawa: Lex a Wolters Kluwer business, 2014, p. 256.

local spatial development plan and in separate regulations with the intended activity, and in the absence of a local spatial development plan in the study of conditions for the directions of spatial development of the commune and in separate regulations.[35] The court rulings rightly indicate that in such a legal state, the commune authority only assesses the compliance of the conditions of the planned exploitation with the commune planning acts, and does not set requirements for such exploitation.[36]

The licence for the extraction of thermal water determines: 1) the type and method of carrying out the intended activity, 2) the space within which the intended activity is to be carried out and the boundaries of the area and the mining site, 3) the duration of the licence, 4) the date of commencement of the activity specified in the licence, and, where necessary, the conditions which must be met to commence the activity. The licence may specify other requirements for the performance of the activity covered by the licence, in particular as regards public safety and environmental protection.

The legal doctrine indicates that the licence decision is a discretionary assessment.[37] With regard to geological and mining licences this view should be considered controversial. It stems from the fact that the legislator has regulated *expressis verbis* the grounds for refusal to grant a licence. Pursuant to art. 29(1) and (1a) of the GML the licensing authority refuses to grant a licence if: 1) the intended activity is contrary to the public interest, in particular related to the security of the state, including the interest of the state concerning raw materials or environmental protection, including rational management of mineral deposits, or 2) the intended activity would make it impossible to use the real property in accordance with its intended use as specified in the local spatial development plan or

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[35] More see A. Lipiński, "Niektóre problemy planowania przestrzennego w związku z działalnością regulowaną prawem geologicznym i górniczym", *Studia Iuridica Agraria*, 2012, No. 10, p. 170 ff.; A. Lipiński, "Niektóre problemy współuczestnictwa organów administracji w procedurach regulowanych prawem geologicznym i górniczym", *Finanse Komunalne*, 2013, No. 9, p. 64 ff.

[36] Judgment of the Supreme Administrative Court of 1 March 2017, II OSK 2832/16, CBOSA.

[37] G. Klimek, "Znaczenie i rola koncesji w ustawie – Prawo geologiczne i górnicze", in B. Rakoczy (ed.), *Wybrane problemu prawa geologicznego i górniczego*, Warszawa: Wolters Kluwer Polska, 2016, p. 75.

in separate regulations, respectively, and in the absence of such plans – 3) would make it impossible to use the real estate in the manner specified in the study of conditions and directions of spatial development of the commune or in separate regulations, 4) the application for a licence covers the same space and type of activity, and in the case of an application for extraction of minerals from a deposit – also the type of mineral already covered by a licence granted to another entity. The structure of the provision of art. 29(1) and (1a) of the GML clearly indicates the duty of the public administration body as regards the refusal to grant a licence. In the light of the above, I consider it correct that in a situation where in the course of the licence procedure no negative grounds for refusing the licence are found (grounds for refusal under art. 29(1) of the GML), the licensing authority is obliged to consider positively the application for the licence,[38] which in turn excludes the attribution of a discretionary character to the licence decision.

III. Scope of Regulation of the Use of Geothermal Energy in the Act on Renewable Energy Sources

Since 2015, the Act on Renewable Energy Sources has been in force in Poland, implementing Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources. According to this act, renewable energy sources include among others geothermal energy, understood as energy of a non-anthropogenic nature accumulated in the form of heat beneath the Earth's surface. The Act on Renewable Energy Sources focuses mainly on issues related to the acquisition of electricity from renewable energy sources, while with regard to heat energy, it defines only mechanisms and instruments supporting its generation. However, when making a detailed analysis of the provisions of this Act, it should be pointed out that also in this area the scope of regulations relating directly to heat energy is very limited. In principle, energy cooperatives are the only directly regulated

[38] Cf. W. Szydło, "Zakres władzy dyskrecjonalnej i współdziałania organów samorządu terytorialnego przy udzielaniu koncesji geologicznych i górniczych", *Samorząd Terytorialny*, 2014, No. 11, p. 45 ff.

mechanism for supporting the generation of heat energy in renewable energy source installations. An energy cooperative is a cooperative within the meaning of the Act of 16 September 1982 Cooperative Law[39] or the Act of 4 October 2018 on Farmers' Cooperatives,[40] the object of which is to produce heat in installations of a renewable energy source and to balance its demand, exclusively for the corporate and personal needs of the energy cooperative and its members, connected to a defined area of the heating network. The energy cooperative operates within the area of one heating network operator, supplying heat to the producers and recipients who are members of that cooperative, whose installations are connected to a given heating network. The operator of the power distribution system with which the energy cooperative intends to cooperate is obliged to immediately: 1) conclude an agreement on the provision of distribution services with the energy cooperative, which shall in particular specify the rules for: a) provision of distribution services to the energy cooperative and its members, b) designation and provision of measurement data, 2) conclude an agreement on the provision of distribution services with a seller selected by the energy cooperative, or amend the already concluded agreement in order to enable the seller to make settlements with the energy cooperative.

IV. Industrial Use of the Heat Energy of the Earth's Crust in Czech Law

The development of modern technologies and the search for alternative sources of industrial energy provides an impetus to redefine traditional legal institutions in order to adapt them to changing needs. An example of this evolution is the concept, developed within Czech mining law, of specific interference with the earth's crust. This concept, according to § 34 of the Czech Mining Act,[41] is understood to include, in addition to the storage of gases or liquids in natural rock structures and underground spaces, the storage of radioactive and other waste in un-

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[39] Polish OJ, 2018, item 1285.

[40] Polish OJ, 2018, item 2073.

[41] *Zákon č.* 44/1988 *Sb. o ochraně a využití nerostného bohatství* (*horní zákon*).

derground spaces, the storage of carbon dioxide in natural rock structures, and the industrial use of the thermal energy of the earth's crust, with the exception of the thermal energy of water brought to the surface. According to § 34(2), the following provisions of the Mining Act shall apply to these interferences accordingly: § 11 (exploration and prospecting of reserved deposits), § 16–18 (establishment of a protected deposit area and restriction of certain activities in that area), § 23 (design, construction and reconstruction of facilities serving the purposes of specific interferences with the earth's crust), § 32 (plans for the opening, preparation and mining of reserved deposits and decommissioning of workings), § 33 (resolution of conflicts of interest), § 36–37a (mining damage), § 38 (traffic safety) and § 39 (surveying and geological documentation). This means that, under Czech law, the industrial use of the dry heat of the rock environment has been subject to mining law regulation on principles similar to those of mineral extraction. At the same time, the legislator has recognised this intervention *expressis verbis* as a mining activity,[42] making it subject to the obligation to obtain a permit in accordance with the provisions of the Mining Activity Act.[43] An application for a permit for an activity involving a particular intrusion into the earth's crust in connection with the industrial use of the earth's heat must be submitted to the mining authority at least three months before the planned commencement of the work. The application must be accompanied by documents concerning the settlement of conflicts of interest (if the activity poses a threat to legally protected objects and interests) and by an opinion of another organisation (if the specific interference with the earth's crust could prevent or impede the extraction of the reserved deposit by another organisation).[44] The participants in the permit procedure are the applicant, the investor, the owner of the mining site and the citizen whose rights and interests protected by law may

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[42] § 2 lit. f *Zákon č.* 61/1988 *Sb. o hornicke činnosti*.

[43] § 11 *Zákon č.* 61/1988 *Sb. o hornicke činnosti*.

[44] O. Vicha, "Szczególna ingerencja w skorupę ziemską z prawnego punktu widzenia", in G. Dobrowolski, G. Radecki (eds.), *Prawna regulacja geologii i górnictwa w Polsce, Czechach i na Słowacji. Wybrane zagadnienia*, Katowice: Infomax, Marasik-Bielejec, E., Bielejec, G., 2014, p. 35.

be affected by the permit, as well as the municipality in whose area the mining activity is to be carried out.[45]

The concept of special interference with the earth's crust in connection with the industrial use of the dry heat of the earth is also reflected in the provisions of the Geological Works Act.[46] According to § 2(1)(e) of the Geological Works Act, geological works are, inter alia, geological surveys and geological prospecting on the territory of the Czech Republic, which include the identification and verification of the geological conditions for the industrial use of the heat energy of the earth's crust. An entity intending to carry out geological exploration in this respect must apply to the Ministry of the Environment for the establishment of a research area. The administrative and legal conditions for the establishment of an exploration area are analogous to those for the exploration and prospecting of deposits of restricted minerals.

Conclusions

The legal conditions for the use of geothermal energy in Poland are determined by the way in which the issuein question is regulated, including in particular the absence of a separate act, relating to this matter in a comprehensive manner. The implementation of investments related to the acquisition and use of geothermal energy is subject to administrative and legal regulations appropriate for the area of interference with legally protected goods. The legal instruments of these regulations are solutions such as notifications, permits, and licences, which are typical for the regulatory function of law. On the one hand, these solutions allow for the delimitation of interference in the so-called common goods, and the definition of conditions for their use and state supervision, while on the other hand, they force the investor to undertake a whole series of formal and legal actions related to the need to obtain administrative approvals. This state of affairs is strongly influenced by the overlapping of different legal regimes related to the protection of individual resources and a large degree of diversity of

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[45] Ibid., p. 36.

[46] *Zákon č.* 62/1988 *Sb. o geologických pracích a o Českém geolgickém úřadu*.

technical solutions enabling the use of geothermal energy. I believe that the legal conditions for the implementation of investments related to the use of geothermal energy in Poland are neutral to the development of this source of renewable energy. They are neither a limiting factor nor a factor favouring this development. Both the degree and forms of regulation of this activity are characteristic for the area of interference in legally protected goods and, as a rule, adequate to the threats and risks resulting from this interference.