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## **INVESTMENT AND CONSTRUCTION PROCESS OF RENEWABLE ENERGY SOURCES AFTER RECENT REGULATORY CHANGES**

### **Abstract**

Renewable energy sources remain the key to a successful energy transition. This article provides an overview of the investment process for all renewable energy sources on the grounds of Polish law. Firstly, it covers the main framework of the investment process in Poland in terms of permit-granting and identifies the administrative decisions required for the construction of renewable energy ventures. On such grounds, further addressed are specific spatial, environmental, and construction issues related to the investment process of particular types of renewable energy installations – wind, solar, water, tidal, geothermal, ambient, and biofuel energy, as well as renewable hydrogen. Such an up-to-date study is particularly relevant given the recent major changes in the law.

### **KEYWORDS**

renewable energy sources, investment process, permitting, permit-granting, administrative law

## SŁOWA KLUCZOWE

odnawialne źródła energii, proces inwestycyjny, zezwalanie, udzielanie pozwoleń, prawo administracyjne

## 1. INTRODUCTION

It was the 1990s that marked the beginnings of the renewable energy market in Poland.<sup>1</sup> Since then, not only has there been intense growth in the demand for green energy, but also a flourishing of legislation on the domestic and international levels. The current Constitution of the Republic of Poland<sup>2</sup> dedicates the greatest attention to environmental protection of all the constitutions so far.<sup>3</sup> It was also not without significance that Poland became a member of the European Union, which obliged authorities and citizens to comply with the EU environmental requirements and implement the European Union's energy and climate policies.<sup>4</sup> A number of legal acts to regulate the green economy have also been adopted in the national legal system.

When viewed from the perspective of investments in renewable energy sources ("RES"), such a state of law presents both an opportunity and a challenge. On the one hand, it encourages factual interest in investing in green energy installations and makes it possible to overcome the possible unfavourability of the authorities as well as the reluctance of certain social groups. Whereas, on the other hand, it requires all investors to maintain a heightened focus on environmental, spatial, and construction aspects of their projects. After all, it should not be forgotten that RES installations, despite their globally positive contribution to the state of the environment, are also in themselves construction projects, whose implementation and operation are not exempt from negative impacts, even if only temporary.

The main objective of the investment and construction process is the development and commissioning of a construction object, and its immanent parts are administrative acts (decisions).<sup>5</sup> The purpose of this article is to present the Pol-

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<sup>1</sup> A. Pultowicz, *Przesłanki rozwoju rynku odnawialnych źródeł energii w Polsce w świetle idei zrównoważonego rozwoju*, Problemy Ekorozwoju, Vol. 4, No. 1, Lublin 2009, p. 111.

<sup>2</sup> Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws of 1997, No. 78, item 483 as amended).

<sup>3</sup> B. Wierzbowski, B. Rakoczy, *Prawo ochrony środowiska. Zagadnienia podstawowe*, 7th edition, Warszawa 2018, p. 38.

<sup>4</sup> K. Tomaszewski, A. Sekściński, *Odnawialne źródła energii w Polsce – perspektywa lokalna i regionalna*, Rynek Energii, No. 4(149), Warszawa 2020, p. 10.

<sup>5</sup> Cf. M. Pchałek, R. Cieślak, Ł. Oleszczuk, *Realizacja przedsięwzięć infrastrukturalnych. Aspekty prawnośrodowiskowe*, Warszawa 2019, pp. 15-16.

ish legal conditions governing the initial stages within the investment process of renewable energy ventures (permit-granting). With the recent major amendments to the law, which not only introduced significant changes to the investment process, but also expanded the definition of RES to include new technologies, such an up-to-date study seems particularly relevant.

## 2. INVESTMENT PROCESS IN POLAND

Discussing the specifics of the proceedings for different types of green energy investments in detail requires a prior familiarization, *in abstracto*, with the model layout of Polish administrative proceedings aimed at obtaining approval for the development of a project.

For many projects, the first administrative stage of the investment process is the obtaining of an environmental decision<sup>6</sup> that determines the environmental conditions under which the project may be developed. On the grounds of Article 71 sec. 2 of the EIA Act,<sup>7</sup> such a decision is required for projects likely to always have a significant impact on the environment, as well as for projects likely to potentially have a significant impact on the environment. A comprehensive list of projects classified into each category is provided in the EIA Act implementing regulations, currently the 2019 EIA Ordinance.<sup>8</sup> The environmental decision, in accordance with Article 86 of the EIA Act, binds the administrative bodies issuing subsequent decisions within the investment process and, thereby, has a preliminary (prejudicial) character with respect to future permits.<sup>9</sup>

The investment must also comply with local planning and zoning objectives. Currently, following the recent amendment to the Spatial Planning and Development Act<sup>10</sup> (“SPDA”), spatial policy instruments are divided into general and

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<sup>6</sup> A. Haładyj, *Decyzja o środowiskowych uwarunkowaniach a pozwolenie emisyjne (analiza wzajemnych zależności)*, Państwo i Prawo, No. 7, Warszawa 2022, p. 64.

<sup>7</sup> Act of 3 October 2008 on providing information on the environment and its protection, public participation in environmental protection and environmental impact assessments (consolidated text: Journal of Laws of 2023, item 1094 as amended).

<sup>8</sup> Ordinance of the Council of Ministers of 10 September 2019 on projects likely to have a significant impact on the environment (Journal of Laws of 2019, item 1839 as amended).

<sup>9</sup> P. Sadowski, D. Lebova, *Administracyjnoprawne ograniczenia realizacji przedsięwzięć wynikające z konieczności uzyskania decyzji środowiskowej*, Annales Universitatis Mariae Curie-Skłodowska. Sectio G. Ius, 1 (64), Lublin 2017, pp. 125-136; B. Rakoczy, *Ustawa o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko. Komentarz*, Warszawa 2010, p. 241; judgment of the Supreme Administrative Court of 16 September 2008, II OSK 821/08, ONSA 2009.

<sup>10</sup> Act of 27 March 2003 on spatial planning and development (consolidated text: Journal of Laws of 2023, item 977, as amended).

individual acts. These include respectively, general plans (Art. 13a *et seq.* of the SPDA), local plans (Art. 14 *et seq.* of the SPDA), local plans adopted in the simplified procedure (Art. 27b of the SPDA), and integrated investment plans (Art. 37ea *et seq.* of the SPDA), as well as administrative decisions, i.e. the decision on development conditions (Art. 59 *et seq.* of the SPDA) and the decision on the location of a public purpose investment (Art. 50 *et seq.* of the SPDA). Eligible forms of zoning for a given project depend on its characteristics. With regard to RES installations, significant changes were introduced by the 2023 Amendment to the SPDA<sup>11</sup> (“AmSPDA”), pursuant to which, once the general plan of a municipality is adopted, which may take place no later than 31 December 2025, the use of local plans will be mandatory to locate installations not mounted on a building (i) on agricultural land of classes I-III and forest land regardless of capacity, (ii) on agricultural land of class IV, with an installed electrical capacity of more than 150 kW or used for the business of electricity generation, (iii) with an installed electrical capacity of more than 1,000 kW regardless of the land class.<sup>12</sup>

However, neither the environmental decision nor the zoning acts prejudice the right to start construction.<sup>13</sup> Construction works for industrial renewable energy projects will usually require a building permit, as stipulated in Article 28 sec. 1 of the Construction Law.<sup>14</sup> Some of the infrastructure may be approved in a simplified procedure through a notification of construction made to the architectural and construction authority, provided it does not raise an objection, within 21 days from the delivery of the notification (Art. 29 secs. 1, 3 in conj. with Art. 30 sec. 5 of the Construction Law). Before certain categories of buildings can be used, an occupancy permit must also be obtained (Art. 55 of the Construction Law).

Additionally, depending on the nature or location of the planned project, the investment process may involve further administrative proceedings. For ventures related to the use of water for energy purposes, as well as for carrying out works involving reconstruction or decommissioning of water facilities, the investor shall obtain a water law permit (Art. 35 sec. 3 item 6 and Art. 17 sec. 1 items 3-4 in conj. with Art. 389 of the Water Law<sup>15</sup>). Placement of energy systems on buildings (micro-installations) listed in the National Register of Monuments, as well as the location of facilities in areas listed in the Register will require the approval of

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<sup>11</sup> Act of 7 July 2023 amending the Act on spatial planning and development and certain other acts (Journal of Laws of 2023, item 1688).

<sup>12</sup> Article 14 sec. 6a items (2)(a-c) of the SPDA in conj. with Article 58 of the AmSPDA.

<sup>13</sup> Judgment of the Voivodeship Administrative Court in Rzeszów of 14 September 2017, II SA/Rz 187/17.

<sup>14</sup> Act of 7 July 1994 – Construction Law (consolidated text: Journal of Laws of 2023, item 682 as amended).

<sup>15</sup> Act of 20 July 2017 – Water Law (consolidated text: Journal of Laws of 2023, item 1478 as amended).

the Voivodeship Conservator of Monuments (Art. 39 of the Construction Law).<sup>16</sup> Separate permits are required to provide transportation services to the investment properties (Art. 29 sec. 1 of the Public Roads Act<sup>17</sup>). Additional proceedings under special regulations will also be required for situations of an extraordinary location of the property, such as in flood risk areas, mining sites or areas, health resort areas, historically contaminated areas, archaeological observation areas, as well as for works at sea or geological and mining activities.

### 3. RES INSTALLATIONS AND THEIR INVESTMENT PROCESS

Polish legislation, headlined by the Renewable Energy Sources Act<sup>18</sup> (“RESA”), identifies as renewable energy sources non-fossil energy sources including wind energy; solar energy; aerothermal energy; geothermal energy; hydrothermal energy; hydropower; wave, current and tidal energy; ambient energy; energy derived from biomass, biogas, agricultural biogas, biomethane, bioliquids and renewable hydrogen. In the following section of the paper, devoted to the detailed aspects of investment proceedings for specific types of RES installations, the abovementioned categorization taken from Polish law is, therefore, adopted, despite the doctrinal accusations of it being an inaccurate implementation of European directives.<sup>19</sup> Each renewable energy source is characterized by individual technical conditions and may require distinct permits for its realization, making it purposeful to discuss their permit-granting dissected by specific types of installations.

Aside from the sectoral division, the RESA also introduced the categorization of RES installations based on the parameters of installed power capacity, enabling the separation of prosumer or self-supply investments from high-profile, advanced ventures, as well as the differentiation of both the legalization require-

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<sup>16</sup> The principles of carrying out works adjacent to monuments are set out in Article 36 *et seq.* of the Act of 23 July 2003 on the protection and care of historical monuments (consolidated text: Journal of Laws of 2022, item 840 as amended).

<sup>17</sup> Act of 21 March 1985 on public roads (consolidated text: Journal of Laws of 2022, item 1693 as amended).

<sup>18</sup> Act of 20 February 2015 on renewable energy sources (consolidated text: Journal of Laws of 2023, item 1436, as amended).

<sup>19</sup> Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (OJ L 328, 21 December 2018). The definition in the current directive refers to energy from renewable sources or renewable energy (*de facto* a different concept) and takes the form of “energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas”. For the standpoint of the doctrine, cf. A. Malinowski, *Definicje niezasadnione* (in: *Błędy formalne w tekstach prawnych*, Warszawa 2020, p. 65).

ments and the degree of formalization of the investment procedure. Article 2 of the RESA in sections 18 and 19 adopts the definition of a micro-installation and a small installation, with projects beyond this framework understood as “large installations”. A micro-installation is defined as a renewable energy source installation with a total installed electrical power not exceeding 50 kW and connected to a power grid with a nominal voltage lower than 110 kV, or an installation with a cogenerated thermal power not exceeding 150 kW, with a total installed electrical power not exceeding 50 kW. A small installation, on the other hand, is a renewable energy source installation with a total installed electrical power greater than 50 kW but not exceeding 1 MW and connected to an electricity grid with a nominal voltage lower than 110 kV or with a cogenerated thermal power capacity greater than 150 kW but not exceeding 3 MW, in which the total installed electrical power is greater than 50 kW and not exceeding 1 MW.

### 3.1. WIND ENERGY

Wind energy is a type of kinetic energy of moving air masses, and it is classified as a renewable energy source.<sup>20</sup> According to the adopted normative division, electricity from wind energy in Poland can be generated (i) on land in micro-installations, (ii) on land in wind power plants, as well as in (iii) offshore wind farms. Micro-installations have the same meaning here as in the RESA, and denote renewable energy source installations with a total installed electric capacity of no more than 50 kW. A certain novelty, however, is the introduction in Article 1 item 1 of the Wind Power Investment Act<sup>21</sup> (“WPIA”), formerly known as the 10h Act, of a supplementary definition under which a “wind power plant” is a renewable energy source installation, consisting of a construction part (constituting a building within the meaning of the Construction Law) and technical equipment, including technical elements,<sup>22</sup> in which electricity is generated from wind energy, with a capacity greater than the capacity of a micro-installation.

#### 3.1.1. ONSHORE WIND POWER INSTALLATIONS

Wind power generation in **land-based micro-installations** remains a relatively approachable investment from the perspective of required administrative proceedings. First of all, wind installations with a total nominal capacity of less

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<sup>20</sup> M. Dończyk, M. Korzon, O. Skibicki, M. Stupak, *Źródła odnawialne* (in: *Odnawialne źródła energii. Poradnik dla inwestorów oraz wytwórców energii*, Warszawa 2022, p. 21.

<sup>21</sup> Act of 20 May 2016 on investments in wind power plants (consolidated text: Journal of Laws of 2021, item 724).

<sup>22</sup> As technical elements, Article 1 item 2 of the WPIA denotes the rotor with blade assembly, power transmission assembly, generator, control systems and nacelle assembly including the mounting and rotation mechanism.

than 100 MW not located in areas covered by forms of nature protection and those with a total height of no more than 30 meters do not at all constitute projects likely to have a significant impact on the environment within the meaning of the EIA Ordinance,<sup>23</sup> and, therefore, do not require an environmental decision. The WPIA provisions do not apply to micro-installations, thus there is no obligation to locate them on the local plan. A zoning decision will be required only in the case of a change in land use or a change in the use of a building, which is unlikely to occur in the case of micro-installations. Furthermore, under Article 15 sec. 4 of the SPDA, a local plan allowing for the concurrent siting of buildings provides for locating micro-installations on them, also in the case of a land use other than production, unless the provisions of the local plan prohibit the siting of such installations.

A building permit and an occupancy permit will be required only when the wind turbine is to be placed on a separate foundation and when the height of the structure exceeds 3 meters,<sup>24</sup> or when the assembly of the micro-installation takes place next to a building listed in the register of historical monuments.<sup>25</sup> The construction of wind turbines higher than 3 meters, but mounted on a building,<sup>26</sup> as well as installations not exceeding 3 meters located in an area entered in the register of monuments, can be legalized in a simplified procedure (notification),<sup>27</sup> while all other wind micro-installations do not require proceedings before an architectural and construction administration body at all.

However, **wind power plants** (recalling – installations using wind energy with a capacity of more than 50 kW), as projects of much larger scale and gravity, are featured by a much more formalized and demanding investment procedure. Any wind energy structures whose total height is greater than or equal to 30 meters and projects in areas covered by forms of nature protection will at the very least constitute projects likely to *potentially* have a significant impact on the environment,<sup>28</sup> and, therefore, requiring a decision on environmental conditions. Whereas onshore installations using wind energy to generate electricity with a total nominal capacity of not less than 100 MW are considered projects likely to *always* have a significant impact on the environment.<sup>29</sup>

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<sup>23</sup> *A contrario* § 3 sec. 1 item (6)(a-b) of the EIA Ordinance. Furthermore, installations designed solely to power road and rail signs, road or rail traffic control or monitoring devices, navigation signs, lighting devices, billboards and advertising boards, even if they are located in areas covered by forms of nature protection, do not constitute projects having a significant impact on the environment.

<sup>24</sup> *A contrario* Article 29 sec. 3 item (3)(a) in conj. with Article 28 section 1 of the Construction Law.

<sup>25</sup> Article 29 sec. 7 item 1 of the Construction Law.

<sup>26</sup> Article 29 sec. 3 item (3)(a) of the Construction Law.

<sup>27</sup> Article 29 sec. 4 item (3)(a) in conj. with Article 29 sec. 7 item 2 of the Construction Law.

<sup>28</sup> § 3 sec. 1 item (6)(a-b) of the EIA Ordinance.

<sup>29</sup> § 2 sec. 1 item (5)(a) of the EIA Ordinance.

Pursuant to Article 3 of the WPIA, the location of wind power plants can be made exclusively on the basis of a local plan, which means that in the absence of such, it is not possible to locate a wind power plant on the basis of a zoning decision.<sup>30</sup> All this means that the investor must apply to the municipal council for the adoption or amendment of a local plan. It is not possible to adopt a plan for a wind power plant in a simplified procedure<sup>31</sup> nor, according to some authors, to implement an integrated investment plan.<sup>32</sup>

The localization restrictions provided for wind power plants, however, do not stop there. Article 4 of the WPIA introduces an important stipulation, according to which the distance from residential buildings at which wind power plants can be located must be at least equal to ten times its total height (10h rule). The purpose and *ratione lege* of the provision was to ensure that a wind power plant does not pose a threat in the form of a negative impact on residential zones.<sup>33</sup> In practice, however, this resulted in the exclusion of 99% of Poland's territory from wind investments in the 2016-2023 period.<sup>34</sup> Nonetheless, the WPIA amendment of 9 March 2023 provided for the possibility of determining a different distance (though not less than 700 meters) in the local plan,<sup>35</sup> therefore increasing the coverage of areas appropriate for the development of wind farms. Finally, the construction of wind power plants also requires obtaining a building permit<sup>36</sup> and an occupancy permit once the works are completed.

### 3.1.2. OFFSHORE WIND FARMS

Undertakings involving the construction of production structures aimed at generating electricity from offshore wind energy have been specifically regulated in Poland by the Offshore Wind Farms Act<sup>37</sup> ("OWFA"), which defines an "offshore wind farm" as an installation constituting a separate set of energy genera-

<sup>30</sup> Judgment of the Supreme Administrative Court of 15 March 2018, II OSK 2305/17.

<sup>31</sup> Article 27b sec. 1 item 1 of the SPDA.

<sup>32</sup> *Wind energy in Poland. 2023 Report*, Polish Wind Energy Association, TPA Poland / Baker Tilly TPA, DWF, 2023, pp. 49, 145; A. Palukiewicz, J. Perzyna, *Co dalej z inwestycjami OZE? Kto zyska, a kto straci?*, published on cire.pl, 2023 (accessed 17 October 2023).

<sup>33</sup> Judgment of the Supreme Administrative Court of 5 March 2019, II OSK 926/17.

<sup>34</sup> R. Krupa-Dąbrowska, *Rząd od lat obiecuje poprawić przepisy, a farmy wiatrowe nie mogą się rozwijać*, published on prawo.pl, 2022 (accessed 17 October 2023); M. Szyrski, *Ocena realizacji konstytucyjnej zasady pomocniczości w prawie odnawialnych źródeł energii*, Samorząd Terytorialny, No. 5, Warszawa 2018, pp. 21-31.

<sup>35</sup> Article 1 item (6)(a) of the Act of 9 March 2023 amending the Act on investments in wind power plants and certain other acts (Journal of Laws of 2023, item 553).

<sup>36</sup> Cf. judgment of the Voivodeship Administrative Court in Olsztyn of 28 April 2016, II SA/OI 273/16; M. Przybylska, *Zasada odległościowa w procesie inwestycyjnym elektrowni wiatrowej i zabudowy mieszkaniowej a działania organów samorządowych*, Państwo i Prawo, No. 4, Warszawa 2018, p. 112.

<sup>37</sup> Act of 17 December 2020 on promoting electricity generation in offshore wind farms (Journal of Laws of 2022, item 1050).

tion facilities, including one or more offshore wind turbines,<sup>38</sup> a medium-voltage grid with substations located on the sea, excluding equipment on the upstream side of the transformer or transformers located at the substation. The permitting procedure for offshore wind farms is of a special nature and can be characterized by the obligation to obtain a number of specific administrative decisions.

Offshore wind farms, according to Article 23 sec. 1a of the Offshore Territories Act<sup>39</sup> (“OTA”), may only be located in the exclusive economic zone. The erection and use of offshore wind farms in internal marine waters and the territorial sea is prohibited. Offshore areas are covered by a spatial development plan for internal waters, the territorial sea, and the exclusive economic zone, adopted by the Council of Ministers in an ordinance.<sup>40</sup> The plan delineates areas intended for renewable energetics, in which offshore wind farms are allowed to be erected. These areas amount to a total of 2,340 km<sup>2</sup>, representing 10% of the exclusive economic zone.<sup>41</sup> As the spatial development plan is in effect, offshore wind farms are, therefore, not eligible for obtaining a zoning decision and must comply with its provisions.

In accordance with § 2 sec. 1 point (5)(b) of the EIA Ordinance, installations using wind energy to generate electricity located in the offshore areas of the Republic of Poland are projects likely to always have a significant impact on the environment and, therefore, require an environmental decision preceded by an environmental impact assessment. Like any project of such magnitude, offshore wind farms will require a building permit<sup>42</sup> and an occupancy permit.

The distinctive nature of sea-based wind energy projects is also implicit in the aforementioned obligation to obtain exceptional administrative permits. This is because it is impossible to build a turbine at sea without permanently disturbing the seabed, and such activities, defined in the OTA as the erection and subsequent use of artificial islands, structures, and devices, require a permit establishing their location and specifying the conditions for their implementation (Article 23 sec. 1 of the OTA). Such a permit shall be issued, in the case of areas covered by a spatial development plan, by the territorially competent director of the maritime office, following an opinion from the ministers responsible for state assets,

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<sup>38</sup> An offshore wind turbine, as defined by the OWFA, is a single, self-contained unit of equipment used to generate electricity solely from offshore wind energy (Article 3 item 4 of the OWFA).

<sup>39</sup> Act of 21 March 1991 on offshore territories of the Republic of Poland and maritime administration (consolidated text: Journal of Laws of 2022, item 457, as amended).

<sup>40</sup> Ordinance of the Council of Ministers of 14 April 2021 on the adoption of a spatial development plan for internal sea waters, territorial sea and exclusive economic zone in the scale 1:200000 (Journal of Laws of 2021, item 935).

<sup>41</sup> *Potencjał lokalizacyjny polskich obszarów morskich* (in:) *Plan zagospodarowania przestrzennego polskich obszarów morskich*, Morska Energetyka Wiatrowa, published on the official website of the Republic of Poland – gov.pl.

<sup>42</sup> Cf. judgments of the Voivodeship Administrative Court in Warsaw of 9 September 2013, III SA/Wa 653/13, III SA/Wa 654/13, III SA/Wa 655/13.

energy, economy, climate, culture and protection of national heritage, fishing, environment, geology, internal affairs, the Minister of National Defense and the Head of the Internal Security Agency. Moreover, it may be issued only after the applicant has obtained the preliminary connection conditions.<sup>43</sup> Additional permits are also required for the construction of infrastructure accompanying an offshore wind farm – laying and maintaining cables, also in the areas of internal waters and territorial sea (e.g., routing a connection from a farm located in the exclusive economic zone to land through internal waters and territorial sea). The details of administrative proceedings for the issuance of a permit to erect artificial islands and a permit to lay cables are regulated in Chapter 4 of the OTA.

In addition, interference with the seabed to the extent that it allows for effective installation of wind turbines may require geological works to determine the geological and engineering conditions of the offshore wind farm foundation, as well as the equipment and facilities included in the power derivation unit. Carrying out such works requires a decision to approve geological work projects and geological documentation within the meaning of the Geological and Mining Law<sup>44</sup> (“GML”). These decisions are issued by the geological administration authority. There may also arise the need to obtain a water law consent for the use of water for energy purposes, should a broad understanding of this definition be adopted.

Many investment decisions for offshore wind farms are subject to immediate enforcement.<sup>45</sup> In addition, the OWFA provides for a number of *leges speciales* provisions on the issuance of decisions and appeal proceedings.

### 3.2. SOLAR ENERGY

Photovoltaic panels convert solar energy into electricity, which cannot only be consumed on an ongoing basis or stored but also sold, depending on the type of installation.<sup>46</sup> In the case of photovoltaic power plants, the degree of complexity of the permitting procedure depends on the size of the installation.

In light of § 3 sec. 1 item 54a of the EIA Ordinance, only projects involving the construction of a photovoltaic farm with a development area exceeding 2 hectares<sup>47</sup> require a decision on environmental conditions. Smaller farms, with a surface area exceeding 0.5 hectares, are also subject to this obligation, but only insofar as they are located in areas covered by forms of nature protection or in

<sup>43</sup> Article 23 secs. 2 and 5b of the OTA.

<sup>44</sup> Act of 9 June 2011 – Geological and Mining Law (consolidated text: Journal of Laws of 2022, item 1072 as amended). Cf. Article 80, Article 93, Article 161 sec. 3 item 2a of the act.

<sup>45</sup> Article 76 sec. 1 of the OWFA.

<sup>46</sup> Judgment of the Supreme Administrative Court of 23 October 2015, II OSK 372/14.

<sup>47</sup> According to § 3 sec. 1 item 54a of the EIA Ordinance, the surface area of a photovoltaic installation is determined by the outline of the outer edge modules of the panels.

buffer zones of such areas. In principle, therefore, photovoltaic micro-installations will not be classified as projects requiring an environmental decision.

Solar installations have been the installations mostly affected by the changes introduced under the AmSPDA. Before, there were virtually no restrictions regarding the possibility of locating them on zoning decisions, except for the soil classes I to III. However, once the general plans go into effect (no later than 31 December 2025), photovoltaic installations with an installed capacity of more than 150 kW on agricultural land class IV, and with the capacity exceeding 1000 kW on all land classes – will require a local plan. The construction of photovoltaic micro-installations not located on the ground (placed on buildings) is slightly different – a zoning decision will be required only when the land utilization changes as a result of the construction.<sup>48</sup> The presumption of compliance with the local plan for building-mounted installations provided in Article 15 sec. 4 of the SPDA is even more favorable for solar installations, as it applies to them regardless of capacity (not just to micro-installations).

A building permit will be required for the execution of photovoltaic devices with an installed capacity of more than 150 kW. Therefore, there is no general obligation to obtain a building permit for solar micro-installations, with the exception of projects that require an environmental impact assessment, photovoltaic panels built at objects listed in the register of monuments, or for the installation of panels on buildings on account of their reconstruction, which itself requires a building permit.<sup>49</sup> The installation of photovoltaic devices with an installed capacity of up to 150 kW onto a building is possible under the simplified legalization procedure, i.e. by making a notification.<sup>50</sup> For photovoltaic devices with an installed electrical power of more than 6.5 kW, there is also an obligation to approve the project of these devices with a fire protection expert as regards their compliance with fire protection requirements, as well as to notify the authorities of the State Fire Service about the completion of works and the intention to proceed to the operation.<sup>51</sup>

### 3.3. GEOTHERMAL ENERGY

Geothermal energy, as defined by Article 2 item 10 of the RESA, is energy of a non-anthropogenic nature accumulated in the form of heat beneath the Earth's surface. In the case of geothermal projects, in addition to the typical decisions in the investment procedure, the investor will be required to undergo the full legal-

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<sup>48</sup> Letter from the General Office of Construction Supervision, *W sprawie montażu ogniw fotowoltaicznych na obiektach budowlanych oraz wolnostojących ogniw fotowoltaicznych*, published on [gunb.gov.pl](http://gunb.gov.pl) (accessed 17 October 2023).

<sup>49</sup> Article 29 secs. 6-7 of the Construction Law.

<sup>50</sup> Article 29 sec. 3 item (3)(c) of the Construction Law.

<sup>51</sup> *Ibidem*.

ization path for the exploitation of underground waters regulated in the GML. It should be emphasized that within the meaning of Article 5 sec. 1 of the GML, thermal waters constitute fossils and, therefore, all regulations on the extraction of such are applicable to them altogether.

Pursuant to Article 95 sec. 1a of the GML, documented deposits and the need to secure their extraction or use must be incorporated into general and local plans. Thus, as a rule, the construction of geothermal power plants shall be based on a local plan. The remarks made with regard to the AmSPDA remain relevant.

The extraction of fossils from a deposit by an underground method<sup>52</sup> with a mineral output of no less than 100,000 m<sup>3</sup> per year is a project likely to *always* have a significant impact on the environment within the meaning of § 2 sec. 1 item 27 of the EIA Ordinance, while in smaller volumes it constitutes a project likely to *potentially* have a significant impact on the environment. Moreover, the very exploration or prospecting of mineral deposits by underground methods and performed through boreholes with a depth of more than 1,000 meters in protection zones of water intakes, in protection areas of inland water reservoirs and in areas covered by forms of nature protection, as well as in each case where the borehole performed has a depth of more than 5,000 meters, will constitute projects likely to potentially have a significant impact on the environment.<sup>53</sup> Subject to this ordinance is also the construction of facilities for the extraction of groundwater with a capacity of not less than 1,100 m<sup>3</sup> per hour (as projects always likely to have a significant impact on the environment) and those with a capacity of between 10 m<sup>3</sup> and 1,100 m<sup>3</sup> per hour (as projects likely to potentially have a significant impact on the environment).<sup>54</sup>

The legalization process for geological and mining activities is particularly complicated. It is first necessary to identify the hydrogeological conditions of the area in question; if the available geological information makes it possible to identify the conditions, one can immediately proceed with the preparation of a geological work project, which is then subject to approval by the geological administration body.<sup>55</sup> Groundwater prospecting is in itself an activity that does not yet require a concession.<sup>56</sup> The intention to proceed with geological works must be reported to the relevant authorities, and if they are to be carried out at a depth of more than 100 meters or with blasting agents, it will be necessary to prepare a mining operation plan and have it approved.<sup>57</sup> The results of geological

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<sup>52</sup> For capturing geothermal energy, the main method is to create boreholes to geothermal hot water reservoirs. Such drillings are similar in technology to oil wells. Cf. E. Gołąbeska, A. Harasimowicz, *Wybrane problemy związane z realizacją systemów wykorzystujących zieloną energię*, Białystok 2023, p. 43.

<sup>53</sup> § 3 sec. 1 item 44 of the EIA Ordinance.

<sup>54</sup> § 2 sec. 1 item 37 and § 3 sec. 1 item 73 of the EIA Ordinance.

<sup>55</sup> Article 79 sec. 1, Article 80 sec. 1 of the GML.

<sup>56</sup> Article 21 sec. 1 in conj. with Article 10 sec. 1 of the GML.

<sup>57</sup> Article 105 sec. 2 item 2 in conj. with Article 108 sec. 11 of the GML.

work should be presented in the form of geological documentation, which is also subject to approval by decision.<sup>58</sup> Subsequently, a deposit development project should be developed, together with an opinion of the Director of the District Mining Authority.<sup>59</sup> Finally, on the basis of the steps taken above and holding a set of relevant decisions, the investor should obtain a concession for the exploitation of thermal waters, which is granted by the voivodeship marshal or the powiat starost – in accordance with Articles 21 and 22 of the GML. Through Article 106 of the GML, the provisions of the Construction Law apply to mining facilities, including with regard to the decision which grants a building permit.

Pursuant to Article 10 sec. 2 of the GML, thermal waters are covered by the mining property belonging to the State Treasury and, therefore, the use of such waters will require obtaining a legal title, which under the current law occurs only through a paid mining usufruct agreement, effective as of the date of the concession.<sup>60</sup>

By all accounts, the investment process for geothermal energy is highly complicated. In addition to advanced formalism, the high costliness of geothermal energy operations may also be an obstacle for investors – one borehole of average depth costs more than ten million zloty.<sup>61</sup> The above factors can often make geothermal investments unprofitable.<sup>62</sup>

### 3.4. HYDROENERGY

Hydropower projects involve, within the meaning of the RESA, the use of mechanical energy of water, excluding energy obtained from pumped storage hydroelectric power plants or hydroelectric power plants with a pumped storage component. In light of the literal wording of the provisions of Article 2 sec. 22 in conj. with Article 2 sec. 12 of the RESA, as well as the European Union definitions, pumped storage power plants have not been included among renewable energy sources, which might be due to the fact that the existence of this type of generation only makes sense if there is a nearby conventional power plant with

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<sup>58</sup> Article 88 sec. 1 in conj. with Article 93 sec. 2 of the GML.

<sup>59</sup> *Wody mineralne. Poradnik inwestora*, National Research Institute – National Geological Institute, 2022, published on pgi.gov.pl (accessed 17 October 2023).

<sup>60</sup> K. Szamałek, *Dokumentowanie wody jako kopaliny wielosurowcowej – potrzeba dyskusji i zmian*, Górnictwo Odkrywkowe, Vol. 57, No. 2, Wrocław 2016, p. 48.

<sup>61</sup> U. Wojciechowska, *Nieopłacalność geotermii to mit*, *Czysta Energia* 11/2013 (147).

<sup>62</sup> J. Kapuściński, A. Rodzoch, *Geotermia niskotemperaturowa w Polsce i na świecie. Stan aktualny i perspektywy rozwoju. Uwarunkowania techniczne, ekonomiczne i środowiskowe*, Ministry of Environment, Warszawa 2010, p. 103.

occasional surplus energy,<sup>63</sup> or that they emit greenhouse gases from the decay processes of aquatic flora.<sup>64</sup>

According to Article 211 sec. 2 of the Water Law, waters of the territorial sea, internal marine waters, inland flowing waters, and underground waters are the property of the State Treasury and, therefore, the use of such waters for energy purposes will require additional legalization beyond the typical investment scheme.

The status of hydropower plants in terms of environmental impact is relatively obvious. Under § 3 sec. 1 item 5 of the EIA Ordinance, such installations constitute projects likely to potentially have a significant impact on the environment and a decision on environmental conditions is, therefore, necessary for their construction. What is perhaps less clear, however, is the scope of meaning of the term “hydropower plant”, given that – unlike in the case of wind power – there has been no normative implementation of a relevant definition. By analogy, it could presumably be considered that hydroelectric micro-installations for self-supply (in this sense, not constituting hydropower plants) could be treated as projects that do not require an environmental decision, although according to the position of the Ministry of Climate and Environment:

*“Hydropower micro-installations are subject to the same procedures at the investment and operation stage as small and large hydroenergy. [...] As a project likely to potentially have a significant impact on the environment, a hydropower micro-installation is subject to an environmental impact assessment. The investor must also obtain a water law permit [...] In addition, the investor will have to obtain a building permit”*<sup>65</sup>

In practice, the obligation to obtain an environmental decision and a building permit should, therefore, be considered a foregone conclusion in the context of any investment aimed at the energetic use of water’s kinetic potential, regardless of its size or installed capacity. Some facilitation may also be provided by the fact that, according to administrative judicature and part of the doctrine, the location of hydropower plants can be effected by means of a zoning decision, and the existence of a local plan is not required.<sup>66</sup> However, the remarks made with regard to the AmSPDA remain relevant.

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<sup>63</sup> J. Nowak, *Elektrownia szczytowo-pompowa*, Delta, published on elektrownie.manifo.com (accessed 9 October 2023).

<sup>64</sup> G. Peczkis, *Elektrownie szczytowo-pompowe. Możliwości wykorzystania likwidowanych kopalń*, Pompy Pompownie 1/2021, Silesian University of Technology.

<sup>65</sup> P. Rapacka, *Nie tylko fotowoltaika. Czy w Polsce jest miejsce dla mikroinstalacji wodnych?*, 2022, published on globenergia.pl (accessed 17 October 2023).

<sup>66</sup> J. Mazurkiewicz, *Energetyka wodna*, National Energy Respecting Agency, 2018; judgment of the Voivodeship Administrative Court in Gdańsk of 17 May 2018, II SA/Gd 21/18. See also on the contrary: A. Bernatek-Jankiel, *Małe elektrownie wodne w systemie planowania przestrzennego w Polsce*, Journal of Ecological Engineering 33:7-12, 2013.

The use of water for energy purposes, including hydropower, constitutes a water service within the meaning of Article 35 sec. 3 item 6 of the Water Law, thus requiring a water law permit. It should be noted that an application for a water law permit for the damming of surface waters with a piling structure with an accumulation height of more than 1 meter and equipped with devices that enable the regulation of flow, or for the dependent use of water by several facilities, shall be accompanied by a draft of a water management instruction containing a description of how the water will be treated and how the needs of all users benefiting from the water resources affected by the water management instruction will be met.<sup>67</sup>

Since flowing waters and the land underneath are owned by the State Treasury, it will also be necessary to obtain the right to use the property, which only comes in the form of a usufruct imposing an annual fee in accordance with Article 261 sec. 1 of the Water Law.

### 3.5. WAVE, CURRENT AND TIDAL ENERGY

The power of sea tides – in a broad sense – includes any use of the mechanical energy of marine tides or wave motion for the production of electricity.<sup>68</sup> Due to the high cost of infrastructure and the early, “not fully matured”<sup>69</sup> development phase of such a technology in general, it has been, in fact, the least used way of obtaining energy from renewable sources so far.<sup>70</sup> Some experts even admit that this way of using water energy is impossible to apply in Poland,<sup>71</sup> because for such a purpose the difference in water levels between high tide and low tide must be at least 5 meters, and there are merely about hundred points meeting such a condition throughout the whole of Europe.<sup>72</sup> Currently, the potential of tidal currents, except for the dam located at the mouth of the French river Rance, is not used anywhere in the European Union.<sup>73</sup>

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<sup>67</sup> Article 407 sec. 3 of the Water Law.

<sup>68</sup> J. Norwicz, T. Musielak, B. Boryczko, *Odnawialne źródła energii – polskie definicje i standardy*, Rynek Energii, No. 1/2006, p. 3.

<sup>69</sup> Cf. point 1.6 of the Opinion of the European Economic and Social Committee, *Opportunities for the exploitation of marine energy as a renewable energy source (own-initiative opinion)*, OJ. EU. C. of 2017. No. 34, p. 53.

<sup>70</sup> K. Fodrowska, *Elektrownie wodne w Polsce*, 2021, published on enrad.pl (accessed 17 October 2023).

<sup>71</sup> E. Przybyło, P. Sołowiej (supv.), *Energia pływów morza (in:) Energia wody – edukacyjno-informacyjny system sieciowy*, University of Warmia and Mazury, published on www.uwm.edu.pl (accessed 17 October 2023).

<sup>72</sup> P. Olszowiec, *Elektrownie pływowe nabierają mocy. Gigawaty z... arktycznych mórz*, Energia Gigawat, 2008.

<sup>73</sup> Cf. point 3.3, Opinion of the European Economic and Social Committee, *Opportunities...*, *ibidem*.

From the perspective of legal theory, the investment process for tidal power plants under Polish law is, however, worth considering. It seems that in the absence of a specific regulation, this type of an installation could be qualified as a hydro-power plant, which, within the meaning of § 3 sec. 1 item 5 of the EIA Ordinance, constitutes a project likely to potentially have a significant impact on the environment and thus requires an environmental decision. In practice, determining environmental conditions for the realization of such a project may be problematic insofar as science has not yet definitively investigated to what extent the energy of water currents can be exploited (and thus weakened) without disturbing environmental sustainability.<sup>74</sup> It is also difficult to determine the applicable procedure for spatial management, but in view of the already discussed fact that a spatial development plan has been adopted for Polish maritime areas, the practical possibility of locating this type of investment on the basis of a zoning decision would, in principle, be excluded anyway. No grounds can also be found for exempting wave and tidal installations from the requirement to obtain a building permit.

Furthermore, at least some of the tidal technologies (such as submarine mills) will require a permit for the erection or use of artificial islands, structures, and devices in marine areas, as well as a permit for laying and maintaining cables in these areas. Most likely, it will also be necessary to obtain a water law permit typical for hydropower plants, since according to Article 3 of the Water Law, the act's provisions also apply to internal marine waters.

### 3.6. AMBIENT ENERGY

Under the newly added Article 2 item 11<sup>1</sup> of the RESA, ambient energy means naturally occurring thermal energy and energy accumulated in the environment with constrained boundaries, which may be present in surface or sewage water and the air, excluding exhaust air. According to point 6 of the preamble to Commission delegated regulation (EU) 2022/759, ambient energy is present in ambient air (formerly known as aerothermal) and ambient water (formerly known as hydrothermal).<sup>75</sup> With the adoption of the ambient energy approach, aerothermal and hydrothermal energy have consequently been replaced by this broader umbrella term within the definition of RES in EU acts. Keeping all three terms in the RESA should, therefore, be considered superfluous, and legislative efforts should be made to regulate them under the joint category of ambient energy.

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<sup>74</sup> *Energia prądów morskich, pływów i falowania*, 2022, published on e-magazyny.pl (accessed 17 October 2023).

<sup>75</sup> Commission Delegated Regulation (EU) 2022/759 of 14 December 2021 amending Annex VII to Directive (EU) 2018/2001 of the European Parliament and of the Council as regards a methodology for calculating the amount of renewable energy used for cooling and district cooling (OJ L 139, 18 May 2022).

By far, the most common technology for harvesting ambient energy relies on heat pumps.<sup>76</sup> In principle, domestic or self-supply heat pumps do not require an environmental decision.<sup>77</sup> Spatial management of heat pumps depends on their type, but as long as their installation does not result in changes to the land use or the use of a building or part of a building, a zoning decision shall not be necessary.<sup>78</sup> In case, however, a local plan is in force, its provisions must be taken into account. Installation of heat pumps with a capacity of up to 150 kW does not require a building permit or notification, provided that it is not implemented on a building listed in the register of monuments or in an area listed in the register of monuments.<sup>79</sup> In addition to the above, special regulations may need to be considered – the GML (if boreholes were to be drilled) or the Water Law (in the case of digging a water well, i.e. a water facility). Relevant administrative incentives for heat pumps were introduced by the Council Regulation (EU) 2022/2577.<sup>80</sup> However, it is noteworthy that ongoing legislative action in the European Union aimed at phasing out F-gases from the European Economic Area may undermine the easiness of investing in heat pumps.<sup>81</sup>

Other ambient energy capture technologies, such as acoustic noise, ambient radio frequency or piezoelectricity, are at this point rather experimental,<sup>82</sup> i.e. not operational at a scale requiring administrative legalization.

### 3.7. BIOMASS, BIOGAS, BIOLIQUID AND BIOMETHANE ENERGY

Biomass is used for energy purposes in the processes of direct incineration of solid or gaseous biofuels or by conversion to liquid fuels. It includes, in particular, substances of vegetal or faunal origin, constituting waste and residues from agricultural, alimentary and forestry production, as well as waste that undergoes

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<sup>76</sup> Cf. R. Lowes, D. Gibb, J. Rosenow, S. Thomas, M. Malinowski, A. Ross, P. Graham, *A policy toolkit for global mass heat pump deployment*, Regulatory Assistance Project. CLASP, Global Buildings Performance Network, 2022, p. 11; P. Rapacka, *Europa zainstalowała w 2022 r. rekordową liczbę pomp ciepła*, published on [teraz-srodowisko.pl](https://teraz-srodowisko.pl) (accessed 14 October 2023).

<sup>77</sup> Environmental decision shall be required only with regard to the development of groundwater intakes deeper than 100 meters (§ 3 sec. 1 item (43)(b) of the EIA Ordinance) and facilities for the extraction of groundwater with a capacity of not less than 10 m<sup>3</sup> per hour (§ 3 sec. 1 item 73 of the EIA Ordinance).

<sup>78</sup> *A contrario* Article 59 sec. 1 of the SPDA.

<sup>79</sup> Article 29 sec. 4 item (3)(c) and sec. 7 of the Construction Law.

<sup>80</sup> Council Regulation (EU) 2022/2577 of 22 December 2022 laying down a framework to accelerate the deployment of renewable energy (OJ L 335, 29 December 2022).

<sup>81</sup> Proposal for a Regulation of the European Parliament and of the Council on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and repealing Regulation (EU) No. 517/2014 (COM/2022/150 final).

<sup>82</sup> Cf. A. Tatuś, *Energy harvesting – pozyskiwanie energii elektrycznej z otoczenia*, Elektronika Praktyczna, published on [ep.com.pl](https://ep.com.pl) (accessed 14 October 2023).

biodegradation.<sup>83</sup> The use of biomass and biogas often makes it possible to carry out cogeneration, i.e. the simultaneous production of electricity and heat using the same fuel.<sup>84</sup> Normative definitions of biomass, biogas, bioliquids, and biomethane<sup>85</sup> are contained in Article 2 items 1, 3, 3c and 4 of the RESA. Despite their qualification as renewable energy sources, the use of biofuels involves incineration, which results in a different range of environmental impacts than in the case of other RES installations discussed above.

Installations for the energetic combustion of fuels, including biomass, biogases, bioliquids and biomethane, with a thermal capacity of not less than 300 MW constitute projects likely to always have a significant impact on the environment, while such installations with a capacity of not less than 25 MW, or when using solid fuel – not less than 10 MW, are projects likely to potentially have a significant impact on the environment.<sup>86</sup> Lower-capacity biofuel power plants will not require an environmental decision. More so, also installations for the sole production of biofuels (excluding agricultural biogas plants) that meet specified criteria will be obliged to obtain an environmental decision.<sup>87</sup>

It appears that all forms of zoning may apply to biofuel facilities<sup>88</sup> – both local plans, including local plans adopted in a simplified procedure and integrated investment plans, as well as zoning decisions, with general limitations introduced in the AmSPDA applicable. Zoning of agricultural biogas plants enjoys special regulations, including Article 64aa of the SPDA and the Agricultural Biogas Act.<sup>89</sup>

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<sup>83</sup> W. Pawłowski, *Biogazownia jako element mający pozytywny wpływ na zmiany środowiskowe przestrzeni wiejskich*, Inżynieria Ekologiczna, Vol. 18, Iss. 5, 2017, p. 161.

<sup>84</sup> P. Lampart, P. Kowalski, *Kogeneracja w oparciu o źródła biomasy / biogazu* (in:) A. Cenian, T. Noch (eds.), *Ekoenergetyka – zagadnienia technologii, ochrony środowiska i ekonomiki*, Gdańsk 2010, p. 121 *et seq.*

<sup>85</sup> According to its definition, biomethane is a gas derived from biogas, agricultural biogas or renewable hydrogen. The remarks given in this chapter will only apply to biomethane derived from biofuels.

<sup>86</sup> § 2 sec. 1 item 3, § 3 sec. 1 item 4 of the EIA Ordinance.

<sup>87</sup> Such installations are indirectly referred to in the provisions of § 2 sec. 1 item 47 and § 3 sec. 1 items 47 and 82 of the EIA Ordinance, according to which projects likely to *potentially* have a significant impact on the environment include installations for the production of fuels from plant products and installations related to waste processing, with an installed electrical capacity of no more than 0.5 MW or producing an equivalent amount of agricultural biogas used for purposes other than electricity production. Meanwhile, projects likely to *always* have a significant impact on the environment are waste processing facilities capable of receiving waste in quantities of no less than 10 tons per day or with a total capacity of no less than 25,000 tons. It should be noted, however, that installations for the production of agricultural biogas (within the meaning of Article 2 sec. 2 of the RESA) are exempt from this obligation. In this case, though, an entry in the register of agricultural biogas producers is required (Article 26 of the RESA).

<sup>88</sup> Cf. E. Wieleńczyk, *Biogazownie – długa droga od pomysłu do realizacji*, Wspólnota, No. 2, 2010, p. 6.

<sup>89</sup> Act of 13 July 2023 on facilitating the preparation and implementation of investments in agricultural biogas plants and their operation (Journal of Laws of 2023, item 1597).

The construction of biofuel power plants and biofuel production facilities shall, in principle, require a building permit. The only exception is agricultural biogas micro-installations, subject only to notification.<sup>90</sup>

In addition to the above, the operation of biofuel plants may also require a decision authorizing waste processing<sup>91</sup> in accordance with Article 41 of the Waste Act.<sup>92</sup> However, the use of non-hazardous biomass (i.e. natural substances from agricultural or forestry production) for energy production by processes or methods that do not cause harm to the environment nor endanger human life and health, is exempt from the obligations of this act.

If such a plant was to process livestock by-products (e.g., feces), it would be furthermore necessary to authorize a supervised activity with the poviats veterinarian.<sup>93</sup> A decision from the Office of Technical Inspection is also required for tanks and boilers operating under pressure, in light of Article 5 secs. 1-2 of the Technical Inspection Act.<sup>94</sup>

Finally, due to their relatively extended environmental impacts (incl. emissions), biofuel plants require additional environmental permits. Depending on the specifics of a given project, these may include water law permits for water intake, discharge of industrial wastewater or agricultural use of wastewater to the extent not covered by ordinary water use and wastewater collection; a waste treatment permit, as well as permits for the introduction of gases or dust into the air (generally for installations with a capacity of more than 10 MW).<sup>95</sup> For installations of thermal processing of non-hazardous waste with a capacity of more than 3 Mg per hour and for recovery or disposal using anaerobic digestion with a processing capacity of not less than 100 Mg per day, it will be possible to obtain a single integrated permit in this regard, instead of a number of sectoral permits.<sup>96</sup>

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<sup>90</sup> Article 29 sec. 3 item (3)(e) of the Construction Law.

<sup>91</sup> E. Wielańczyk, *op. cit.*, p. 8.

<sup>92</sup> Act of 14 December 2012 on waste (consolidated text: Journal of Laws of 2022, item 699 as amended).

<sup>93</sup> Articles 23(1)(a) and 24(1) of the Regulation (EC) No. 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No. 1774/2002 (*Animal by-products Regulation*) (Official Journal of the EU L 300, 14 November 2009).

<sup>94</sup> Act of 21 December 2000 on technical inspection (Journal of Laws of 2022, item 1514). See Article 5 secs. 1-2 of the act in conj. with § 1 of the Ordinance of the Council of Ministers of 7 December 2012 on types of technical equipment subject to technical inspection (Journal of Laws of 2012, item 1468).

<sup>95</sup> Item 1 of the appendix to the Ordinance of the Minister of Environment of 2 July 2010 on cases in which the introduction of gases or dust into the air from installations does not require a permit (Journal of Laws of 2010, No. 130, item 881).

<sup>96</sup> Article 201 sec. 1 of the Act of 27 April 2001 – Environmental Protection Law (consolidated text: Journal of Laws of 2021, item 1973 as amended), in conj. with the appendix to the Ordinance of the Ministry of the Environment of 27 August 2014 on the types of installations that may cause

### 3.8. RENEWABLE HYDROGEN

In 2023, the RES catalog was broadened to include renewable hydrogen, which is understood as hydrogen produced from renewable energy sources in a renewable energy facility, including through electrolysis<sup>97</sup> (green hydrogen).

As per the definition, in order for the hydrogen to be considered renewable, it must be produced in an RES facility. Possible production technologies include therefore power-to-gas (P2G) systems with the usage of renewable electricity – wind, solar (yellow hydrogen), hydrothermal, hydropower, wave, current and tidal, ambient and biofuel energy; as well as reforming of biogas.<sup>98</sup> Since the production of renewable hydrogen must be connected to another RES plant, the legalization of newly developing hydrogen plants will often be tied to the investment process of renewable energy projects.

Polish regulations on the investment process do not yet include provisions dedicated to renewable hydrogen plants. As of now, it is often assumed that such projects qualify as installations for the production of substances using chemical processes to manufacture basic products or intermediates of inorganic chemistry,<sup>99</sup> which, within the meaning of § 2 sec. 1 item (1)(b) of the EIA Ordinance, constitute projects always having a significant impact on the environment and thus require an environmental decision. It will then be a project requiring an environmental impact assessment, which also implies the obligation to obtain a building permit under Article 29 sec. 6 of the Construction Law. With regard to spatial development, it seems that all forms of legalization are valid unless the main facility next to which the hydrogen plant would operate requires a specific form of zoning itself (e.g. wind power plants). Other possible legal requirements include an occupancy permit and an integrated permit,<sup>100</sup> as well as a water law permit (the electrolysis process involves the use of water).

## 4. CONCLUSIONS

The investment and construction process for RES ventures in Poland can be tangled. Investors must obtain multiple administrative decisions, all in the pre-

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significant pollution of particular natural elements or the environment as a whole (Journal of Laws of 2014, item 1169).

<sup>97</sup> Article 2 item 36a of the RESA.

<sup>98</sup> H. Hyunah Cho, V. Strezov, T.J. Evans, *A review on global warming potential, challenges and opportunities of renewable hydrogen production technologies*, Sustainable Materials and Technologies, Vol. 35, 2023.

<sup>99</sup> Cf. R. Frączek, *Studium wykonalności instalacji do produkcji, sprzężania, magazynowania i dystrybucji wodoru – część II*, published on zielonagospodarka.pl (accessed 14 October 2023).

<sup>100</sup> *Ibidem*.

scribed order. Besides the typical pattern, many additional proceedings arise from the characteristics of a given technology or from special conditions of the location of the planned project. Implementing projects is also not eased by rapidly changing legislation, which often introduces new policies or obligations. Although there happen to be facilitations as well, staying abreast of changes can be a difficulty in itself. Therefore, it is essential to issue up-to-date summaries of the investment procedures every so often. Naturally, it is advisable to consult a technical and legal advisor before undertaking any investment activities – despite the authors best efforts to present the issues in detail, this paper cannot constitute tailored legal advice for any given case.

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