



Legal basis of landscape protection in relation to the RES investments implementation

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ABSTRACT

In recent years, Poland has seen a dynamic growth of investments in the energy sector using renewable energy sources. From Poland's adoption of the National Action Plan for energy from renewable sources (year 2010) the number of biogas power plants in Poland increased by 36%, biomass power plants and wind power plants with 200% and the solar power plants as much as 4000%. The smallest increase was recorded in the case of hydroelectric power by only 5%. The development of new renewable energy investments is often accompanied by significant changes in the landscape. To a large extent this is due to the scale of objects or their accumulation. The aim of the study is to determine if the instruments of landscape protection can be considered as sufficient in landscape protection from negative changes in relation to the investment RES. We analyzed the provisions relating to planning, implementation of the investment, environmental protection, nature conservation and protection of monuments. These provisions largely allow you to limit the negative impact of the RES on the landscape. They are connected mainly with the restrictions in locating RES investments in the landscape as well as reducing the impact of which may cause RES investments on the landscape. It should however be emphasized that they relate to selected projects or selected landscapes (eg. priority landscapes). Mainly, these instruments seem to be an effective tool for landscape protection in case of implementation of RES installations producing electricity on an industrial scale. However, there is a shortage of effective measures to protect the landscape in the nucleus of the implementation of micro-installations of renewable energy sources.

Keywords: landscape; renewable energy sources

1. INTRODUCTION

In the 21st century the value of the landscape is changing. Due to energy transition from conventional to renewable it is observed that many landscapes that were once perceived as culturally and ecologically important may reveal their energetic potential [1,2]. Currently in many countries former farm lands are being transformed into wind farms, solar farms or biomass production areas. Usually renewable energy constructions change physiognomy of the landscape significantly [3]. Many of renewable energy installations like wind power stations become new dominants in the landscape and have big impact on the view from many different directions. In some places the view from and on historic and natural heritage areas changed unwittingly. Problem of visual landscape changes caused by renewable energy productions is also more widespread when compared with conventional energy. While conventional energy is usually posed in few areas in each country, renewable energy production can be developed in many areas and need much more space to achieve similar economical results [4]. The influence on the landscape forced scientists and decision makers to develop strategies on sustainable renewable energy landscapes [5]. Good examples of the countries that developed special procedures, techniques and legal bases on visual landscape protections are Great Britain, the Netherlands, Denmark and Germany - countries with a good system of spatial planning and significant investments in renewable energy production for many years [6-9]. The situation looks a bit different in Poland. According to National Action Plan of 2010, energy from renewable sources had to achieve 15% of all energy sources before 2020 and only in recent years the number of renewable energy investments increased significantly from 2% in 2000 to 11,% in 2013 [10]. In 2016 in Poland there were 1161 wind power plants 382 solar farms, 752 hydroelectric power, 299 biogas power plants and 38 biomass power plants¹. This dynamic increase have a big impact on the landscape and its visual value. Nowadays in Poland there are no regulations on the visual landscape protection in a relation to renewable energy sources. However there are several legal instruments which can protect the landscape from the negative impact indirectly. In this study several acts of law and ordinances were examined according to landscape protection in relation to RES investments implementation.

2. MATERIALS AND METHODS

The research involved an analysis of the existing legislation in order to determine the possible scope of the landscape protection related to RES implementation. The study covered the laws and regulations connected to widely understood landscape development. It allowed to select ten acts, which provisions define directly or indirectly the instruments of landscape protection in relation to implementation of renewable energy sources.

These instruments were divided into four groups: planning and construction instruments, instruments of monuments protection, instruments of nature conservation and instruments of environmental protection. Their arrangement is based on the definition of trends in landscape protection by Böhm [11].

¹ Urząd Regulacji Energetyki-Mapa Odnawialnych Źródeł Energii available at: <https://www.ure.gov.pl/uremapoze/mapa.html> [access 8 October 2016]

Then, for particular groups of instruments, we defined: the type of RES investments, which might be affected, and the scope of protection (including particularly: restrictions on locating RES investments and reducing their impact on the landscape).

3. INSTRUMENTS OF LANDSCAPE PROTECTION IN RES INVESTMENTS

From all of the environmental elements landscape has the weakest instruments of protection [12]. It is caused mainly by the fact that “landscape” cannot be defined in one specific way and for a long time it had no legal definition in the Polish law². In 2015 the so-called „Act of Landscape Protection” (Act of 24 April 2015, introducing certain laws attempting to strengthen instruments of landscape conservation) was revealed. According to the Act’s provisions landscape is a space perceived by people, contains elements of nature or products of civilization, and is formed as a result of natural factors and/or human activity.

“Act of Landscape Protection of 2015” introduced new instruments of landscape protection (for example the Landscape Audit) and also brought a number of major changes to the existing instruments (for instance the areas of protected landscape). However, none of the amended regulations did not directly address the issue of landscape protection in relation to the implementation of renewable energy sources. It should also be noted that provisions on the dominant landscape (introduced in the Presidential Draft of the Act) were removed during the phase of expert consultations. This change was met by fear that the law may prevent the development of wind power in Poland [13].

Lack of relevant provisions in the law does not mean a lack of instruments to protect the landscape in relation to implementation of renewable energy sources. It is possible to find them in the provisions related to planning, implementation of the investments, environmental protection, nature conservation and protection of monuments.

3. 1. Planning and construction instruments

Instruments of construction and planning arise from the Act of Construction Law of 1994³ and Act of the Law on Spatial Planning of 2003⁴.

The provisions of the Construction Law are related to the identification of appropriate procedures related to the implementation of RES investments. According to Article 29 paragraph 2. section 16 installation of heat pumps, photovoltaic plants with a power output up to 40 kW and free-standing solar panels do not require a building permit and only a construction works notice. Other projects, including primarily those that require an environmental assessment or impact assessment on Natura 2000 sites, require a building permit. This waiver is also required while constructing RES installations at sites present in the register of monuments. The above rules indicate that apart from a few exceptions, there are nearly no constraints on implementing micro-installations of renewable energy sources. An implementation of this type of investment based solely on a construction works notice could bring significant changes in the nature of the landscape. They will consist of a series of

² Ustawa z dnia 24 kwietnia 2015 r. o zmianie niektórych ustaw w związku ze wzmocnieniem narzędzi ochrony krajobrazu

³ Ustawa z dnia 7 lipca 1994 r. - Prawo budowlane. (Dz.U. 1994 nr 89 poz. 414)

⁴ Ustawa z dnia 27 marca 2003 r. o planowaniu i zagospodarowaniu przestrzennym (Dz.U. 2003 nr 80 poz. 717)

singular changes, which because of their nature will not be affected by any systematic means of ensuring the high quality of spatial planning.

The Law on Spatial Planning and Development refers to the possibility of designing protection zones associated with limits in building, land development and use of land in connection with locating renewable energy production facilities with a capacity exceeding 100kW in the Studies of conditions and directions of spatial development. It is therefore not actually landscape protection related to renewable energy production, but rather protection of landscape users in relation to these investments.

The most important planning instrument, which may affect the protection of the landscape in relation to implementation of renewable energy, is the Audit of Landscape. Audit of Landscape, in accordance with Article. 38a of the Law on Spatial Planning and Development defines, among others, "priority landscapes" and recommendations concerning their protection and development. The arrangements contained in the audit must be included in all following planning documents. While there are no direct provisions in the audit, it may impose certain restrictions on locating investments (including renewable energy production) in such landscapes.

3. 2. Instruments of monuments protection

The Act of the Monuments Protection and Conservation of 2003⁵ does not directly point to the instruments for landscape protection in the implementation of renewable energy sources. It only refers to the necessity of obtaining a permit from the Conservation Officer while conducting works at historic sites (art. 36). Such works may include for example the installation of heat pumps or photovoltaic panels. A similar scope of protection may be used in cultural park areas. One of the possible prohibitions is for example a ban on all construction works at the site.

Another provision which may indicate the possibility of restrictions related to the implementation of renewable energy sources is art. 19 of the Act. These rules say that local spatial development plans and studies of conditions and directions of spatial development can determine conservation protection zones with special restrictions, prohibitions and orders meant to protect historic object located in those areas. It should be emphasized that, in accordance with Article. 6, paragraph 1. point 1 point a cultural landscape is also a monument.

3. 3. Instruments of nature conservation

The provisions of the Nature Conservation Act of 2004⁶, similarly to the Act of Protection of Monuments of 2003, do not relate directly to RES investments. Nevertheless, according to Art. 17 section 1 in a regional park and protected landscape area (art. 24, paragraph 1) bans can be introduced to block the implementation of projects that may significantly affect the environment. Their types with regard to renewable energy sources are discussed in the next section.

An important instrument for the protection of landscapes in relation to implementation of renewable energy sources can be protection plans for landscape parks. These plans may

⁵ Ustawa z dnia 23 lipca 2003 r. o ochronie zabytków i opiece nad zabytkami (Dz.U. 2003 nr 162 poz. 1568)

⁶ Ustawa z dnia 16 kwietnia 2004 r. o ochronie przyrody (Dz.U. 2004 nr 92 poz. 880)

specify boundaries of protection zones for exposure foregrounds, view axes, viewpoints or areas with distinctive local architectural forms (highlighted in the audit of landscape). In areas of landscape protection bans can be implemented, for instance for locations of new buildings, including those with a height over 7 meters. These regulations can be therefore also applied to renewable energy investments.

3. 4. Instruments of environmental protection

According to the current legislation protection of landscape in connection with the installation of renewable energy sources can be maintained through a system of environmental impact assessments. However, this applies mainly to projects related to the production of electricity from renewable energy sources on an industrial scale.

According to the records of the Council of Ministers of 9 November 2010 on projects likely to have significant effects on the environment⁷, installations utilizing wind energy with a total nominal power greater than 100 MW and localized in marine areas of Poland should always be treated as projects posing a high risk of such major effects. Projects that could potentially have a significant impact on the environment include: hydropower devices, wind energy installations other than those mentioned above, localized in national parks, nature reserves, landscape parks, protected landscape areas, Natura 2000 areas, ecological grasslands, landscape-environmental complexes with a total height of over 30 meters, installations for the production of fuels from vegetable products, with the exception of installations for the production of agricultural biogas.

In 2013, photovoltaic systems have been added to the list. In the case of locating photovoltaic farms in national parks, nature reserves, landscape parks, protected landscape areas, Natura 2000 areas, ecological and nature-landscape and buffer zones of national parks, nature reserves and landscape parks the EIA procedures are required for installations covering an area bigger than 0,5 ha. In other cases, the threshold is set at 1 ha.

This means that the EIA procedures will not be required in all the projects related to energy production from renewable sources, eg. biogas and energy crops, and which could potentially affect the landscape. In the case of plants used for biomass production conducting changes carries two most important risk factors which will be difficult to control. The first is the fact that some species of plants used for energy purposes are considered invasive in Poland, such as plants of the genus *Salix* sp, *Populus* sp., or *Robinia*. The only energy plant which is considered a species-threatening in our home environment is the giant knotweed (*Reynoutria sachalinensis*)⁸.

The second risk factor is the fact that fast growing plants used in the production of biomass in may quickly obscure the existing lookout openings for valuable objects in the landscape. In addition to obscuring the view creating new spatial dominants diverting attention from other objects is also a common case [14]. An important matter in protecting landscape physiognomy values in connection with the implementation of RES investments is the change to the Assessment Directive (Directive of the European Parliament and of the

⁷ Rozporządzenie Rady Ministrów z dnia 9 listopada 2010 r. w sprawie przedsięwzięć mogących znacząco oddziaływać na środowisko (Dz.U. 2010 nr 213 poz. 1397)

⁸ Rozporządzenie Ministra Środowiska z dnia 9 września 2011 r. w sprawie listy roślin i zwierząt gatunków obcych, które w przypadku uwolnienia do środowiska przyrodniczego mogą zagrozić gatunkom rodzimym lub siedliskom przyrodniczym (Dz.U. 2011 nr 210 poz. 1260)

Council 2014/52 / EU of 16 April 2014. Amending Directive 2011/52 / EU)⁹, which makes creating visual impact assessments mandatory in such cases.

In the case of plants used for energy purposes an opportunity for protection against invasive species is the Act of 15 January 2015. amending the Act on biocomponents and liquid biofuels and other acts (OJ 2015 pos. 151)¹⁰. This Act contains important provisions which state that the bio-components may be counted towards national targets only if they fulfill the sustainability criteria (art. 20a, paragraph. 2, point 1 and 1a of the Act of 10 April 1997 to the Energy Law)¹¹In practice, this might mean that plants from the list of invasive species cannot be used for this purpose (Regulation of the Minister of the Environment of 9 September 2011. on the list of animals and plants of alien species, which if released to the environment may threaten native species or natural habitats)¹².

4. DISCUSSION

During the last decades renewable energy sector develops dynamically in many places also in Poland. Thus, sustainable development of RES investments should be considered as an important part of the policy dedicated to renewable energy sources [15]. Furthermore in case of landscape protection direct legal bases should be followed by specific guidelines, procedures and techniques for sustainable development of RES in particular environments and landscapes [16]. Unfortunately procedures like Landscape Visual Impact Assessment (LVIA) are still not compulsory in Poland [17]. Neglected in Poland aspect of landscape protection and especially landscape visual protection caused that during last years many of the valuable landscapes were disturbed by reckless decisions [18-20].

5. CONCLUSIONS

To sum up there is no direct legislation for landscape protection in relation to RES investments although there are other legal bases which can protect the landscape in indirect ways. Those regulations are mostly related to bans on locating investments in some landscapes or to the reduction of their negative impact on. However, they are related to selected investments or specific landscapes, perceived as those with unique historic or nature value, for example “Priority Landscapes” according to Audits of Landscape. Regulations listed in this article can be perceived as effective instruments for landscape protection mostly in industrial-scale energy production, where the number of particular installations and space used is bigger. At the same time it is observed that so-called micro-installations are mostly not

⁹ Dyrektywa Parlamentu Europejskiego i Rady 2014/52/UE z dnia 16 kwietnia 2014 r. zmieniająca dyrektywę 2011/52/UE, Dz. UE L 14.124.1

¹⁰ Ustawa z dnia 15 stycznia 2015 r. o zmianie ustawy o biokomponentach i biopaliwach ciekłych oraz niektórych innych ustaw (Dz.U. 2015 poz. 151)

¹¹ Ustawa z dnia 10 kwietnia 1997 r. - Prawo energetyczne. (Dz.U. 1997 nr 54 poz. 348)

¹² Rozporządzenie Ministra Środowiska z dnia 9 września 2011 r. w sprawie listy roślin i zwierząt gatunków obcych, które w przypadku uwolnienia do środowiska przyrodniczego mogą zagrozić gatunkom rodzimym lub siedliskom przyrodniczym

regulated in any specific way. Similar problems can be observed in biomass production, where areas covered by high energy crops can change the landscape greatly.

Biography

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