## Right-of-way for Transmission Facilities as Regulation of Legal Relationships Regarding Real Estate between the Real Estate Owner and the Transmission Entity<sup>\*</sup>

### Anna Przewięźlikowska

Department of Integrated Geodesy and Cartography, Faculty of Mining Surveying and Environmental Engineering, AGH University of Science and Technology, Krakow, Poland E-mail: przewie@agh.edu.pl

**Abstract.** In Poland, after World War II, most of the technical infrastructure was built based on a construction permit, and without a legal title to a given real property. Therefore, a necessity arose for the regulation of property rights where technical infrastructure was built. For the establishment of the right-of-way for transmission facilities it is essential to regulate the legal relationships between the owner of the real estate and the transmission entity and their entry into the land and mortgage register. The extent of the granted right-of-way determines the value of consideration for the owner of the encumbered property.

This study analyzes the rules for the determination, establishment and surveying preparation of the right-of-way for various types of transmission facilities. First a thorough examination of the legal status of the real property was required and then the extent of the necessary right-of-way to be established for the given facilities was analyzed. The next stage of the study involved determining the extent of the rights-of-way and appropriate protective zones for the networks pursuant to the relevant technical guidelines. The analysis revealed significant diversity of legal regulations on the establishment of the right-of-way for the specific types of public utilities.

Keywords: right-of-way for transmission facilities, public utilities, real property encumbrance.

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#### Introduction

The right-of-way for transmission facilities was introduced to the Civil Code in August 2008 (Act 1964) in Art. 305, in order to regulate the legal relationships between transmission entities and owners of the real estate on which such facilities are located. The right-of-way for transmission facilities allows the company to use part of the real property and to access the existing networks, systems and transmission equipment, in order to carry out the works related to the construction and operation of these facilities. At the same time, property owners have more and more claims for compensation and they are willing to regulate the legal status associated with the transmission right-of-way (Butryn, Preweda 2016).

This phenomenon results from the fact that the legal bases for the right-of-way for the transmission facilities have been introduced quite recently. The article discusses the problem of using the legal bases for different networks, as well as the defects and ambiguities in this regard, mainly of the aforementioned Art. 305 of the Civil Code [14] and the Regulation of the Minister of Economy on the technical conditions to be met by gas networks and their location of 26 April 2013 (Regulation 2013). The problems of establishing the transmission rights-of-way for power networks, heating networks, telecommunication systems, sewerage and water supply systems, have not been properly defined, as demonstrated in the examples (Kaczmarczyk 2015).

#### The objectives for establishing rights-of-way for transmission facilities

Chapter III of the Civil Code contains the provisions on the right-of-way for the transmission facilities. This issue is explained in the cited Articles 305 of the Civil Code (Act 1964):

Art. 305<sup>1</sup>. The real property may be encumbered for the benefit of the entity who intends to build or who owns facilities referred to in Article 49 § 1, with the right which consists in that this entity can use the encumbered property within a specified extent, in accordance with the intended purpose of these facilities (transmission right-of-way).

<sup>\*</sup> AGH University of Science and Technology. Statutory research number 11.11.150. Department of Integrated Geodesy and Cartography

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Art.  $305^2$ . § 1. If the property owner refuses to conclude an agreement to establish the right-of-way for the transmission facilities, and it is necessary for the proper use of the facilities referred to in Article 49 § 1, the transmission entity may request its establishment for a suitable consideration.

§ 2. If the transmission entity refuses to conclude an agreement to establish the right-of-way for the transmission facilities, and it is necessary for the proper use of the facilities referred to in Article 49 § 1, the property owner may request an appropriate consideration in return for the establishment of the transmission right-of-way.

*Art.* 305<sup>3</sup>. § 1. The right-of-way for the transmission facilities shall be transferred to the purchaser of the company, or the purchaser of the facilities, referred to in Article 49 § 1.

§ 2. The transmission right-of-way shall expire with the liquidation of the company, the latest.

§ 3. After the expiry of the transmission right-of-way, the transmission entity is obliged to remove the facilities referred to in Article 49 § 1, hindering the use of the property. If this resulted in undue hardship or expense, the transmission entity is obliged to repair the resulting damage.

*Art.* 305<sup>4</sup>. To the right-of-way for the transmission facilities, the provisions of land easements shall apply, accordingly.

The right-of-way for the transmission facilities is determined by the boundaries of the area, within which the transmission company (e.g. water and sewage plant, heating plant, gasworks, water supply plant) can use the real property they do not own, where all the structures and installations making up the systems and pipelines to supply and discharge electricity, power, gas, liquids, steam and other devices with similar purpose, for the purpose of maintenance, verification and even disassembly and assembly of new facilities.

Pursuant to Art. 49 § 1 (Act 1964), transmission facilities do not constitute the components of the real property, if they belong to the company. However, Art. 49 § 2 says that the person who incurred the costs of the construction of the facilities referred to in Art. 49 § 1, and who is the beneficial owner, may request that the transmission entity who connected them to the network purchased rights to them for an appropriate consideration, unless the parties agreed otherwise in an agreement. In the case the transmission entity does not own the transmission facilities, no right-of-way for the transmission facilities is established.

If the transmission entity is the owner of the transmission facilities, or plans to build such facilities, the above right shall be established for the benefit of the company. Then, by way of an agreement between the property owner and the entity, it is necessary to determine whether the right-of-way shall be established free of charge or for a consideration. When determining the amount of the consideration for the use of land, the parties may commission the valuation of limited property rights to a real estate appraiser. The principles of concluding agreements have been presented by (Rakoczy 2012). In the case of an agreement to establish the right-of-way for the transmission facilities, the form of a notarial deed is not required for its validity. Such rigor is restricted only in relation to the declaration made by the owner of the property. The statement of intent of the transmission company may be made in any form.

The transmission right-of-way can be established not only for the existing transmission facilities, but also for those which are planned to be built in the future. This process secures the legal interest of the transmission entity already at the planning stage.

If there is no possibility to regulate legal relationships between the property owner and the entity by way of an agreement, there is an alternative to establish the right-of-way for the transmission facilities in court. In non-litigious proceedings, the court decides on the validity of the establishment of the right-of-way, its extent, as well as the consideration for the owner of the property for the determination of these rights. For this purpose, an expert witness in the field of land surveying determines the extent of the transmission right-of-way on the map for legal purposes with the transmission right-of-way project. The consideration for the establishment of the right-of-way is determined by the court based on the appraisal prepared by the expert witness (Dziczek 2013).

As part of the regulation of the legal possession of someone else's land for the operation of the existing transmission facilities, the owner of this real property on which transmission facilities have been placed for many years, is entitled, among other things, to:

1) the consideration for non-contractual use of the property (if neither this owner nor his or her predecessors concluded agreements on the use of the land) – up to 10 years (according to the law, the consideration payable to the owner covers the entire period during which the possessor used the object). The consideration for non-contractual use of the land may be claimed ten years back from the date of filing a lawsuit in court. The earlier period is considered time barred.

2) The consideration for the establishment of the right-of-way consists of two components: compensation for the decrease in the value of the property, dependent on the degree of interference of the established right into the right of ownership or perpetual usufruct, and the equivalent for the consent and the right to use the land during the operation of the equipment.

It should be noted that the utility connection to the public network does not mean the transfer of the ownership rights to the connected section to the owner of the transmission company. This is possible only after the conclusion of the appropriate agreement for each of the sections of the technical infrastructure (Ogłódek 2010), (Mika, Salata 2015).

A plan to build transmission facilities is not a reason for the establishment of the right-of-way because it does not produce any legal effect. No oral form or a private document, e.g. a will, allows to establish the right-of-way for the transmission facilities. Only an official document may be the proof of the intended construction of a plant. The examples include: a decision on the location of a public investment (if its issuance is provided for by the law), a planning permission, an agreement with a designer or a potential contractor (Ogłódek 2010).

In practice, the joint ownership of a property poses a problem in establishing the right-of-way for the transmission facilities. This leads to a situation where it will be necessary to encumber the real property with the transmission right-of-way only in the part intended for the exclusive use by one or more owners. However, according to (Rakoczy 2012), in this case the transmission right-of-way should encumber the property as a whole, rather than its individual parts. Then, in accordance with the principle of the unity of ownership rights, the right-of-way would encumber the rights of all the owners, not just those, whose parts transmission devices would go through.

#### Rights and obligations of the property owner and of the transmission entity

The transmission entity has more rights than obligations. The rights are focused primarily on the possibility to use someone else's property. It is contained in the agreement or the court judgment, and to the extent specified by the provisions of the Civil Code – Art. 305 (Act 1964). It is characteristic for this law that it is possible to use the real property with the exclusion of other people, including the owner. It is unacceptable, however, to extend the transmission equipment at the expense of increasing the inconvenience of the encumbered property. For example, an investor cannot place another electric pole on the property, only due to the fact that so far there were two poles there.

The entity's obligations concern the scope of using the property according to the boundaries of the granted right-of-way for the transmission facilities. After this right has been granted, the transmission entity is not obliged to obtain the owner's consent each time to use the property, or to inform him or her that the property will be used. The transmission entity must inform the property owner of the planned work only when the property owner is also the recipient of the services (Dziczek 2013).

Monitoring the condition of the transmission facilities indirectly protects the owner of the encumbered real property. The entity's obligations follow from the Energy Law (Act 1997) and the Act on collective water supply and discharge of wastewater (Act 2001b). They are designed for the safety of the property owners and their interests. For example, a skewed electric pole fulfills its task for the entity – it allows for the current to flow. But for the owner of the property it is a threat. The duty of the entity should include securing and repair of the facilities for the benefit of the property owner. In critical situations, the transmission entity should remove the life-threatening faulty equipment.

The second duty of the transmission entity is paying a consideration to the owner of the encumbered real estate, according to the agreement. Another obligation involves the removal of trees, shrubs and branches, which constitute a threat to the proper functioning of the transmission equipment. In the case of unjustified removal of trees, shrubs and branches, the transmission entity shall be held responsible for damage to forests. On private ground, logging of the trees which directly posed a threat to the transmission line is permitted under Article 142 (Act 1964).

The fundamental right of the property owner is their entitlement to demand a consideration. Another right involves a change in the content or the manner of carrying out the right-of-way for the transmission facilities.

The obligations of the property owner regarding the established transmission right-of-way include:

1) making access to the transmission equipment possible for the entity,

2) adequate management of the property, allowing the transmission entity an undisturbed assembly, maintenance and possible disassembly of the facilities.

Restrictions applying to the owner regarding the established transmission right-of-way concern:

1) planting of trees,

2) construction of residential buildings and buildings intended for human residence,

3) development of the real property,

4) utility connections.

Disagreements between the parties primarily relate to the designation of boundaries for the transmission device in the field, the necessary access to it, a consideration and failure to observe the rights and obligations of the parties. It depends on the location of the property and the type of a transmission device. In practice, there is a situation where, without a consent of the property owner, the transmission entity built transmission facilities. Such an action results in a significant reduction in the market value of the property.

#### The problem of determining protection zones

The right-of-way for the transmission facilities for certain types of networks is associated with a necessity to determine a protection zone for them. Basically, it is a strip of land located symmetrically along the axis of the network conduit. In practice, surveyors encounter the problems associated not only with the determination of the parameters of this area, but also with its name.

The best solution would be to include the strips of land along the axis of the linear devices in the local zoning plans or planning permissions (Butryn, Preweda 2016).

A mention on the principles of determining protection zones can only be found in Article 10 of the Act of 27 March 2003 on spatial planning and land development (Act 2003). It only applies to the land around the facilities producing energy from renewable energy sources with a capacity exceeding 100 kW:

2a. If on the territory of a commune, it is planned to assign some areas where the facilities producing energy from renewable energy sources with a capacity exceeding 100 kW will be located, as well as their protection zones associated with the restricted development and use of this land; their location shall be determined in the study.

The section of land with the restricted use of the property is not defined in the regulations and may have different names: impact zone or restricted use zone. The width of this zone depends on the type of the linear equipment (transmission, distribution), the manner of their construction (underground and overhead) and the degree of its impact on the environment (power networks, gas pipelines, oil pipelines). Also, the individual networks are defined differently depending on the industry, and these definitions also change over time, which significantly affects the determination of the width of these strips of land (Buśko, Przewięźlikowska 2011).

#### Transmission right-of-way for the gas network

Strips of land used in construction (assembly zones, working zones) or during the operation of the equipment (protection zones) are associated with gas networks. The surface area of such strips of land contributes to the reduction of the property value. For the valuation of damage and considerations, in addition to the surface area, the technical assumptions set out in the legislation, in technical standards and in construction projects are used as well. The center line of the control zone should coincide with the axis of the gas pipeline. In the control areas, erection of buildings, of fixed equipment and warehouses, as well as planting trees is prohibited. In this designated area it is not allowed to perform any actions which would jeopardize the gas pipeline during its operation.

For the gas industry, there is the Regulation of the Minister of Economy of 26 April 2013 on the technical conditions to be met by gas networks and their location (Regulation 2013), which contains the principles used in design, construction, reconstruction or expansion of the gas network used for transmission and distribution of gas fuels at operating pressure of up to and including 10 MPa.

§ 2 of the Regulation explains the most important notions related to the gas network:

Gas network – the objects of the gas network connected and cooperating with each other, used for the transportation of natural gas.

*Pipeline – the pipeline and equipment, placed on the outside of gas stations, objects extracting, producing, storing or utilizing natural gas, used for the transportation of natural gas.* 

Control zone - an area designated on both sides of the axis of the pipeline, whose center line coincides with the axis of the pipeline, in which the energy company engaged in the transportation of natural gas take steps to prevent activities which could have a negative impact on the stability and proper operation of the pipeline.

A very important aspect is the subdivision of gas pipelines, which was included in § 6. In this way, types of pipelines which were specified form the basis for determining the control zones.

§ 10.6. specifies the widths of the control zones for gas pipelines according to the maximum operating pressure (MOP):

According to § 10 1 of the Regulation (Regulation 2013), it is required to determine the control zones for the pipelines. In this particular strip of land it is necessary to control all the activities that could lead to the damage to the pipeline or adversely affect its use or performance. In the control zones it is prohibited to construct buildings, arrange storage places or warehouses.

In addition, for the gas pipelines with a diameter of up to and including DN 300, it is necessary to keep a distance of 2.0 m from the trees. For the pipelines with a diameter larger than DN 300, this distance is 3.0 m. It is determined between the axis of the pipeline of the trunk of the tree. The work in the control zones are carried out after a previous consultation with the relevant gas network operator. If in the plans of the underground utilities, the control zones for the gas pipelines built in the road right-of-way were not included, the location of the control zones should be agreed with the road manager and the design documentation of the pipeline should be complemented. In (Regula-

tion 2013) § 17.8 specifies the distance between the boundary of the control zone of the steel pipeline and the extreme projection of the overhead power line.

Table 1. Subdivision of the gas pipelines and the widths of control zones for the pipelines according to the maximum operating pressure (MOP); Source: own calculations based on (Regulation 2013)

			Control zone	The width of the control zone
Maximum operating pressure (MOP)	low-pressure gas pipelines	up to and including 10.0 kPa	up to and including 0. MPa	1.0 meter
	medium-pressure gas pipelines	over 10.0 kPa up to and including 0.5 MPa		
	increased medium- pressure gas pipelines	over 0.5 MPa up to and including 1.6 MPa	over 0.5 MPa up to and including 1.6 MPa	2.0 meters
	high-pressure gas pipelines	over 1.6 MPa	over 1.6 MPa and with a diameter of	up to and including DN 150 – 4.0 meters
				over DN 150 up to and including DN 300 –
				6.0 meters over DN 300 up to and
				including DN 500 – 8.0 meters
				over DN 500 – 12.0 meters
Materials used	steel pipelines			0.5 meter – for power lines with the voltage of up to and including 1.0 kV
				3.0 meters – for power lines with the voltage of up to and including 15.0 kV
				5.0 meters – for power lines with the voltage of up to 15.0 kV.
	polyethylene pipelines			

When determining the width of the control zone for the pipelines, the year of construction of the facilities is very important. Detailed guidelines for determining the strip of land have been presented in the tables in Appendix 2 (Regulation 2013). These tables contain, respectively:

- the width of the control zones for the gas pipelines laid in the ground, with the gas pressure over 0.4 MPa up to 10.0 Mpa, constructed before 12 December 2001, or for which a building permit was issued before that date,
- the width of the control zones for the gas pipelines laid in the ground, with the gas pressure not exceeding 0.4 Mpa, constructed before 12 December 2001, or for which a building permit was issued before that date,
- the width of the control zones for the gas pipelines constructed in the period from 12 December 2001 until the Regulation entering into force, or for which a building permit was issued at that time.

In addition to the principles demonstrated in Appendix 2 of the binding regulation, for the preparation of the map for legal purposes with the project of the transmission right-of-way, also the guidelines The distances between building structures and technical facilities (Korzeniowski 1994) are used which, in the tabular form, contain a detailed description of the widths of the strips of land required to assemble the conduits of the underground public utilities.

#### Transmission right-of-way for the power network

The aforementioned Article 305 of the Civil Code (Act 1964) also refers to the determination of the transmission right-of-way for the power network. Pursuant to the Environmental Protection Law of 27 April 2001 (Act 2001a), before obtaining a decision on environmental conditions, a report should be drawn up, on the need to establish an area of restricted use for the planned project, referred to in Article 135:

Art. 135. 1. If the environmental impact assessment of the project required under the Act of 3 October 2008 on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessments, or the as-built analysis demonstrate that despite the use of available tech-

nical, technological and organizational solutions, the standards of the quality of the environment outside the plant, or other object, can not be met, then for the sewage treatment plant, municipal landfill, composting plant, communication route, airport, power line and **power station** as well as radiocommunication, radionavigation and radiolocation installations, **the area of restricted use is created**.

Pursuant to the Act of 3 October 2008 on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessments (Act 2008), Article 82. 1. says that:

*Art.* 82. 1. In the decision on environmental conditions, issued after the environmental impact assessment, the competent authority:

3) in the case referred to in Article 135 section 1 of the Act of 27 April 2001 – Environmental Protection Law, states a need to create the area of restricted use;

The transmission right-of-way for overhead power lines is determined by the width occupied by the range of the location of the power lines on electric poles. It follows that the right-of-way for the transmission facilities is an area formed by the orthogonal projection of electric lines onto the real estate located below.

The transmission right-of-way for overhead power lines is not specified in the form of a regulation, though. To define the protection zones, surveyors must use the Regulations in the form of the standards, as presented in Table 2.

Name of the standard	Scope of application		
N SEP-E-004 Electrical and signaling cable lines, design and construction	The standard contains the requirements for the design and construction of cable power lines. It sets out the distances for intersecting the cables, lay- ing the cables close, parallel, and under a road		
PN-EN 50423-1:2007 AC overhead electrical lines over 1 kV up to and including 45 kV	The standard sets out the distances between the medium-voltage cables and building structures or trees		
PN-EN 50341-1:2005 AC overhead electrical lines over 45 kV Polish denotation: PN-EN 50341-2013-03	The standard applies to the minimum distance between the wires and buildings, recreation areas, waterways, antennas, masts and lanterns		
Technical guidelines "The distance between building structures and technical facilities" (Korzeniowski 1994)	<i>"The widths of the strips of land (L) needed to lay utility cables in the ground"</i> contained in the tabular form		

Table 2. Standards for determining the rights-of-way and protection zones for power lines; Source: own study

Therefore, there is no uniform law such as a Regulation to establish the transmission right-of-way and protection zones for power networks. The standards only set out the distances between the cables and some objects, such as buildings and trees, and the rest of the information is contained in the listed technical guidelines (Korzeniowski 1994) on laying utility lines in the ground.

#### Transmission right-of-way for the water supply network

The distances between the pipes of the water supply system and buildings or greenery were defined by the Central Research and Development Center for Installation Technology INSTAL in September 2001 (Technical requirements 2001), recommended by the Ministry of Regional Development and Construction to apply as technical conditions. However, this is not a secondary legislation, such as a Regulation. If these distances are to be reduced, adequate safety measures must be developed, which should be included in the technical documentation.

According to other technical guidelines of the company AQUANET S.A. in Poznan (Technical guidlines 2013), the width of the protection zones (laid off from the pipe axis in each direction), without permanent or temporary development and trees, should be as follows:

1) for water supply system with a diameter of DN  $\leq$ 300 mm - 3.0 meters

2) for the water supply system with a diameter of DN $\geq$ 300 mm – 5,0 meters

The guidelines apply both to the newly designed networks as well as the existing ones. The exception are other findings based on the court judgments or other legal actions.

In addition, there are various Polish technical standards for water supply networks. They concern, in particular, the design of water supply systems. These standards may be exemplified by:

1) PN-64/H-74204, which regulates the issue of the external diameters of the pipelines,

2) PN-87/-01060, 1987, which is the basis of the water supply networks, their objects and equipment.

#### Transmission right-of-way for the sewerage network

The distances between the conduits of the sewerage system and buildings, greenery and other objects were defined by the Central Research and Development Center for Installation Technology INSTAL in August 2003 in volume no. 9 (Technical requirements 2003). The guidelines are recommended for application by the Ministry of Infrastructure. They are demonstrated in Table 5 below.

There were also other guidelines created for technical conditions, developed by water and sewerage companies. For example, the company AQUANET S.A. in Poznan (Requirements 2013) established the definition of a 2.5-meter strip of land on each side of the pipe axis. Such guidelines can be used both for the planned and the existing networks. Court judgments or other legal action may be the exception to the rule. Such findings appear to be unusual because for the other networks the width of the protection zone is determined by the size of the individual conduits.

There are also technical standards which were developed for sewerage networks:

- 1) PN-87/b-0170, 1980 applies to the external sewerage network, its objects and equipment.
- 2) PN-92/B-10735, 1992 is on sewerage conduits, the requirements and tests for acceptance procedures.

#### Summary

Analyzing the provisions of law for determining the right-of-way for specific transmission facilities, it should definitely be noted that gas networks have the best-defined regulations. These provisions are unambiguous and have a nationwide reach, as they are in the form of the Regulation. For other networks, the provisions are technical standards and regional provisions, which may raise doubts as to their application throughout the country. At the same time, due to a lack of precision in the legislation, there are a lot of ambiguities as to the interpretation of the width of the protection zone. They are not clear and they do not determine the width of the protection zone in a direct way, but they only specify the distances from individual objects that may occur in the area.

From a practical point of view, the best solution for the establishment of the right-of-way for transmission facilities is an agreement between the parties in the form of a notarial deed. Unfortunately, disputes in this matter are frequent. Then the matter becomes more complicated. In this case, a map for legal purposes with the project of the right-of-way for the transmission facilities should be drawn up. Consistently with the recommendations of the court, the map should only contain the right-of-way, or the right-of-way with the protection zone of a given network. The protection zone seems to be crucial, especially for overhead infrastructure, having often much wider impact zone than the right-of-way itself. The established right-of-way determines the value of consideration for the owner of the encumbered property. For this reason, a very important aspect is to determine the appropriate width and the area of the right-of-way for the transmission facilities, including the protection zone for a specific network.

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