

1 INTRODUCTION TO ENERGY INDUSTRY

The study of law in the energy industry requires, in addition to general knowledge of law, which is connected with the interpretation of legal norms and law as such, also a proper knowledge of physical contexts. In the same way that an expert in medical law is expected to understand the connections related to medicine, a future expert in energy law is expected to be familiar with the terminologies and laws applicable in the energy industry. In application practice, the absence of a correct perception of physical phenomena and contexts in the energy industry can lead to a wrong interpretation of the legal norm.

The basis of the word energetics is energy (from the Greek word *energeia* – a term for momentum, activity, realization). The term “energy” itself is a physical quantity that can be defined as the ability of matter (substance or field) to do work. From the point of view of Slovak jurisprudence, energy can be defined as a controllable natural force.² Fekete defines energy in the context of SR law as controllable natural forces generally usable by humans (electricity, gas, flowing water).³ In the context of our law, energy together with movable things, animals and real estate is considered a tangible thing.⁴

This chapter is internally divided into three parts. The first part of the chapter is devoted to basic physical connections related to electricity industry. The second part of the chapter is devoted to basic physical connections connected with the gas industry, and the last part is devoted to heat energy industry. The aim of this chapter is to provide an overview of those basic physical phenomena and physical laws, knowledge of which is essential for correct orientation in the given problem.

1.1 Basics to the study of electricity industry

Each of us uses electricity several times a day. This achievement of modern times has become an integral part of our daily life. In this context, it should be remembered that the supply of almost all services of modern life depends on a continuous and stable supply of electricity. To illustrate, just imagine a normal

² Compare with § 497 of Act No. 89/2012 Sb. Občianský zákoník as amended.

³ FEKETE, I. 2015. *Občiansky zákonník – Veľký komentár (4. zväzok)*. 2. vyd. Bratislava : Eurokódex, 2015, p. 15.

⁴ Compared to Sweden, electricity (one of the forms of energy) is considered as immovable property. See in detail FEKETE, I. 2015. *Občiansky zákonník – Veľký komentár (4. zväzok)*. 2. vyd. Bratislava : Eurokódex, 2015, p. 15.

day, in the morning we turn on the light, prepare coffee, listen to music, use the elevator, charge the phone, use computers. Electricity is also used in the provision of telecommunication and data services, for the functioning of the sewage system, for the operation of industrial enterprises, but also in transport (trams, trolleybuses, trains). However, few people know the physical laws of the functioning of this key sector of the economy. In this part of the publication, we will take a closer look at the elementary physical background of the functioning of electricity.⁵

1.1.1 Electricity system architecture

The electrification system can be defined most simply as a system of devices through which electricity is produced and transported to end consumers. The legal definition of the electricity system can be found in § 2b) point 8 of the Act on energy as “*interconnected electric power facilities of the electricity producer; the transmission system operator; the distribution system operator; the operator of the direct line and the owner of the electric connection, which serve for the production, transmission and distribution of electricity; the system also includes measuring, protection, control, security, information and telecommunication devices necessary for the operation of the system*”. At the beginning of the development of electrification, power plants were directly connected to points of consumption as single-purpose devices, while such autonomous operations were gradually connected into interconnected units, which today we consider to be the first electrification systems at the city level. It was characteristic of these urban systems that they operated on different technical standards, therefore their simple connection was not possible without harmonization of system parameters (direct current and alternating current, different values of voltage and frequency). The subsequent development of the economy required the connection of existing systems into one complex electrification system, which enabled the mutual connection of all places of electricity production (power plants) with places of its consumption (households and businesses) and increased reliability of electricity supply. This complex system of equipment consists of three main elements:

- electricity production,
- electricity transmission and distribution,
- electricity consumption.

⁵ Within the publication, we will use the terms electrical energy and electricity equally (author’s note).

4 SOURCES OF LAW IN THE ENERGY SECTOR

The theory of law discusses the sources of law in several senses: in the material sense (the achieved stage of development of the society), in the formal sense (valid and effective legal rules) and in the gnoseological sense (sources of knowledge of law). For the purposes of the presented publication, in the following text we will focus only on the formal sources of law in the energy sector, i.e. those rules of conduct that have the form of a state-recognized source of law.

Energy law can be defined as a set of legal rules that govern social relations in the energy sector. Therefore, we consider the source of law in the energy sector to be a generally binding rule of conduct for legal entities and natural persons which regulates their behavior in the energy sector. Only a source of law containing at least one legal rule concerning social relations in the energy sector can be defined as a source of law in the energy sector. However, the sources of energy law do not have the same legal nature, therefore it is necessary to distinguish between them. As was mentioned in Chapter 3 of this publication, the Constitution of the Slovak Republic directly sets the conditions of precedence of international treaties over laws. This fact must undoubtedly be considered also in the case of sources of law in the energy sector. For the purposes of this publication we divide sources of law in the energy sector into the following groups:

- legally binding acts of the European Union
- international treaties that have been ratified and promulgated in the manner laid down by law,
- generally binding legislation of the SR,
- final decisions of the Constitutional Court of the SR on discrepancies between legal acts.

4.1 Legally binding acts of the European Union

The position of energy in the EU law is discussed in Chapter 3 – Energy as a common policy area of the European Union. Therefore, we will now focus on the sources of the EU law that have an impact on the social relations in the energy sector in the Slovak Republic.

Before proceeding to the discussion of the EU legal framework in the energy sector, we consider it appropriate to give a brief general summary of the sources of the EU law. We will subsume the EU and Euratom law under the term the EU

law. The EU law is made up of primary law and secondary law.⁶⁰ Some authors refer to the so-called supplementary sources of law (SDEÚ case law and general principles of law – author's note) and international treaties as a separate source.

Primary law is the basic source of law for deriving the EU competences and is made up of a triad of treaties:

- TEU,
- TFEU and
- Euratom

The protocols and annexes to the treaties in question, the accession treaties of the EU Member States and other treaties are also part of primary law. Primary law establishes the competences between the EU and the MS, defines the decision-making process, the powers of the EU institutions and the scope of their activities.

Secondary EU law is made up of unilateral EU acts, agreements and CJEU case law. Unilateral acts include regulations, directives, decisions, opinions and recommendations.

As was mentioned, energy is now one of the EU's common policy areas. Therefore, we consider it important to briefly address the issue of EU and MS competences. In relation to the EU's law-making competences, three areas of division of competences between the EU and the MS can be identified, namely the exclusive competence of the EU (Article 3 of TFEU), the shared competence of the EU and the MS (Article 4 of TFEU) and the EU's supporting competence (Article 6 of TFEU).⁶¹

Pursuant to Article 1(1) of TEU: *“By this Treaty, the HIGH CONTRACTING PARTIES⁶² establish among themselves a EUROPEAN UNION, hereinafter called ‘the Union’, on which the Member States confer competences to attain objectives they have in common.”*

It is clear from the above-mentioned provision that the MS already expressed their will to transfer certain competences to the EU when the EU was founded. According to Article 4 of TEU, the competences were not transferred to the EU remain the competences of the MS. Article 5 of TEU is crucial to the implementation of the delegated competence; in particular, we refer to paragraph 1: *“The*

⁶⁰ See: VARGA, P. 2012. *Fundamentals of European Union Law*. Plzeň : Aleš Čeněk, 2012, p. 14.

⁶¹ For instance, see: REINS, L. 2019. The European Union's framework for FDI screening: Towards an never moregrowing competence over energy policy? In *Energy Policy* [online]. 2019, no. 128, p. 668. [cit. 2022-02-06]. Available at: <<https://reader.elsevier.com/reader/sd/pii/S0301421519300357?token=2FB1A40231CF31BF3014A4ED37E3F29BDB-0170988C7E5A-3B46473EFF5ADDF13026DFBD0604E8F EF12D32E3E4D0098178>>.

⁶² The High Contracting Parties are signatories to the WEU ergo the MS (author's note).

limits of Union competences are governed by the principle of conferral. The use of Union competences is governed by the principles of subsidiarity and proportionality,” and paragraph 2 of TEU: *“Under the principle of conferral, the Union shall act only within the limits of the competences conferred upon it by the Member States in the Treaties to attain the objectives set out therein. Competences not conferred upon the Union in the Treaties remain with the Member States.”*

In view of the foregoing, it can be stated that three guiding principles determine the manner and scope of the EU action:

- the principle of conferral of powers (Article 4 of TEU) – the EU has only such powers as have been conferred on it by all MS and acts only within the limits of the powers conferred on it by the MS,
- the principle of proportionality (Art. 5 of TEU) – EU measures (content and form) must not go beyond what is necessary to achieve the objectives of the Treaties,
- subsidiarity principle (Art. 5 of TEU) – the EU shall act in areas which do not fall within its exclusive competence only to the extent and when the objectives of the action envisaged cannot be sufficiently achieved by the MS at central level or at regional and local level, but can be better achieved at EU level by reason of the scale or effects of the proposed action.

In view of the foregoing, it can be stated that we will consider the following as the source of the EU law in the energy sector:

- primary EU law: TEU, TFEU, Euratom,⁶³
- secondary EU law: directives, regulations, decisions,⁶⁴
- CJEU decisions.

For the energy sector, it is important to mention that since the ratification of the Treaty of Lisbon, energy has been an area of common policy between the EU and the MS. EU law-making in the energy sector is characterized by the following specific features:

- significantly more direct EU law-making in the electricity and gas sectors,
- the thermal energy sector is mainly regulated by energy efficiency regulations and emission standards,
- the water sector is primarily focused on water protection and efficient management of water resources.

⁶³ See chapter 3.

⁶⁴ See subchapter 2.1.

10 PROJECTS OF COMMON INTEREST OF THE EUROPEAN UNION¹⁸³

Projects of common interest represent a special category of infrastructure projects that are identified by the EC. Projects of common interest can be categorized according to different criteria, such as geographical location, project value or sector focus.

It follows from the PCI legislation (Art. 170 of the TFEU) that the EU contributes to the establishment and development of trans-European networks in the areas of transport, telecommunications, and energy infrastructures. The basic PCI typology can be inferred from the aforementioned provision, namely PCI in transport, energy, and telecommunications. The PCI categorization by sector is reflected in their different legislation. Within individual sectors (transport, energy, digital technologies), a different process of PCI determination (assignment of the PCI status) and different scope of rights and obligations can be observed. The PCI status itself is closely linked to access to funding from the Connecting Europe Facility. In this context, we state that at the EU level, there is uniform legislation in relation to PCI funding. The Connecting Europe Facility legislation is based on the CEF Regulation, which sets out the conditions, methods and procedures for providing EU financial assistance to trans-European networks in order to support PCI in transport, telecommunications and energy infrastructures and to exploit potential synergies among these sectors. The CEF Regulation also sets out the allocation of resources that will be available in the multiannual financial framework for 2021 – 2027.¹⁸⁴ An overview of the current PCI legislation by sector, as well as the defined budget for individual sectors within the Connecting Europe Facility, is presented in Table 3.

¹⁸³ This chapter reflects the legal status before the revision of TEN-E. On 3 June 2022, the Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No. 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013. The revised TEN-E Regulation, among others, aims to: conform the infrastructure development to reflect the climate mitigation's targets, promote the integration of renewables and of clean energy technologies into the energy system, continue to connect isolated regions, strengthen existing cross-border interconnections and promote cooperation with partner countries.

¹⁸⁴ Article 1 of the CEF Regulation

Sector	Specific objective	Budget of the Connecting Europe Facility for 2021 – 2027
Transport	<ul style="list-style-type: none"> – contribute to the PCI development related to efficient, interconnected and multimodal networks and infrastructure for smart, interoperable, sustainable, inclusive, accessible, safe and secure mobility, and – adapt parts of the TEN-T for the dual-use of transport infrastructure to improve both civilian and military mobility 	25,807 million euros
Energy	<ul style="list-style-type: none"> – contribute to the PCI development related to the further integration of an efficient and competitive internal energy market, interoperability of networks across borders and sectors, facilitating the decarbonisation of the economy, promoting energy efficiency and ensuring security of energy supply, etc.; – facilitate cross-border cooperation in the field of energy, including renewable energy 	5,838 million euros
Digital Technologies	<ul style="list-style-type: none"> – contribute to the PCI development related to the deployment of and access to safe, secure, and high-capacity digital networks, including 5G systems, and to the increased resilience and capacity of digital backbone networks in EU territories by linking them to neighbouring territories, as well as to the digitisation of transport and energy networks. 	2,065 million euros

Table 3: PCI legislation by sector and allocated budget for 2021 – 2027 from the Connecting Europe Facility¹⁸⁵

Source: author's own processing.

¹⁸⁵ Article 45 of the CEF Regulation.