# Legal Framework for Renewable Energy in the European Union and in Slovakia

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**Summary:** One of the common topics of the Member States of the European Union is also the energy policy, which has become a subject of significant legislative and institutional changes in recent years. The aim of this paper is to analyze the legislative framework of a legal regulation promoting renewable energy in the European Union, as well as in the Slovak Republic, together with the assessment of a degree of implementation of European law into the legal system of the Slovak Republic in the field of renewable energy. Regarding legislation promotiong renewable energy sources in Slovakia special attention is paid to the sector of electricity.

**Keywords:** renewable energy sources, promotion system, implementation of European commitments.

## 1. Introduction

One of the common topics of the Member States of the European Union is also the energy policy, which has become a subject of significant legislative and institutional changes in recent years. Furthermore, the latest political events and economic developments in the European region clearly indicate that this trend shall henceforth continue. Issues related to energy policy are now one of the most sensitive and therefore, an adequate attention in the national and pan-European field is given to them.

Union, as well as individual Member States, are well aware that a regulatory and legislative framework governing the energy sector, regardless of how they are set, will directly affect the economic growth of countries and the quality of life of their citizens. The question is only whether the effect will be positive or, vice versa, negative.

Energy security, efforts to achieve the objectives in the environmental area, increasing dependence on the import of fossil fuels, and price volatility in the energy market today are among the most essential determinants affecting the

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development of the energy sector in the European Union. Promotion of renewable sources appears to be a key to the solution of these unprecedented challenges. The European Union has declared that the promotion of renewable energy sources, together with energy savings and improvements in energy efficiency, will be a high priority in the future direction of its energy policy. Union presumes that the promotion of renewable energy will contribute to a greater security and diversification of energy supply while ensuring a high level of environmental protection. Last but not least, the promotion of renewable sources is seen as an opportunity to promote social and economic cohesion in the various regions of the Member States of the European Union.

It would be naive to delude ourselves that those findings or assumptions are not motivated by a strong political background. On the other hand, it cannot be denied that the search for a safe and sustainable energy source is one of the greatest challenges of our time.

Promotion of renewable energy sources is therefore nowadays considered as one of the key areas of the economy, in which it is essential that all Member States take the measures necessary to introduce a minimum standard of common rules in this sector and to introduce a uniform policy in relation to third States that supply energy to the European Union.

## 2. Legal Regulation of Renewable Sources in EU

Fundamental principles relating to the field of legal regulation of renewable energy sources (and energy industry in general) can already be found in primary EU law. In this case, it the area of so-called shared competence.[1] The stated means that the powers in the field of renewable energy are divided among the competent authorities of the EU and individual Member States, i.e. on the basis of the principle of subsidiarity. The fact that the inclusion of objectives for the promotion of renewable energy sources into the establishing document of the EU has become real as late as the arrival of the Lisbon Treaty in December 2009 appears to be slightly surprising. Until then, the energy was contained only in a few marginal and overly vague provisions in the primary EU law.[2]

Despite the fact that EU energy policy is one of the key areas essential to the functioning of the EU, it is surprising that the primary EU law directly addresses the energy only in a single article, namely Article 194 of the Treaty on the Functioning

[1] Article 4 sec. 2 limb. i) of the Treaty on the functioning of the European Union.

[2] Only The Treaty of Rome contained a provision, which proclaimed that the activities of the EC towards the fulfilment of its objectives also include measures in the field of the energy industry.

of the European Union (TFEU). The article stipulates that in *"In the context of the establishment and functiononing of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: (i) ensure the functionong of the energy market, (ii) ensure security of energy supply in the Union, (iii) promote energy efficiency and energy saving and the development of new and renewable forms of energy, and (iv) promote the interconnection of energy networks."*[3]

Article 194 TFEU implies that the setting of objectives in the area of the promotion of renewable energy sources falls within the competence of EU to its bodies. The choice of instruments for achieving the objectives set by the European Commission is, however, still in the hands of individual Member States. Member States should decide on the conditions for utilization of their energy resources, promoting the construction and operation of renewable energy sources, as well as the procedures on regulatory issues and financial support for producers of energy from renewable sources in order to achieve the objectives set by EU bodies.

Despite the aforesaid, however, it is not possible to assert quite clearly that only a single article was devoted to the promotion of renewable energy in the EU primary law. Promotion of renewable energy is clearly one of the interdepartmental issues and the interest of progressive development of this area can be observed also in other areas of social life of the EU. Based on the aforesaid, it can therefore be established that the conditions for the promotion of renewable energy sources, albeit indirectly, are yet contained in other provisions of the TFEU. It is, for example, Articles 101 to 106 TFEU, dealing with the rules of competition. Furthermore, Articles 191 to 193 TFEU that are dealing with the environment in which a special consideration is given to the fight against a climate change, are indirectly referring to the promotion of renewable energy sources. Finally, Article 173 of the TFEU, which is devoted to industry because the energy is a fundamental and inseparable part as such, cannot be excluded from this area.[4]

Legislation for the promotion of renewable sources is regulated in more detail in the secondary EU legislation, while a dominant form is vested in directives. Secondary legislation has been developing in the historical context in phases, aiming at different stages in the gradual creation of a functional and sustainable energy market, where the renewable energy sources shall have an inherent status.

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[3] Syllová, Jindřiška. *Lisabonská smlouva*. 1. ed. Praha: C. H. Beck, 2010. p. 700.

[4] JAKAB, Radomír. BILIŠŇANSKÝ, Miroslav. *Implementácia práva EÚ do právneho poriadku SR v oblasti elektroenergetiky.* In *Implementacja prawa unijnego do systemów prawa krajowego w Polsce i na Slowacji po dziesieciu latach czlonkostwa w Unii Europjskiej.* Rzewzów: Wydawnictwo Uniwersitetu Rzeszowskiego, 2015. p. 76-89.

The first comprehensive analytical document focusing on the area of renewable energy sources was so-called White Paper – Energy for the future: Renewable energy sources from the end of 1997. The white paper identified fundamental energy problems, to which Member States are or shortly will be exposed and drew attention to the conclusions of the Kyoto conference of 1997. White Paper identified for such issues mainly (i) the increasing dependence of Member States on imported energy sources from third countries (ii) inadequate and inconsistent use of renewable energy sources (iii) and, finally, climate change and its impact on the economy and Member States energy requirements. The White Paper set forth a gradual increase in the share of renewable energy in gross energy consumption within the Community while recommended to achieve at least 12% of this share by 2010 for the solution of the above raised issues.

A real step towards the promotion of renewable energy sources by the European Parliament and the Council can be referred to as Directive 2001/77EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market from January 2001. First of all Directive defined the term "renewable energy sources", meaning that renewable non-fossil energy sources such s wind, solar, geothermal, wave, tidal, hypopower, biomass, ladfill, gas sewage treatment plant gas and biogas. Directive required achieving the objective of a 21% share of green electricity in total electricity consumption in the EU by 2010, while also requiring the fulfilment of national indicative objectives for individual Member States. Which specific mechanisms shall be used at the national level remained in the hands of individual Member States. Directive emphasized the need for the removal of factual, legal and other barriers of the increase of the electricity production from renewable energy sources and the need for streamlining and expediting procedures at the appropriate administrative level.

In accordance with the uncertain situation in the field oil supplies security (i.e. the transport sector), the EU adopted in 2003 *Directive 2003/30/EC on the promotion of the use of biofuels of other renewable fuels for transport* with the objective to promote the production and consumption of biofuels in the EU. Biofuels are in fact (or at that time were) seen as the only available large scale substitute for petrol and diesel in transportation. As in the electricity sector, also the directive on biofuels was determining a benchmark value of a biofuel share in petrol and diesel consumption.[5]

First directives on the promotion of renewable sources of energy have shown which direction the development should take in this field, on the other hand, we

[5] In 2005 in the amount of 2% and in 2010 in the amount of 5.75%.

have to state that they were far from a solid and ambitious legislation underlying the increase in the contribution of renewable sources of energy to the overall EU energy consumption. They have been set to the Member States only indicatively, i.e. not legally binding objectives in the field of renewable energy sources. This phase of the promotion of renewable energy sources is therefore characterized by more formal measures that failed to respond to the complexity and novelty of the introduced technology. Progress that has been made (primarily in electricity) has been largely invoked due to efforts made by a relatively small number of Member States. Furthermore, the EU has not adopted any legislation to promote heating and cooling from renewable sources, while this sector contributes to the overall final energy consumption in the EU with around 50%.

Insufficient progress in meeting previously set objectives in 2009 led to the adoption of comprehensive legislative framework that has brought much broader and more radical changes in the support of renewable energy. Such an approach can be regarded as quite pragmatic and therefore the level of harmonization of laws in the field of energy in the Member States and the related liberalization tendencies in the market with electricity and gas just peaked in 2009 by the adoption of so-called third liberalization package of measures which should contribute to the creation of a single energy market in the EU.[6]

Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources was adopted on April 23, 2009 and has been valid until now. Significant change, which the Directive 2009/28/EC brought, consisted mainly in setting the binding national objectives for the overall share of energy from renewable sources in gross final energy consumption of individual nation states. This is to achieve the overall objective of the Community, which has been set at 20%. Current positions and capabilities of Member States, including the existing share of energy from renewable sources and energy mix was taken into consideration in determining the binding objectives for individual Member States. Binding national objectives for the Slovak Republic has been fixed at 14%, while, Sweden, for example, has an objective at 49%, which is by far the most from all Member States.[7]

It is essential to note that the objectives set forth in the Directive cover not only the share of electricity consumption, but energy itself, involving heating, cooling and transport. Binding objectives for the transport sector were set for all states equally at 10% share of the total final energy consumption in transport,

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[6] JAKAB, Radomír. BILIŠŇANSKÝ, Miroslav. *Implementácia práva EÚ do právneho poriadku SR v oblasti elektroenergetiky*. *In Implementacja prawa unijnego do systemów prawa krajowego w Polsce i na Slowacji po dziesieciu latach czlonkostwa w Unii Europjskiej*. Rzewzów: Wydawnictwo Uniwersitetu Rzeszowskiego, 2015. p. 76-89.

[7] Annex no. 1 of the Act on Promotion of RSoE.

which shall be recovered from renewable sources (and not just from biofuels alone, as it was previously). These are significant differences compared to Directive 2001 or 2003 and that of 2009.

Objectives set forth in the Directive were consequently transferred into so-called National Action Plans, which Member States were required to draw up and communicate to the Commission by 30 June 2010. The action plan should set national objectives for the share of energy from renewable sources consumed in transport, electricity production and in the sector of heating and cooling in 2020, the trajectory of the expected growth in the use of renewable sources in each sector, measures to achieve the objectives, promotion systems as well as the total contribution expected of each technology to produce energy from renewable sources.

The Directive also proposed a variety of mechanisms that can be used by Member States to achieve their objectives (promotion schemes, guarantees of origin, joint projects, cooperation between Member States and third countries), the selection and method of application of particular measures is left to the discretion of Member States.

Given the fact that the production of energy from renewable sources often involves new and expensive technologies that require high financial inputs, creating a system of promotion and providing promotion (in various forms) is a prerequisite for the growth of this sector. Two dominant systems for the promotion of investments in this field have crystallized in the area of renewable energy in the EU – a system of a guaranteed purchase price (so called feed-in-Tariff) and the system of quotas or green certificates.

Guaranteed purchase price is largely a price determined by the legislative or official decision for the amount of electricity produced from renewable sources. This price is set for a certain fixed period which is within the range of 10-30 years. During this time, the State (through its bodies or a regulatory body) guarantees the amount of the minimum price for the producer of renewable energy, as well as guarantees the producer such consumption – the purchase of such produced energy at a guaranteed price (main representatives of this promotional scheme is Germany and France).

The system of quotas requires from energy suppliers a mandatory purchase of energy from renewable energy sources. Every unit (typically 1 Megawatthour of electricity) generated by certified producer represents a certain amount of so-called green certificates and the State or the Regulatory Authority determines the amount of green certificates that suppliers of energy need to achieve for a given period (this system can be found in various modified forms in countries such as Great Britain, Denmark and Italy).

The selection of a specific promotional system and its application is at the discretion of the Member States, taking into account their national interests and

potential of renewable energy sources (geographical and geological aspects), energy infrastructure and the question of the additional costs for the promotion of the implementation of a system. These differences are the main reason why a number of Member States prevent closer harmonization of legislation on the issue of systems for the promotion of renewable energy sources.

With regard to the persisting differences among States in promoting renewable sources, the cooperation mechanism that the Directive 2009/28/EC established is also worth attention. Member States may (and under conditions prescribed in the Directive also with countries outside the EU) consolidate their efforts in the development of renewable energy sources, by the following approaches: (1) statistical transfers– under which a single Member State with a "surplus" amount of energy from renewable sources may statistically sell the surplus to another Member State, which renewable energy sources may be more expensive. Accordingly, one country gains revenues that may at least partially cover the cost of developing the energy, while another gives a contribution to the achievement of its objective at a relatively low cost, (2) joint projects – under which a new project in the field of renewable energy sources in one Member State may co-finance other states and outputs are statistically shared by both countries. Joint projects may be implemented also between Member States and third countries in the event the electric energy is being imported into the EU and meets further conditions prescribed in the Directive (in particular, it must be a newly built facility with the operation as of 25.06.2009), and, finally, (3) joint promotional schemes – under which two or more countries may agree to harmonize all or part of their promotional systems, to integrate this energy into the internal market and the joint utilization of production in accordance with the rule that takes account of the origins of financial support.

Cooperation among Member States is certainly an interesting approach in achieving the ambitious objectives set by the Community. However, the only previously issued cross-border mechanism remained the Swedish – Norwegian joint promotional system, particularly through recognition of green certificates, which operates since January 2012. The actual disinterest in common mechanisms might be, however, overcome as approaching 2020. Moreover, in 2016, the Nordic countries (the Netherlands, Norway, Sweden, Germany, Luxembourg, Ireland, Germany, France, Denmark and Belgium) signed a declaration on closer cooperation in ensuring sustainable, secure energy supplies available in the North Sea.[8]

A part of the Directive 2009/28 / EC is also the reinforcement of measures aimed to develop the energy infrastructure in order to adapt it to the further development

[8] The text of the political declaration is available at: https://ec.europa.eu/energy/en/news/north-seas-countries-agree-closer-energy-cooperation.

of a production of renewable energy. This measure applies mainly to the electricity sector. Member States shall provide a prioritized or guaranteed access to the electricity systems for producers of energy from renewable sources and to ensure that transmission and distribution system operators guarantee the transmission and distribution of electricity produced from renewable energy sources in their territory.

The openness of systems for electricity producers constitute a major element in the integration of renewable energy sources at the national and international electricity market and contributes significantly to the creation of the single energy market that the EU is trying to create. On the other hand, technical possibilities and requirements for the security and stability of individual power systems cannot be undervalued. This is confirmed in the case of Germany, for example, that with the increasing promotion of renewable sources (mainly wind parks in the North) is not able to provide continuous transmission of produced electricity from the north to the south of the country. Huge tidal volumes of wind power are overloading systems in Poland, the Czech Republic and Slovakia and significantly limit cross-border capacity to other market participants and the international trade with electricity. Slovakia has also a problem with capacity for connecting new sources, but we focus on this more closely in the following sections of this paper.

The results achieved by the Directive 2009/28 / EC are perceived mostly positively in the European spheres. The Commission itself has identified the Directive as *"the key driver for European led global investment in renewable Technologies and supportive renewable energy policies far beyond Europes' frontiers helping renewables emerge as cost-competitive energy source in the last decade in Europe and on global scale."*

Less than 5 years remain by the end of 2020 and it seems that most Member States are on the track to meet objective for renewable energy set forth in the Directive 2009/28 / EC. Prospects for the EU as a whole, relating to the objectives for 2020, remain favourable. According to the Commission report of 2015 in meeting objectives for 2020, we succeeded in meeting the expected share of 15.3% in gross energy consumption in 2014. However, some Member States shall need to significantly increase their efforts and, if necessary, to use some mechanisms for cooperation with other Member States for the sake of progress. In a report from 2016, the Commission expressed the greatest concern about Belgium, France, Luxembourg, Malta, the Netherlands and Spain, so these countries will have to strengthen their policies and instruments to ensure compliance with the objectives for 2020.[9]

[9] Renewable energy progress report [2016/2041(INI)] from 31.5.2016. [online]. Available at: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0196+0+DOC+XML+V0//EN

# 3. Legislation on the Promotion of Renewable Sources in Slovakia

In recent years, the promotion of renewable energy sources in Slovakia has undergone significant changes. These changes were mainly determined by the requirements of the European Union. The Slovak Republic as a full member of the Union is therefore not following only the national, but also European legislation. The fact that the implementation of European commitments will not be an easy task is evidenced by the fact that Slovakia has, in accordance with Directive 2009/208 / EC, an obligation to increase the use of renewable energy sources in proportion to the gross final energy consumption to 14% in 2020, while still in in 2005, this figure stood at 6.7%. The strategic document regarding the objective of 14% is the National Action Plan for renewable energy, approved by the Government on 06.10.2016 by Government Resolution no. 677/2010 (**NAP**).

Slovak Republic, despite the later accession to the European Union, compared to the old members, proceeded to the issue of renewable energy sources rather ambitious, as evidenced by the very objective stated in the NAP, that stipulate the level of 15.3% of renewable sources in proportion to the gross final energy consumption in 2020. The fulfilment of this objective inevitably led to the amendment of several statutes and other legal acts in the field of energy, which should stabilize energy market a make business environment more attractive for new investments. Renewable energy sources for the production of heating and electricity has become a priority.[10]

Energy legislation represents a relatively wide mass branched into a number of statutes and other legislation. Basic substantive issues relating to running a business in the energy, construction and operation of energy facilities and the conduct of state administration are regulated mainly by the Act. no. 251/2012 Coll. on Energy and on amending and supplementing certain laws (**Energy Act**) and Act no. 657/2004 Coll., on Thermal Energy (**Act on Thermal Energy**). These Acts and their follow-up secondary legislation constitute the key legislative framework for the status of individual participants in the energy market and determine their mutual relations. These Acts created conditions for the functioning of the open energy market, as well as the conditions for third party access to energy transmission system in Slovakia. For instance, the provision of § 27 sec.

[10] According to the document entitled *"Draft of Energy Policy of the Slovak Republic"* of October 2014, the share of electricity produced from renewable energy sources in the long term, in the period from 2010 to 2040, shall have increased from 19% to 29%, while the use of renewable energy to generate heat in the same period is predicted to increase from less than 10% to over 30%.

1 of the Energy Act stipulates that the electricity producer shall have the right to connect an electricity generation facility to the network provided that it meets the technical requirements and business terms for connection to the system. Moreover the electricity producer shall have the right to enter into a contract on Access to system provided the electricity producer meets the technical requirements and business terms for Access to the system. The technical requirements for access and connection to the network are specified by the network operator and these must be set on the non-discriminatory, transparent and secure basis.[11]

Efficient and stable promotion for the production of renewable energy is so significant that it was reflected in the form of a state regulation in almost all countries of the European Union. Production of energy from renewable sources is a regulated activity in accordance with Act. no. 250/2012 Coll., on Regulation in Network Industries (Regulatory Act). The actual subject matter of regulation of electricity and combined production of heat and electricity are primarily prices of produced energy, including the conditions for their application. Results of a price regulation in relation to producers are price decisions rendered by the Regulatory Office for Network Industries as a regulatory authority in the field of energy.

Regulatory Act contains, except the price regulation, also so-called substantive regulation, which is, for example, the issuance of an authorisation for doing business in the energy sector. Procedure for the substantive regulation involving a claimant – the producer – commences by the submission of the application. In the event of fulfilling the statutory requirements, the outcome of the substantive regulation is the issuance of an authorisation for the performance of regulated activities. Such a decision is of a legislative nature, i.e. it establishes the rights and obligations of the applicant *pro futuro*, i.e. as of entering into the force to the future.

Simultaneously, however, it shall be added that for the performance of certain activities in the field of electricity production from renewable sources, it is sufficient to meet the notification obligation towards the Regulatory Office for Network Industries. Confirmation of compliance with the notification requirement, however, has no longer the nature of an administrative decision, since such a certificate is not issued in the administrative proceedings. The nature of an administrative decision issued in an administrative procedure has neither certificate of origin of electricity produced from renewable energy sources, certificate of origin of electricity produced by high-efficiency cogeneration. Although the given confirmations fall within the substantive regulation, they have no decisive nature but rather the nature of certificates, to which the legislation does not

[11] § 19 sec. 1 Energy Act.

acknowledge the administrative nature. According to provision of § 41 sec. 2 Regulatory Act, general law on administrative procedure shall not apply to issue of these certificates.

## 4. Promotion of Renewable Energy Sources in the Act No. 309/2009 Coll.

A more detailed regulation governing the area of promotion the utilisation of renewable energy source is finally the Act no. 309/2009 Coll., on the promotion of renewable energy sources and high efficiency cogeneration (Act on the Promotion of RSoE). This law regulates the relatively wide scope, including a field of conditions and methods of application for the promotion of electricity generation and cogeneration of electricity and heat from renewable energy sources, the conditions for the promotion of a biomethane production, the application of the rights and obligations of producers from renewable energy resources, rights and responsibilities of regional distribution systems and other participants in the energy market, the state administration in the promotion of renewable energy sources, defines certificate of origin and guarantee of origin of electricity produced from renewable energy sources and by high-efficiency cogeneration, while implemented new terms into the legislative framework, as it was required by the implementation of European directives.

Act on the Promotion of RSoE has undergone a number of amendments since 2009, which gradually reflected not only the proposed measures of the European Commission in the field of energy, but also the content of the national strategy documents. One of the most essential of them, except the already mentioned NAP, is the Energy Policy of the Slovak Republic ( EP SR) adopted by the Ministry of Economy of the Slovak Republic, which defines objectives and priorities of the energy sector in the long term, i.e. a minimum period of 20 years. EP SR's objective is to ensure the sustainable growth and competitiveness of the national economy by ensuring the sustainable Slovak energy industry. From this perspective, it is a priority for EP SR to ensure the reliability and stability of the energy transmission by the usage of low-carbon technologies, such as renewable energy sources and nuclear energy.

In the promotion of the renewable sources of energy and for the purposes of the Act on the promotion of RSoE, the renewable source of energy is deemed as a non-fossil source of energy, the energy potential of which is constantly restored by natural processes or human activity, and includes the following sources: hydro energy, solar energy, wind energy, geothermal energy, biomass including all

products of its processing, biogas, landfill gas, waste water treatment plant gas, biomethane, earothermal energy and hydrothermal energy. General basic terms including the definition of individual renewable energy sources stem from the Directive 2009/28/EC.

Act on RSOE represents a number of forms of promotion for producers of renewable energy and high efficiency cogeneration with an emphasis on resources with less performance, which is in line with the principle of promoting decentralized sources. In other words, a form of promotion for producers varies depending on the type of renewable energy source and the total installed capacity of the production facility. According to provision of § 3 sec. 1 limb a), an electricity producer is entitled to (i) priority connection to the distribution network, (ii) priority access to the network, (iii) priority electricity transmission, (iv) priority electricity distribution, and (v) priority electricity supply. The given form of promotion represents a basic form of promotion that is provided to producers, regardless of the performance and nature of the production facility. In this respect, however, it should be noted that, the stated is currently not applied in practice to the source with the installed capacity of 10 kW. The three regional distribution companies declared so-called "stop status" for connecting new sources for the production of electricity with the mentioned output of 10 kW at the end of 2013. Technical limitations in the system are given a reason to do so. The number of connected production sources in fact caused that the amount of electricity produced from renewable sources is not consumed directly in the production area, which then causes energy flows in the system that may endanger the safety and reliability of operating the electricity systems.

Since 2009, when the Act on the promotion of RSoE was passed in Slovakia, a large number of new facilities for the production of electricity from renewable sources of energy and high efficiency cogeneration of energy have been introduced into the operation. The reason for such increase of facilities is mainly the guarantee of promotion through feed-in tariffs for a period of 15 years.

As was already mentioned in the introduction, the promotion of electricity production from renewable energy sources through feed-in tariffs is the most widespread form of promotion in the EU. This promotional system is considered useful for investors because of the guarantee of the return on investment. Promotion in the form of feed-in tariffs is regulated in the Act on Promotion in § 3 sec. 1 limb b) and c), i.e. in the form of electricity offtake for the price of electricity covering the losses and in the form of so-called additional payment. Both forms are provided through the regional distribution system and the producer may (contrary to the legislation in the Czech Republic) implement both forms of promotion at the same time.

The fact is that all facilities generating electricity from renewable sources, which are connected to the regional distribution system and comply with the current legislation, have a guaranteed repurchase of electricity, based on the promotion under § 3 sec. 1 limb b) of the Act on Promotion of RSoE. Regional distribution system operator is required to repurchase such electricity to cover losses that arise from the physical distribution of the required amount of electricity to the final customer at the various voltage levels. The regional distribution system operator thus pays only for the actual amount of electricity serving to cover losses, which had been supplied by the producer. The price of electricity for losses is a pricing decision of the Regulatory Office for Network Industries set forth as a fixed price generally valid for one calendar year.

In accordance with the provision of § 5 sec. 7 of the Act on Promotion of RSoE, in the event, if the instantaneous power of the electricity offtake exceeds the quantity necessary for covering the losses, the regional distribution network operator is entitled to sell this electricity at a price not less than the price of electricity for losses.

Philosophy of purchasing the electricity to cover losses is not standard in the EU Member States. The imposition of obligations for a market participant, which is a regulated entity and which may not deal in electricity, in addition to the above exemptions for the required offtake of electricity. Such an approach was set by the Act on the Promotion of renewable energy sources because of the experience of previous years, however, nowadays, it is necessary to modify such approach, not only as result of the volume of electricity offtaken to cover losses. Some operators of regional distribution systems have already delegated another person (supplier of electricity) for the provision of support in the form of repurchasing electricity to cover losses, as the provision § 4 sec. 1 of the Act on Promotion of RSoE allows them.

Unlike previous form of promotion, in the event of additional payment in accordance with § 3 sec. 1 limb c), the fact is that the regional distribution system operator pays the price for all volumes of electricity (lessen by auto-comsumption of technology) produced by a producer connected to the network regardless of whether the manufacturer supplies the electricity to a provider of the regional distribution system (or the person authorized by him).[12] The amount of additional payment is determined by the Office for Regulation of Network Industries individually for each single producer. Additional payment is set forth as a fixed price, while the Regulatory Office for Network Industries takes into consideration the type of renewable energy source, rate of return on investment,

[12] Electricity generation facilities to which applies additional payment are listed at § 3 sec. 4 of the Act on Promotion of RSoE.

production technology, the term of initiation the facility into operation, and the term and scope of reconstruction or modernisation of technological facilities or the total installed capacity. Amount of the additional payment de facto does not change and remains the same as in the year when the facility was initiated into operation.[13]

Market principles are currently preferred in the promotion of renewable energy sources and high efficiency cogeneration. Generously set prices for some types of renewable energy cause undesirable financial and technical effect. Given the experience with the promotion of renewable energy sources, it can be stated that in Slovakia, this risk was underestimated and prices were set very favourable towards investors. This is particularly related to the resources that are relatively unstable depending on the weather, such as photovoltaic power plant.

The Regulatory Office for Network Industries determined the generously set feed-in tariff for photovoltaics further the adoption of the Act on Promotion of RSoE in 2010 and that invoked a large interest of investors for this area of business. Investors who have had ready funds for projects for different types of renewable energy sources mostly focused on the area of photovoltaics. Towards the end of 2013 the installed capacity of these sources amounted to 537 MW. Purchase price of electricity from solar energy, which was several times higher than the market prices of electricity, has reflected to the final price of electricity to the so-called tariffs for the system operation (**TFO**).

Further construction was regulated by the legislative modification of promotion to avoid problems in the management of the power system and escalating electricity prices. Under the current legal status for facility of an electricity producer that uses solar energy as source, the additional payment applies only to a facility with the installed capacity of up to 30 kW that is located on a roof structure or perimeter wall of one building connected with the earth by a fixed fondation, registred in the cadastre of immovables[14].

The promotion of those renewable sources that do not show fluctuations in production and which feed-in tariffs will be closer to those of the market can be expected in the new regulatory period to support. The new setting of the promotional system for renewable energy sources should thus ensure the achievement of its objectives in a cost effective manner and should prevent impact on electricity prices.

[13] The Act on Promotion allows an exception from this principle, where pursuant to § 6. sec. 4 the Office shall alter the price of electricity under sec. 3 per calendar year by additional payment that reflects the significant increase or decrease in raw material prices in the preceding calendar year that were used to generate electricity.

[14] § 3 sec. 10 Act on Promotion of RSoE.

# 5. Cost for Promotion Energy from Renewable Energy Sources

As mentioned above, as regional distribution system operator is obliged to offtake electricity for which they are paying the price of electricity for losses. The electricity producer is also entitled to an additional payment to the regional distribution system operator to the actual amount of electricity produced for a calendar month from renewable sources (reduced the own technological autoconsumption of electricity). Regional distribution systems operators have the cost of this promotion compensated in the procedure of price regulation under Act no. 250/2012 Coll.[15]

The funds designated for the promotion of production of renewable electricity for the regional distribution system operators are allocated annually by the Regulatory Office for Network Industries through TFO, based on forecast production from renewable sources for individual calendar years. Given the fact that in the past, there was an inconsistency among the data on estimated production, what caused increased costs for electricity supply and thus the impact on the price of electricity, the notification obligation for electricity producers was introduced under provisions § 4 sec. 2 limb c) of the Act on RSoE. According to that provision: *"electricity producer entitled to support is obliged to notify the Regulatory Office for Network Industries and the regional distribution system operator of claiming the support pursuant to § 3 sec. 1 limb b) and c), including of the expected quantity of supplied electricity always by 15 August for the following calendar year."* Failure to meet this obligation causes the impossibility to apply for the support in the form of additional payment and as well as in the form of electricity offtake for the price of electricity covering the losses.[16]. There is no doubt that the loss of entitlement in producers to the promotion for a full calendar year may denote a significant limitation of their business and can also significantly negatively affect their economic situation, in particular where such promotion constitutes a significant or even sole incomes from business activities of such producer of electricity. For this reason, therefore, the fact that one third of all of the overall number of 3000 producers of electricity from renewable sources has not fulfilled their statutory obligations in 2015 is strikingly shocking.[17]

[15] § 5 sec. 1 Act on Promotion of RSoE.

[16] § 4 sec. 3 Act on Promotion of RSoE.

[17] A list of producers who lost a claim to exercise the promotion in 2015 because of the application of the provision § 4 sec. 3 of the Act on Promotion of RSoE is available on the website of the Regulatory Office for Network Industries; for an actual list of producers see: http://www.urso.gov.sk.

The current system of promotion with the philosophy of purchasing the electricity to cover losses in the distribution system is unsustainable; especially due to the fact that the electricity that is compulsorily being purchased exceeds the losses in distribution systems. Moreover, the calculation of system costs in every operator of the regional distribution system is also quite complicated.

There is an ongoing discussion in connection with the promotion of electricity produced from renewable sources that a single central purchaser of all electricity produced in this way shall be determined. Regardless of which that entity would be at the end, all such mandatorily reversely purchased electricity would be placed on the market, thus contributing to the increase of its liquidity. Such a system would undoubtedly contribute to the optimization of costs compared with the system of three regional distribution companies. Regulatory Office for Network Industries would then be able to set fees for the promotion of "green electricity" far more effectively because the costs would check and compare with the facts only in one subject. At the same time, this would eliminate an obligation for the regional distribution system operators to make, which is not related to distribution as such. Additionally, a similar model has already been operating in Austria and Italy.

# 6. Conclusion

Promotion of renewable energy sources is nowadays considered as one of the key areas of the economy, in which it is essential that all Member States take the measures necessary to introduce a minimum standard of common rules in this sector and to introduce a uniform policy in relation to third States that supply energy to the European Union.

The Directive 2009 with legally binding Union and national targets and 10% target for renewable energy use in transport became the key driver for European led global investment in renewable technologies and supportive renewable energy policies far beyond Europe's frontiers. This momentum needs to continue.

With four years to go to the end of 2020, majority of the Member States are well on track to meeting the renewable energy targets laid down in the Directive 2009. On the other hand the concerns regarding the progress in some Member States still exists and causes lesser optimistic assumptions related to their future development, namely: deviations from their own national renewable energy action plans; failure to address certain administrative and grid-related barriers to the uptake of renewable energy; recent disruptive changes to national support schemes for renewable energy; and, finally, the slow transportation of the Directive into national law.

The Slovak Republic as a full member of the Union is not following only the national, but also European legislation. Basic substantive issues relating to promotion of electricity from renewable energy sources are regulated mainly by the Act no. 309/2009 Coll., on the promotion of renewable energy sources and high efficiency cogeneration. It can be stated that via this act the measures contained in the European energy directives has been thoroughly implemented.

Reservations, however, may have in relation to support scheme provided through three regional distribution system operators. On the other hand, with the financial subsidies for electricity produced from renewable energy sources, the share of "green electricity" generated in the years 2010–2014 increased to stable level of around 20 %. In 2015, however, production of electricity from renewable energy sources accounted only for 17 %. The share o fit total gross consumption was reduced even to 15,6 %. The decline was undoubtedly caused by the loss of support for more than 1.000 producers due to the failure of their legal obligations in reporting data.

Finally, it can be concluded that the Slovak republic has implemented the European Union rules regulating the area of promotion energy from renewable sources, taking into account acceptable departures. The way forward in the area of promotion the energy from renewable energy sources should, step by step, lead to the ceasing the system based on financial subsidies and implementing market oriented tools.