

Introduction

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The term “energy industry” generally denotes a field which is concerned with the economic use of all energy sources and supplies.

Nowadays, we use different forms of energy, including their combinations, but the most frequent forms of energy used are water energy, wind energy, heat energy and nuclear energy.

The majority of energy may be used in a place where it originates and this is important for its use but it is not a decisive factor.

However, a much more effective use of energy takes place in a place designated in advance where, in a concentrated form, its transformation, exchange or sale is carried out. Here, the energy plays an important role as a commodity which may be transported freely and subsequently sold and purchased or processed and just then be sold and purchased, either in large or small amounts – for small consumers. We therefore talk about the transport of energy through various networks, referring thus to network industries. With respect to the legal regulation, we thus talk about the legal regulation of network industries.

The framework of legal regulation of network industries may be found in individual national constitutions and national legislation.

In the EU, this legal regulation is contained in the Treaty on the Functioning of the EU, particularly its Title XVI entitled “Trans-European Networks”. Article 170 of the Treaty states that the European Union wants to contribute to the development of trans-European networks in the areas of transport, telecommunications and energy infrastructures, including the interconnection of national networks as well as the access to such networks.

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We will not deal with the development of transport and telecommunications networks since these are subject to a specific legal regulation and operate more or less effectively. The situation is much more complicated with respect to energy infrastructure, naturally, including the specific features through which one can differentiate it from transport or telecommunications networks.

As we have already mentioned, energy networks have certain specific features which can be derived from the type of energy and also from the fact of whether the renewable or non-renewable energy sources are concerned.

A specific problem typical of them is their spontaneity and the fact that they are subsequently difficult to store and handle. These facts are frequently taken advantage of by supranational corporations in a cross-border trade.

Most proposals for legal regulation support the renewable sources. However, investors are many times not interested in them since it is rather expensive. Many investors thus prefer to invest in non-renewable sources.

Given these problems and other obstacles which tend to emerge, the construction of energy networks and development of energy market (especially electricity) in Europe is of a great importance at both the national as well as the European level.

The applicable legal regulation at the national and the European level should ensure the priority of electricity, preservation of its specific qualities, ensure the means of its transport and ensure the compliance of national interests with the supranational ones, in particular with the Union's interests.

The transport and sale is generally related mainly to the market environment. Foreseeability and functionality is typical of such market environment.

At the European Union level, this practically means that it is necessary to create energy networks interconnection so that every entity in the EU could, whenever it needs to, purchase enough energy from the administered European energy network.

Energy Law and Renewable Resources of the Czech Republic

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1. Introduction

In this chapter, I will focus on two areas of energy law in the Czech Republic, that is: (i) energy security, which is a fundamental prerequisite for energy law; and (ii) the future of energy law, especially concerning the preservation of sufficient energy resources for a modern society.

The answer to challenges related to both issues mentioned above may lie in renewable resources, which are now used much more than they ever used to be, but the effectiveness of this use – also taking into account their potential negative impact on the environment – is still questionable.

2. Energy security of the Czech Republic

“Energy security is the availability of sufficient supplies at affordable prices”², which means that one seeks the right balance between the amount of energy and the willingness to pay for it only as much as one thinks is still economically justified.

The three main aspects of energy security are as follows:

1. The security of obtaining energy resources;
2. The security of energy transformations and energy transport; and

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² D. Yergin, *Ensuring Energy Security*, Foreign Affairs 2006, Vol. 85, available at www.foreignaffairs.com/articles/61510/daniel-yergin/ensuring-energy-security (accessed on 2 October 2016).

3. The energy security of final users³.

Energy is a key precondition for any rate of economic growth and there is no doubt that the main source of energy. To promote and maintain its economic growth, it is necessary for every country to supply appropriate amount of energy for production, movement and everyday life of its citizens.

Energy security comprises of various levels of relations (between different groups of objects using energy named below), even though the degree of understanding the energy threat differs. The difference in interests is determined by an entity's understanding of the term of energy security. Among different stakeholders, in terms of energy security, we can mainly distinguish:

- Producers (owners of energy sources);
- Distributors (entities that distribute energy resources or through which these resources are distributed);
- Consumers; and
- Other entities with particular interests on energy security (e.g. banks, car producers, scientific institutions and environmental organisations)⁴.

It is evident that the interests and objectives of the above-mentioned groups with regard to energy security are to some extent different. However, in principle, as regards security, the fundamental objective should be the same: ensuring sufficient production at the lowest price possible, while ensuring protection of energy resources, their distribution and subsequent consumption.

The energy sector and the related energy security is an important aspect of country's security and one of the Czech Republic's priorities. It is necessary to define a clear long-term energy policy, which will influence the future of the Czech Republic. The country's vulnerability lies in the fact that it is largely dependent on supplies of energy from a single source and that the energy market is not sufficiently integrated. The Czech Republic largely builds on the security strategy of the EU and NATO, what is most visible in a document of the Ministry of Industry and Trade entitled "State Energy Policy"⁵. The document reflects requirements and proposals of the EU stemming mainly from the Lisbon Treaty and, in general, from the evolving throughout the recent years EU strategy and policy of the energy security.

In the State Energy Policy (hereinafter also referred to as the "SEP") the Czech government defines a political, legislative and administrative framework for a reliable, affordable and sustainable energy supply. According to Section 3

³ I. Beneš, *Energetická bezpečnost: informační příručka*, Hluboká nad Vltavou 2007, p. 5.

⁴ V. Prorok, [in:] *Energetická bezpečnost – geopolitické souvislosti*, Prague 2008, p. 15.

⁵ *Ministry of Industry and Trade of the Czech Republic*, Update of state energetic concept of the Czech Republic, available online (accessed on 2 October 2016).

of the Act on Energy Management⁶, the SEP is a strategic document expressing the state's goals in the energy sector in line with the requirements of economic and social progress, including protection of the environment.

The State Energy Policy identifies five strategic priorities, which should contribute to the achievement of the top-level goals. The first priority includes a balanced mix of primary energy resources and electricity generation sources, with this mix being based on their broad portfolio and on effective use of all available domestic energy resources. Second priority is maintaining trade surplus with the EU with sufficient reserves and preserving available strategic reserves of domestic forms of energy. Third priority is increasing the energy efficiency of the national economy, developing the networks infrastructure of the Czech Republic in the context of Central European countries, reinforcing international cooperation and integration of electricity and gas markets in the region and promoting the creation of an effective and agile common energy policy of the EU. The remaining priorities include the support for research, development and innovation to ensure competitiveness of the Czech energy sector and the support for education with the aim to implement the necessary generation renewal and to improve the quality of technical intelligence in the energy sector.

Last, but not least, increasing the energy security and resistance of the Czech Republic and strengthening the ability to obtain the necessary energy supplies in the event of frequent breakdowns, multiple attacks against critical infrastructure and long-lasting crises in fuel supplies.

2.1. Energy risks

The security risks the Czech Republic is facing in the field of energy can be classified as: (a) technical (interruptions in the supply of primary energy feedstock as a result of breakdowns or accidents in the production or transfer of energy); (b) economic (ensuing from the character or non-existence of the market); and (c) political (related to the regulatory environment, national industrial incentive policy or assumption of foreign policy obligations).

From a general viewpoint, when providing for energy security it is necessary, as far as possible, to follow one core principle: avoiding the absolute dependence on a single source in any segment of strategic raw materials. In the Czech Republic's case this means not exceeding, if possible, the high proportion of oil and gas supplies from Russia (in 2015, this proportion was 56.4% both for oil

⁶ See Act No. 406/2000 Coll.

and natural gas⁷) and efforts should be made rather to reduce this proportion in favour of a different supplier. From the viewpoint of energy security, the best-case scenario is not to take more than 30% of the total volume from a single supplier.

With regard to the fact that traditional energy resources and their reserves are finite, it is necessary to diversify resources and achieve a certain ideal energy mix, especially in the field of nuclear energy or potential limited renewable resources. Another goal is to reduce dependence on fossil fuels and search for more effective solutions – research and new technologies with the aim to reduce energy intensity and seek economically viable alternative sources of energy that are friendly to the environment.

In general, it is possible to divide the need for energy into 3 parts: households, industry and transport. As regards transport, there is an evident substantial dependence on oil and oil products, and the Czech Republic imports almost all its oil capacity from abroad. The same is the case for natural gas and, therefore, it is necessary to look for ways of avoiding the growth of dependency⁸ on these imports and, thus, increasing energy security at the same time. According to the SEP, what makes the Czech energy mix different from the neighbouring countries is the generation of electricity. The Czech Republic is self-reliant in terms of both households and industry. What more it even exports roughly 25% of electric power to other countries. Therefore, it could be argued that considering electric energy sources, the Czech Republic is safe.

What is or, what can be, an energy security issue is the relatively uncompetitive environment in the gas or electricity market because the company RWE Transgas supplies most of it. The main threat is cancelling diversification of supplies from Norway, with the Czech Republic having no strategic stockpile of gas and with gas storage facilities in the Czech Republic being controlled by privately owned companies. Short diversification of gas energy supplies is not the direction that the Czech Republic should take, because it represents potential future threat.

2.2. Energy security in the future

It has been identified that the main challenges for the Czech Republic's energy security are a possible lack of coal for Czech combined heat and power plants and power plants as a result of mining limits; the rising costs of the use

⁷ Czech Statistic Authority, available at <https://www.czso.cz/csu/czso/spotreba-vybranych-roponych-produktu-a-zemni-plyn-prosinec-2015>.

⁸ E.g. that would be implemented projects to produce electricity from gas.

of coal as a result of the levying of full-scale charges for emission credits by the year 2020; the trend of replacing coal with imported natural gas and the related increase in the Czech Republic's import dependency; postponing the expansion of Czech nuclear power plants; problems with the implementation of gas infrastructure projects aimed at further diversification of gas supplies to the Czech Republic; and the strains on the Czech electric transmission network as a result of international electricity transfers and an increase in the use of intermittent renewable energy resources⁹.

In the future, energy security can be and hopefully will be reinforced namely by reducing the dependency of oil and gas supplies from a single source. This call is even more important given that Russia has chosen its energy strategy as a political tool used at the international level that serves for building or renewing, to some degree, Russia's global power status. In light of the above, it would be also highly desirable to look for alternative transport routes for the existing suppliers followed by the diversification and search for new energy producers.

Compared to many other European countries¹⁰, raw material and energy security in the Czech Republic is at a relatively good level. What is quite worrying though is the fact that a vast majority of the measures that determine this solid level of raw material and energy security was adopted in the past and, therefore, today we are reaping the fruits of the right strategic decisions made in the previous decades. The area of the energy security and, in particular, the raw material security of the Czech Republic provides enough room for further strengthening in individual segments. To implement this though, it is necessary to start looking at this strategic area as an area of the public interest¹¹.

It is true – and it is probably a step in the right direction – that efforts are being made to achieve diversification of energy resources, but a question remains how this can be achieved, because in the Czech Republic's geographical context the only option is to build larger gas storage facilities. Without doubt, a more relevant issue is the search for energy savings and effective use of energy resources.

The main problem in the development of renewable resources or green energy is the natural conditions of the Czech Republic, which do not allow for further extensive development of these resources. Another issue with renewable resources is the possibility of destabilising the energy network and

⁹ P. Binhac et al., *Energetická bezpečnost ČR a budoucnost energetické politiky EU*. Zkrácená verze, Prague 2010, p. 7.

¹⁰ Most energy dependant countries are islands (Malta, Ireland, Cyprus), small states (Luxemburg) and Italy.

¹¹ *Ministry of Industry and Trade of the Czech Republic*, Background to the Concept of Resources and Energy Security of the Czech Republic, available at www.download.mpo.cz/get/44988/50560/583032/priloha001.pdf (accessed on 15 September 2016).

power outages in the national grid caused by the random character of supplies into the grid. Installation of some renewable energy resources (especially wind and solar power plants) has its technical limits concerning the extent to which they can participate in the performance of the energy network. The support for renewable energy resources in the Czech Republic should be to some extent limited, while acknowledging that the benefits of these energy resources will not be seen until after many years.

Another important aspect is to achieve some form and degree of decentralisation of the energy system to prevent a situation where, for example, one cyber attack puts the entire transmission network out of order, and to reinforce the energy transmission system in the public interest to minimise the risk of blackouts.

In the light of the above, it seems advisable to strengthen the role of nuclear energy in the Czech Republic's energy mix and to use and perhaps even increase the current production of nuclear power plants based on technologies of some EU countries (Germany, France). Energy security would also be surely reinforced by the Czech Republic having its own reserves of nuclear fuel, i.e. by continuing the uranium mining.

Secondly, there should also be appropriate endeavours undertaken to use the country's own energy resources, while realistically assessing their potential use. The country should start assessing and using the possibility of exploiting (even in the future) its reserves of lignite and coal. In an ideal scenario, the country should prevent the situation when there will be impossible access to raw materials e.g. by constructing buildings in areas where raw materials are available.

Another recommendation on how to increase energy security in the Czech Republic is, in my opinion, the creation and promotion of the full liberalisation and functioning of markets and an effective legal regulation of non-competitive markets.

As the main guarantor of the Czech Republic's energy security, the State should through the SEP clearly communicate to energy companies its long-term strategy and priorities for energy security. This would eliminate the current uncertainty, which undermines investment in the energy sector and poses a threat to the country's energy security. The current trend of postponing important political decisions only exacerbates the problems of the Czech energy sector and reduces possibility of their resolution¹².

¹² *Ministry of Industry and Trade of the Czech Republic*, Background to the Concept of Resources and Energy Security of the Czech Republic, available at www.download.mpo.cz/get/44988/50560/583032/priloha001.pdf, p. 8 (accessed on 15 September 2016).

3. Using renewable energy resources

The Act on the Environment¹³, does not use the term “renewable energy resources” (hereinafter referred only as the “RER” or “RR”), but the term “renewable natural resources” which, according to Section 7 of this Act, have “the ability, when gradually consumed, to be restored partially or completely by themselves or with human contribution.” The legal regulation on environmental protection (the environmental law) is an essential branch of law influencing the use of renewable energy resources; precisely because these resources are a part of nature and use of renewable resources should be primarily subjected to environmental protection. Only in those cases, when there is no harm to the environmental protected fields (basically all nature), then any kind of support (e.g. financial, administrative) should be used.

The definition of renewable resources is based on the Directive on the Promotion of the Use of Energy from Renewable Resources¹⁴; however, the Czech legislation use different definition of the RR for the purposes of their support, because this definition takes into consideration the country’s geographical location, and the definition does not include energy from oceans. It is evident that considering the geographic and geological conditions in the Czech Republic, it is impossible to use all these resources or, in other words, it is possible, to a limited extent, potentially use only some of them.

The growth in the use of renewable energy is hindered especially by the relatively high price of this energy compared to the price of energy obtained from traditional sources. There are two ways of increasing the use of RR. Either to let the market forces decide whether renewable energy can compete with other energy sources, or to contribute, through government interventions on the energy market with electricity, to the achievement of predefined volume of energy from RR to be used in a certain period. The current economic policy of the EU prefers the later, as most policy makers are convinced that the market by itself is not able to drive effectively an increase in the significance of renewable energy in the energy balance sheets of individual countries¹⁵.

The basis for the use of RR is Article 7 of the Czech Republic’s Constitution and the Act on the Environment. Then there is the Act on supported energy

¹³ Act on the environment of 5 December 199 No. 17/1992 Coll.

¹⁴ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing directives 2001/77/EC and 2003/30/EC.

¹⁵ P. Musil, *Globální energetický problém a hospodářská politika: se zaměřením na obnovitelné zdroje energie*, Prague 2009, pp. 26–150.

sources¹⁶, which along with other laws applicable to specific RR defines the fundamental conditions for the use of RER, especially in terms of supporting their use and defining the relationship or conflict with the principles of environmental protection.

Section 32 of the Act on the Environment provides a non-exhaustive list of positive tools of environmental protection and in fact implements Article 7 of the Constitution. It states that entities utilising natural resources can be granted tax and levy reliefs or provided with loans or subsidies in accordance with the principle of permanently sustainable development¹⁷. On the contrary, negative stimulation is referred to in Section 31 of the Act on the Environment, stating that specific taxes, fees, levies and other payments will be imposed for polluting the environment. These provisions are a core prerequisite for special regulations, which further specify the positive or negative stimulation, among other, with regard to the use of RR.

According to the Act on Supported Energy Sources and the Energy Act¹⁸, supported renewable resources are “renewable non-fossil natural sources of energy, i.e. wind energy, solar energy, geothermal energy, water energy, soil energy, air energy, biomass energy, landfill gas energy, sludge gas energy from wastewater treatment plants and biogas energy”. In this case, the definition focuses on specific energy sources and specifies that these sources are non-fossil, i.e. excludes sources based on carbon, originating historically in different geological periods. Renewable resources are in more detail specified in the Decree of the Ministry of Industry and Trade on Determining Types and Parameters of Supported RR¹⁹, adopted for the purposes of implementing the Act on Supported Energy Sources. No support is provided for peat bogs, as they constitute an important landscape feature and they are protected against damage and destruction.

The EU law defines the protection of competition against negative impact of public support both by primary and secondary laws. While public support is not forbidden per se, it is considered as incompatible with the EU’s single market,

¹⁶ Act on Supported Energy Sources No. 165/2012, as amended.

¹⁷ Concept of sustainable development is defined in § 6 of the Environment Act as “development for present and future generations, which preserves the possibility of meeting their basic needs”. All this without reducing biodiversity and it preserves the natural functions of ecosystems, but to a comprehensive approach of this concept, it is necessary to consider other related aspects.

¹⁸ Act on supported energy sources No. 165/2012, as amended; Act on business conditions and the performance of state administration in energy sectors (hereinafter referred to as the “Energy Act”) No. 458/2000, as amended.

¹⁹ Decree on determining the types and parameters supported by renewable sources to produce electricity, heat or biomethane and the establishment and preservation of documents No. 477/2012.

with some types of support absolutely or conditionally exempted²⁰. In the Czech Republic, public support in the area of environmental protection is used quite often.

According to the Report on the Environment of the Czech Republic from 2011²¹, there had been a positive increase in the production of electricity from RR, which was mainly driven by the extensive public support for renewable energy generation, as reflected especially in the massive photovoltaic boom. This support had resulted in an increase in the price of electricity for consumers, but the share of RR in the total energy production remained low. The high proportion of fossil resources in the production of energy in the Czech Republic and emissions from local furnaces, especially in small settlements, was a lingering problem. In the Report from 2014²², it was already stated that the energy and material intensity of the Czech economy was decreasing. A slight decrease has been registered in the emissions of greenhouse gases and emissions of polluting substances. The share of steam power plants, which burn mainly lignite, is also decreasing, while the proportion of RR and nuclear energy is growing. The new support for photovoltaic production is focused on households.

3.1. Means and forms of support of the use of energy from renewable resources

While the means of support of the use of energy from RR may be of a various nature, the most crucial and important are various forms of public support, especially in the area of environmental protection. This may, for example, include support from the viewpoint of environmental protection to obtain more easily various permits for the activities of entities that use RR, which is regarded as an administrative tool. Support is also provided in the form of state guarantees for private loans or purchase of goods and services under preferential terms or in the form of financial support, either directly through subsidies, or through tax or fee reliefs, which is regarded as an economic tool.

However, support can be regarded as compatible with the single market only if it covers the difference between the costs of the production of energy from RER and the market price of the relevant type of energy, if its amount is limited

²⁰ M. Janků, J. Mikušová, *Veřejné podpory v soutěžním právu EU*, Prague 2012, pp. 16–19.

²¹ *Ministry of Industry and Trade of the Czech Republic*, Environment Report of the Czech Republic of 2011, available at www.mzp.cz/cz/news_121213_zprava_ZP.

²² *Ministry of Industry and Trade of the Czech Republic*, Environment Report of the Czech Republic of 2014, available at www.mzp.cz/cz/news_151120_Zprava_o_ZP_2014.

to the strict minimum and if it is non-discriminatory and reasonable. When using RR, the most important tools are administrative and economic.

3.1.1. Administrative tools

These tools are used mainly for planning, assessing and permitting various activities related to the use of energy from RR, of which the biggest attention is devoted to the placement of structures or facilities for the production of renewable energy. The most important tools are the obligation of preferable connection and the quotas on biofuels used in transport.

The obligation of preferable connection is defined in Section 7 of the Act on Supported Energy Sources. It is the obligation of the operator of the transmission system or the operator of the distribution system to connect to the system of a plant generating electricity from a supported source for the purposes of electricity transmission or distribution (if the producer requests so and fulfils the conditions specified in Decree No. 51/2006 Coll. of the Energy Regulatory Office)²³. An exception to this rule is a provable lack of capacity of the facility to transmit or distribute or a danger (threat) to the safe and reliable operation of the power system. The purpose of the quota on biofuels is to ensure a minimum quantity of biocomponents in the fuels released into free circulation.

As regards spatial planning, there is a very interesting fact. The facilities for the production of renewable energy are not regarded as public technical infrastructure, but as production facilities. Thus, they cannot be defined in the zoning documentation as publicly beneficial structures, which could lead to expropriation. In most cases, they cannot be situated in the undeveloped parts of municipalities²⁴.

3.1.2. Economic tools

The main purpose of economic tools is to introduce charges on the economic (business) use of natural resources and to provide financial incentives for the uses of natural resources in line with the principle of sustainable development. To be specific, these incentives include the minimum feed-in tariffs (this was most evident in the support for photovoltaic power plants – hereinafter referred to as “PVPP”), the so-called green bonuses, tax incentives (benefits), tax deterrents and subsidies.

²³ Decree on conditions of connection to the electricity grid No. 51/2006 Coll., as amended.

²⁴ *Ministry of Industry and Trade of the Czech Republic*, Licensing process of renewable energy sources, pp. 38, 49 and 51.

(a) Green bonuses and feed-in tariffs

The green bonus is an amount intended to support the production of electricity, biomethane or heat and targeted at the producers of electricity from RR and producers of biomethane or heat. The Energy Regulatory Office in a pricing decision defines the scope and amount of most of the aforementioned forms of support.

(b) Tax incentives and deterrents

This is the least significant tool of support for RER, but is regarded as the least negative in terms of impact²⁵. As regards the real property tax, structures serving for the operation or production of energy from RR and/or structures or units are exempted from this tax for a period of five years after a change of heating method by making a shift from fossil fuels to the system using RER²⁶.

Tax deterrents include energy taxes on natural gas, on fossil fuels and electricity²⁷. A specific deterrent is a levy on electricity from sunlight (the so-called “solar tax”) defined in Division IV of the Act on Supported Energy Sources.

(c) Subsidies

This is the most important form of support for the use of energy from RR. For example, a subsidy is provided to a market operator as a reimbursement for the costs related to the support for electricity from supported resources, heat from RR and biomethane. Another option is “EFEKT”, the state programme in support of energy savings and use of renewable energy resources. It is possible to receive subsidies, loans or contributions from the State Environmental Fund of the Czech Republic according to Directive No. 6/2010 of the Ministry of the Environment²⁸. Another programme is *Zelená úsporám* (“Green Savings”) and *Nová zelená úsporám* (“New Green Savings”), which promotes installation of heating sources using RER and investment in energy savings in both renovated and new buildings. The Czech Republic has risen the funding for this programme mainly by selling emission credits under the Kyoto Protocol on the reduction of emissions of greenhouse gases.

The support for the use of renewable energy has been often criticised. The criticism focused mostly on the support provided through feed-in tariffs, which has been labelled as “economically unsustainable and morally unjustifiable”,

²⁵ P. Musil, *Globální energetický problém a hospodářská politika: se zaměřením na obnovitelné zdroje energie*, Prague 2009, pp. 188–189.

²⁶ See section 9 of the Act on the tax on immovable property No. 338/1992 Coll.

²⁷ Act on the stabilisation of public budgets No. 261/2007 Coll.

²⁸ Directive of 2010 No. 6/2010 of the Ministry of the Environment.

because the total costs (approximately 70% concerns the support for PVPP) have resulted in higher prices of electricity for all customers. Electricity generation in photovoltaic and wind power plants is regarded as the most expensive way of reducing the CO₂ emissions generated by electricity production²⁹. Very significant legislative changes were made in 2010, which were mainly aimed to cut support for large photovoltaic power plants situated on agricultural land. This culminated in the introduction of the so-called solar tax, which is a levy imposed on electricity produced from 1 January 2011 to 31 December 2013 at plants put into operation between 1 January 2009 and 31 December 2010. That is exactly the period of the largest boom of PVPP in the Czech Republic driven by feed-in tariffs which were very attractive for electricity producers and which led to a large-scale construction of the PVPP.

The author believes that the support for the PVPP is very inappropriate, as this kind of support can never lead to the generation of significant volumes of energy given the Czech Republic's geographical location. In addition, these plants occupy large sections of agricultural land and no one really knows how to dispose in an environmentally friendly way (if at all) of the fields covered by solar panels.

It is believed that the only realistically available RER in the Czech Republic is biomass for the needs of cogeneration plants. Its use is actually promoted through investment incentives such as the replacement of the combustion source, what eventually brings some control over the desirable technological standard of plants and control over emissions.

As regards economic support, the currently prevailing trend is a shift from the system of feed-in tariffs to the more market-defined green bonuses. One can agree with this trend, because the general support for RER should be rather lowering, supplementary and rather subdued.

4. Conclusions

The energy policy and strategy of the Czech Republic over the recent years has not brought any new ways or directions and the policy appears to be consistent. Energy policy and security has reached "higher level", i.e. from the viewpoint of energy suppliers, infrastructure has been improved and dependence on Russia as a single source has been reduced.

²⁹ M. Zajíček, K. Zeman, *Ekonomické dopady výstavby fotovoltaických a větrných elektráren v ČR*, Prague 2010, pp. 9–10.

The Czech Republic is, to a significant extent, tied by various international commitments, especially as regards the environment. It is therefore, in my opinion, impossible to build an energy policy from a scratch and devise “one’s own way” while disregarding international obligations. Due to certain limits set by international treaties and commitments, it is impossible to implement a policy of energy security based on the state’s own reserves. As a result, in my view, it may be argued that the country’s sovereignty in the area of energy security may be considered as too excessively restricted.

International commitments in relation to the exploitation of natural resources are significant elements that ensure a balance between the need to ensure energy security and environmental protection.

It should be noted that natural resources, especially the fossil ones, would surely run out one day. Further intensive mining and high energy consumption at the expense of the environment may speed up this process. Therefore, energy security may not be achieved by having a sufficient energy reserves and exploiting conventional energy resources, but by searching for new and alternative resources and by effectively using and consuming the currently existing resources.

The main goals of the Czech Republic’s energy policy should be attained through a stable, balanced and financially feasible system of subsidies and taxes.

In terms of energy security, in my view, the best option for the Czech Republic is nuclear energy, which is a real, effective, long-term and, at the same time, the most environmentally friendly source of energy. There are only two dangerous factors concerning nuclear energy – the human factor and the factor of natural conditions. The human factor can be prevented by a system of cutting-edge technologies and control mechanisms that eliminate the possibility of human failure. As regards the factor of natural conditions, there is no such problem in the Czech Republic.

For the reasons presented in this chapter, the concept of the Czech Republic’s energy security should ideally continue to follow the current direction and strategy. Namely to ensure, on the one hand, sufficient supplies of energy from a variety of sources, and via a variety of transit routes and, on the other hand, to ensure the key infrastructure for these sources, including energy transit routes. This should be achieved by (i) using quality technologies and materials and through protection against undesirable natural influences and the human factor; as well as (ii) virtually or cybernetically – because most of the industry is controlled through information technologies and, therefore, a sufficient security of information systems is a major component of the overall energy security. In the author’s opinion, this security is at a very solid level in the Czech Republic.

One of the ways of ensuring and supporting energy security may be the use of renewable energy resources. In my opinion, in the Czech Republic this option is not a solution when it comes to obtaining new sources of energy because of the obligations under international treaties, geographical conditions and, at the same time, because of consumption, energy needs and the full capacity use of the energy system.

The National Action Plan³⁰ has identified areas, which, if properly implemented, should accelerate and simplify the integration of RER and other resources into energy systems by specifying a simplified process for the construction and update of energy structures. The drafted National Action Plan proposes (assumes) that in 2020 the country will reach a 15.3% share of energy from renewable resources in gross final energy consumption and a 10% share of energy from renewable resources in gross final consumption in the transportation sector. It is questionable whether the mandatory share of RER in gross final energy consumption is not contradictory with the requirements for protecting the elements of the environment and for complying with the planned state budget deficit as a share of the GDP.

However, in general, in my point of view, providing across-the-board subsidies for “green energy” is definitely not advisable in the long-term perspective and, under the influence of economic forces. On the contrary, what seems to be very appropriate is to promote, for example, the use of sunlight energy as a source for low output on buildings and, to a limited extent, the use of geothermal energy. I also believe that the funding for the support of RER should be based on energy taxes, fees and obligatory payments for externalities, which should secure enough support for a reasonable increase in the use of RER, but not at all costs.

³⁰Updating the National Action Plan for renewable energy sources approved by the Government in January 2016 pursuant to the Act on Supported Energy Sources.